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# External Evaluation of ESMAP 2007-2011

## Final Evaluation Report



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## TABLE OF CONTENTS

List of tables and figures .....	iii
Acronyms v	
Executive summary .....	viii
<b>1. Introduction .....</b>	<b>1</b>
1.1. Background.....	1
1.2. Rationale for this evaluation.....	4
1.2.1. Changes within ESMAP.....	4
1.2.2. Summary of past evaluations.....	4
1.3. Objectives and scope of the evaluation.....	5
<b>2. Evaluation approach and methodology .....</b>	<b>7</b>
2.1. Frame of reference for the evaluation .....	7
2.2. Inception phase.....	7
2.3. Data collection phase .....	9
2.4. Analysis and reporting phase .....	10
<b>3. Analysis and findings.....</b>	<b>11</b>
<b>3.1. Relevance.....</b>	<b>11</b>
3.1.1. Consistency of ESMAP objectives with global/regional challenges and priorities of client countries .....	11
3.1.2. New business lines and priorities, and program objectives.....	18
3.1.3. ESMAP’s comparative advantage in the energy sector.....	20
3.1.4. Definition of stated objectives in the strategy documents .....	22
3.1.5. Appropriateness of activities, outputs, and products to the objectives of the program .....	24
3.1.6. Incorporation of gender and social issues .....	25
3.1.7. Lessons learned and recommendations on relevance .....	28
<b>3.2. Effectiveness .....</b>	<b>30</b>
3.2.1. Management flexibility in reaching program objectives.....	30
3.2.2. Achievement of objectives across work programs.....	33
3.2.3. Extent of a functional M&E system.....	40
3.2.4. Fulfillment of strategic role .....	46
3.2.5. Consistent contribution toward objectives and extent of replicability .....	51
3.2.6. Transition to programmatic funding .....	54
3.2.7. Linkages to World Bank operations.....	55
3.2.8. Influence on lending and investment.....	59
3.2.9. Lessons learned and recommendations on effectiveness .....	64

<b>3.3. Efficiency</b> .....	<b>66</b>
3.3.1. <i>Efficiency of ESMAP activities</i> .....	66
3.3.2. <i>Cost-effective areas of ESMAP operations</i> .....	75
3.3.3. <i>Lessons learned and recommendations on efficiency</i> .....	82
<b>3.4. Institutional arrangements and management</b> .....	<b>83</b>
3.4.1. <i>Appropriateness and effectiveness of organizational setup</i> .....	83
3.4.2. <i>Effectiveness of management accountability</i> .....	86
3.4.3. <i>Operation of the CG as the governance body</i> .....	88
3.4.4. <i>Effectiveness of the TAG</i> .....	90
3.4.5. <i>Representativeness of governance structure and participation of client countries</i> .....	93
3.4.6. <i>Lessons learned and recommendations on institutional arrangement and management</i> .....	94
<b>3.5. Strategy for program sustainability</b> .....	<b>96</b>
3.5.1. <i>Proactive and effective management of growth</i> .....	96
3.5.2. <i>Achieving and sustaining an optimum resource level</i> .....	103
3.5.3. <i>Effectiveness at building internal and external partnerships</i> .....	105
3.5.4. <i>Development impact</i> .....	110
3.5.5. <i>Internal learning</i> .....	114
3.5.6. <i>Risk identification and management</i> .....	117
3.5.7. <i>ESMAP adaptability and responsiveness to the changing global environment</i> .....	121
3.5.8. <i>Extending ESMAP's benefits</i> .....	128
3.5.9. <i>Lessons learned and recommendations on program sustainability</i> .....	133
<b>4. Lessons learned</b> .....	<b>134</b>
<b>5. Recommendations</b> .....	<b>136</b>
<b>Annex 1 - Evaluation Matrix</b> .....	<b>138</b>
<b>Annex 2 - Intervention Logic</b> .....	<b>157</b>
<b>Annex 3 - List of Documents Reviewed</b> .....	<b>158</b>
<b>Annex 4 - Desk Review and Field Visit Sampling</b> .....	<b>168</b>
<b>Annex 5 - List of People Interviewed</b> .....	<b>176</b>
<b>Annex 6 - Efficiency: Detailed Analysis of Expenditures per Output</b> .....	<b>182</b>
<b>Annex 7 – Terms of Reference</b> .....	<b>187</b>

## List of table and figures

### Tables

Table 1 - Summary of Past Evaluations.....	4
Table 2 - Coherence Matrix between ESMAP Objectives and Challenges in the Energy Sector.....	12
Table 3 - Project Portfolio Distribution within ESMAP’s Work Program Themes .....	13
Table 4 - Business Plan 05-07 and 08-13 Comparisons.....	15
Table 5 – High-Level Objectives of Desk Review Sample.....	34
Table 6 - Product Lines and High-Level Objectives for Desk Review Sample .....	37
Table 7 - World Bank Staff Survey – ESMAP Achievement of High-Level Objectives.....	38
Table 8 - ESMAP Results Framework Components and Subcomponents .....	41
Table 9 - Desk Review Sample of Final Assessment Materials .....	43
Table 10 - Sample ACS “Development Objectives” and Relevance to ESMAP Objectives.....	44
Table 11 - Making Strategic Priorities Clear to World Bank TTLs.....	51
Table 12 - ESMAP Engagement of Local Partners – Perceptions of World Bank TTLs.....	58
Table 13 - Case Study Countries’ Influence on Actors .....	63
Table 14 - ESMAP Influence on External Actors – Perceptions of World Bank Staff .....	64
Table 15 - TTL Responses to Questions Relating to ESMAP’ s Internal Communication .....	98
Table 16 - Program Management and Administration Costs Relative to Total Funds Disbursed .....	101
Table 17 - TTL Responses to Questions Relating to Working through Local Partners .....	110

### Figures

Figure 1: ESMAP Outcomes and Indicators .....	24
Figure 2 - Results of Desk Review Projects by High-Level Objectives .....	34
Figure 3 - Desk Review Project Product Line Results by High-Level Objective .....	38
Figure 4 - World Bank Staff Survey – ESMAP Achievement of High-Level Objectives .....	39
Figure 5 - Final Assessments Available per Start Year, Desk Review .....	43
Figure 6 - Final Assessment Ratings Provided for Objectives, by Start Year, Desk Review.....	43
Figure 7 - ESMAP Engagement of Local Partners – Perceptions of World Bank TTLs .....	58
Figure 8 - Effectiveness of ESMAP on Influencing World Bank – Staff Survey.....	61
Figure 9 - ESMAP Influence on External Actors – Perceptions of World Bank Staff (response count) .....	64
Figure 10 - Planned vs. Implemented Activities for EECI in FY10.....	67
Figures 11 and 12 - Planned vs. Implemented Activities for REMTI in FY09 and FY10.....	67
Figure 13 - Planned vs. Implemented Activities for PEA-TP in FY10.....	68
Figure 14 - ESMAP Disbursements between 2006 and 2011 by Theme.....	69
Figure 15 - Influence on Lending by Theme for Completed Projects between FY09 and FY11 (US\$ billions) ....	71
Figure 16- Timeliness of Responses to Project Proposals.....	75
Figure 17 - Speed of Disbursement of Funds .....	75
Figure 18 - Budget Execution against Business Plan Projections .....	76
Figure 19 - Percentage of Budget Disbursed by Theme for FY09 .....	76

Figure 20 - Execution of Budget by Theme .....	77
Figure 21 - Execution of Budget by Product Line.....	77
Figure 22 - Execution of Budget by Region .....	78
Figure 23 - Leverage Ratio per Theme for All FY09- FY11 Selected Projects (note: for total disbursement, not for completed projects) .....	79
Figure 24 - ESMAP Management Costs between FY06 and FY10.....	81
Figure 25 - Knowledge Dissemination Costs (Source: Annual Report 2009).....	81
Figure 26 - Level of TTL Satisfaction with ESMAP' s Internal Communications .....	99
Figure 27 - Budget Allocation by Thematic Area (2005-07) and Portfolio by Value (end-CY2006 and FY2008) .	99
Figure 28 - Budget Allocation by Program Area (FY2009-11) and According to 2008-13 Business Plan.....	100
Figure 29 - Program Management and Administration Costs as a Fraction of Total Expenditure.....	102
Figure 30 - Length of Tenure of ESMAP Staff as of end-FY2010.....	103
Figure 31 - Receipts/Pledges from Donors FY2007-13.....	105
Figure 32 - Coefficient of Variation of ESMAP Donor Receipts .....	105
Figure 33 - Extent to Which TTLs Work through Local Partners .....	110

### Boxes

Box 1 - Regional Importance of Morocco Renewable Energy Development .....	14
Box 2 – “Integrating SMEs in Tanzania's Rural Energy Initiative” .....	16
Box 3 - Country Visits Reveal Varying Perceptions of ESMAP's Niche.....	21
Box 4 - Gender and Energy in Ghana and Burkina Faso.....	<b>Error! Bookmark not defined.</b>
Box 5 - Social Safety Net for LPG Subsidies in Morocco.....	27
Box 6 - Evidence of the Integration of Gender and Social Issues in ESMAP's Work in India.....	28
Box 7 - Value for Money in Peru.....	72
Box 8 - Leverage for Wider Climate Adaptation .....	73
Box 9 - ESMAP Leverage in Tanzania .....	80
Box 10 - Limited Mitigation in Tanzania.....	118
Box 11 - Dropped Project .....	119
Box 12 - Successful Risk Management .....	120
Box 13 - How to Reach More Beneficiaries at No Extra Cost in India.....	130
Box 14 - Reaching More Beneficiaries in Tanzania .....	132



## Acronyms

<b>AAA</b>	<b>World Bank Analytical and Advisory Activities</b>
<b>ACS</b>	Activity Completion Summary
<b>ADB</b>	Asian Development Bank
<b>AEI</b>	Africa Electrification Initiative
<b>AFD</b>	African Development Bank
<b>AFR</b>	(Sub-Saharan) Africa
<b>AFREA</b>	Africa Renewable Energy Access Program
<b>AFRREI</b>	Africa Rural and Renewable Energy Initiative
<b>AFTEG</b>	World Bank Africa Energy Group
<b>AFTSN</b>	World Bank Africa Region Sustainable Development Department
<b>ASTAE</b>	Asia Sustainable and Alternative Energy Program
<b>AusAID</b>	Australian Agency for International Development
<b>BP</b>	Business plan
<b>CCS</b>	Carbon capture and storage/sequestration
<b>CEIF</b>	Clean Energy Investment Fund
<b>CESVAP</b>	Country Energy Sector Vulnerability Assessments Program (EASP)
<b>CF</b>	Carbon finance
<b>CFL</b>	Compact fluorescent lamps
<b>CG</b>	Consultative Group
<b>CIF</b>	World Bank Climate Investment Fund
<b>COP15</b>	Fifteenth Conference of Parties (of the UNFCCC)
<b>CSO</b>	Civil society organization
<b>CSP</b>	Concentrated Solar Power
<b>CTF</b>	World Bank Clean Technology Fund
<b>DAC</b>	Development Assistance Committee
<b>DC</b>	(Washington) District of Columbia
<b>DfID</b>	United Kingdom Department for International Development
<b>DH</b>	District Heating
<b>DPL</b>	Development Policy Loan
<b>EAP</b>	East Asia and Pacific
<b>EASP</b>	Energy Assessments & Strategy Programs
<b>EASSD</b>	World Bank East Asia and Pacific Sustainable Development Sector Department
<b>EC</b>	European Commission
<b>ECA</b>	Europe and Central Asia
<b>ECSSD</b>	World Bank Europe and Central Asia Sustainable Development Sector Department
<b>EE</b>	Energy Efficiency
<b>EECI</b>	Energy Efficient Cities Initiative
<b>EIB</b>	European Investment Bank
<b>ENV</b>	World Bank Environment Department
<b>ESMAP</b>	Energy Sector Management Assistance Program
<b>ESMEDS-TAP</b>	Energy SME Development Strategies-TA Program (PEA-TAP)
<b>ESPCs</b>	Energy savings performance contracts
<b>ESW</b>	Economic and Sector Work
<b>EU</b>	European Union

<b>EUI-PDF</b>	European Union Energy Initiative Partnership Dialogue Facility
<b>FY</b>	Fiscal year
<b>GDP</b>	Gross Domestic Product
<b>GEA</b>	Global Energy Associates
<b>GEDS-TAP</b>	Gender and Energy Development Strategies-TA Program (PEA-TAP)
<b>GEF</b>	Global Environment Facility
<b>GFSE</b>	Global Forum for Sustainable Energy
<b>GIZ/KfW</b>	German Technical Corporation/German Development Bank
<b>GPOBA</b>	Global Partnership for Output-Based Aid
<b>GRM</b>	Grant Reporting and Monitoring
<b>IBRD</b>	World Bank International Bank for Reconstruction and Development
<b>IDA</b>	World Bank International Development Association
<b>IEA</b>	International Energy Agency
<b>IFC</b>	International Finance Corporation
<b>IIASA</b>	Institute for Applied Systems Analysis
<b>IMF</b>	International Monetary Fund
<b>IRENA</b>	International Renewable Energy Agency
<b>LADM</b>	Lighting Africa Development Marketplace
<b>LCCS</b>	Low-carbon case studies
<b>LCGCSP</b>	Low Carbon Growth Country Strategies Program (EASP)
<b>LCR</b>	Latin America and Caribbean
<b>LCSSD</b>	World Bank Latin America and Caribbean Sustainable Development Sector Department
<b>LED</b>	Light-emitting diode
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MACTool</b>	Marginal Abatement Cost Tool
<b>MDGs</b>	Millennium Development Goals
<b>MDTF</b>	Multidonor trust fund
<b>MNA</b>	Middle East and North Africa
<b>MNSSD</b>	World Bank Middle East and North Africa Sustainable Development Sector Department
<b>MSETCL</b>	Maharashtra State Electricity Transmission Co Ltd (MahaTransco)
<b>MW</b>	Megawatts
<b>NGO</b>	Nongovernmental organization
<b>NORAD</b>	Norwegian Development Aid Agency
<b>OECD</b>	Organisation for Economic Co-operation & Development
<b>PCN</b>	Project Concept Note
<b>PEA-TAP</b>	Pro-poor Energy Access-TA Programs
<b>PPIAF</b>	The Public-Private Infrastructure Advisory Facility
<b>PPP</b>	Public-private partnership
<b>PSF</b>	Project Summary Form
<b>QAG</b>	Quality Assurance Group
<b>RE</b>	Renewable energy
<b>REISP</b>	Regional Energy Integration Strategies Program (EASP)
<b>REMTI</b>	Renewable Energy Market Transformation Initiative
<b>RES-TAP</b>	Rural Electrification Strategies-TA Program (PEA-TAP)
<b>RET</b>	Renewable Energy Technology
<b>RPTES</b>	Regional Program for the Traditional Energy Sector

<b>SACCOS</b>	Savings and Credit Cooperative Organizations
<b>SADC</b>	Southern Africa Development Community
<b>SAR</b>	South Asia
<b>SASSD</b>	World Bank South Asia Sustainable Development Sector Department
<b>SDN</b>	Sustainable Development Network
<b>SEGEN</b>	World Bank Sustainable Energy Department Energy Unit
<b>SEGES</b>	World Bank Sustainable Energy Department Energy Sector Management Assistance program
<b>SIDA</b>	Swedish International Development Agency
<b>SIDS</b>	Small Island Developing States
<b>SME</b>	Small & medium-size enterprise
<b>SREP</b>	World Bank Scaling-Up Renewable Energy in Low-Income Countries (CIF)
<b>SWAP</b>	Sector-wide approach
<b>TA</b>	Technical assistance
<b>TAG</b>	Technical Assistance Group
<b>TOR</b>	Terms of Reference
<b>TRACE</b>	Tool for Rapid Assessment of City Energy (EECI)
<b>TTL</b>	World Bank Task Team Leader
<b>UNDP</b>	United National Development Program
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>USAID</b>	United States Agency for International Development
<b>WB</b>	World Bank
<b>WBG</b>	World Bank Group
<b>WBI</b>	World Bank Institute
<b>WEC</b>	World Energy Council
<b>WEO</b>	World Energy Outlook

# Executive summary

## Scope of the evaluation

Through this mandate, the consultants have performed an independent review of the outcomes and achievements of the Energy Sector Management Assistance Program (ESMAP) for the last five years (from July 2006 to June 2011, including the last year of the 2005-07 Business Plan and the first four years of the 2008-13 current Business Plan). As stated in the terms of reference (ToR) (Annex 7), the primary objectives of the evaluation were to: (i) assess the effectiveness of ESMAP as a global technical assistance (TA) program; (ii) assess the major factors that have influenced results either positively or negatively; (iii) draw key lessons learned; and (iv) recommend how better to meet the objectives of the program. In addressing these objectives, the evaluation assessed what impact ESMAP has had in helping to achieve poverty reduction in client countries by enhancing institutional capacity in the energy sector.

## Methodology

The evaluation process considered the five Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) criteria: the relevance (i), effectiveness (ii), and efficiency (iii) of ESMAP's mission and related business plans (program-level effectiveness and results, including governance and country-level and activity-level performance of ESMAP's portfolio), and strategy for continued sustainability (iv) of the program, including resource mobilization and financial management. ESMAP's impacts (v) on poverty reduction in client countries were also considered by the evaluation team. Finally, overall institutional arrangements were comprehensively assessed in terms of relevance, effectiveness, and efficiency.

The evaluation was undertaken in three phases: (i) the inception phase, which was meant to plan and scope the evaluation and develop the evaluation tools; (ii) the data collection phase, which included extensive documentation review, surveys, interviews, and field visits in six countries; and (iii) the analysis and reporting phase, during which the team synthesized and analyzed all the collected data and prepared this evaluation report.

## Key Findings and Conclusions

### *Relevance*

Overall, ESMAP's objectives and program design are consistent with current global/regional challenges and concerns in the energy sector. During the last five years, ESMAP has integrated an increasing number of global and regional issues—such as energy security, renewable energy, climate change and energy efficiency, and gender and energy—into its main areas of focus, with strong coherence to program activities. ESMAP has demonstrated its capacity to adjust its design or strategy of thematic areas, or type of products, because of new information or client concerns. However, in order to remain operationally and strategically viable, ESMAP's main areas of focus will need to remain clear and limited in number, so as to avoid confusion and overstretching of limited resources.

ESMAP's objectives and program are also consistent with the needs and priorities of its client countries and, though less often, to specific groups. Over the course of the evaluation period, new business lines and program priorities were opened and a number of tools were also developed and used by clients to address pressing energy sector needs. New business lines and program priorities are generally very coherent with ESMAP's overall objectives, as most develop out of existing initiatives under longstanding intended outcomes. New initiatives draw on a large array of information sources, including lessons learned from previous ESMAP and World Bank operations, state-of-the-art expertise in the targeted (sub)sector, research, consultation with partners and stakeholders, exploratory missions, and household energy surveys.

Portfolio review and country visits reveal that the perceived main comparative advantages of ESMAP are: (i) ESMAP's privileged link with the World Bank, facilitating access to World Bank loans and exceptional expertise; (ii) ESMAP's unique positioning at the institutional and regulatory levels, filling information gaps and providing expert knowledge in order to support regulatory and institutional development and unblock/foster energy sector

development; (iii) ESMAP's capacity as a global program to conduct global/regional sector studies and benchmarks, building on its strong technical expertise and on the experience gained with other countries by ESMAP and the World Bank; and (iv) ESMAP's timely and quality response capacity. These comparative advantages are not perceived the same way by all categories of stakeholders, and perceptions differ significantly from one country to another, depending on ESMAP positioning, activities conducted by other donor organizations, the level of development of a given country, and its capacity to access world-class expertise on its own. In addition, the distinction between ESMAP and the World Bank is widely unknown to stakeholders and often to clients.

There is little evidence of ESMAP competing with other donors at country or global levels. ESMAP usually has a specific niche, being a global expertise center uniquely located within the World Bank and able to tap Bank complementary expertise and its work very often also serves the interests of other organizations, favoring investments and loans.

In terms of relevance of design, ESMAP strategy documents provide numerous references to the program's comparative advantages, but do not necessarily explain clearly how planned objectives actually capitalize on or enhance them. Identified activities, outputs, and products are generally appropriate to program objectives in each area of the work plan, and have become increasingly so over the course of the evaluation period. With the exception of recent planning documents, following 2009, they are not as clear as they could be on how each product or activity contributes to the achievement of ESMAP.

With respect to cross-cutting themes, about one-third of projects reviewed addressed broad social issues in planning documents. With the exception of a small number of specifically gender-focused initiatives, gender is almost absent from the project portfolio. Available evidence therefore suggests that little attention has been given to gender and social issues at the activity level over the 2007-11 timeframe. In program-level documentation, gender and social issues are generally well covered, however, which suggests that there is an apparent disconnect between stated policies and intentions and the realization of those intentions in practice. Furthermore, other than compliance with World Bank safeguards, no systems appear to be in place to ensure that social and especially gender issues are systematically integrated at the project level. Mainstreaming gender and social issues across the portfolio remains a challenge, but new efforts to promote gender and social issues in ESMAP activities, outputs, and outcomes, are underway and now must be pursued and reinforced in order to ensure results in this regard at the activity level.

### *Effectiveness*

ESMAP has largely exhibited flexibility to design and execute activities effectively in order to achieve program goals. The design and execution of most projects is accomplished with an appropriate level of quality, adjustability, and timeliness in order to manage operational and implementation challenges. Most activities and publications are planned, adjusted, and executed according to client priorities and at the time those needs are critical. Some internal barriers remain in terms of communicating and streamlining procedural expectations, as well as assuring the long-term effectiveness of activities and products through an adaptable but structured inclusiveness of stakeholders, especially in terms of dissemination and follow-up after publications and activities. Furthermore, especially in the context of global studies, ESMAP needs to gauge the level of need and concerns properly at national/regional levels to see whether the global challenges addressed actually align with more immediate priorities.

ESMAP has achieved relatively strong success across the three main high-level objectives for its client countries: (i) better informed policy making; (ii) enhanced client capacity; and (iii) adoption of cutting-edge solutions. On average, from among desk review projects with evidence of achievement of objectives, approximately half of projects tended to achieve their respective intended high-level objectives *fully*, and the other half partly met their objectives. However, out of a possible 88 objectives to meet, it was too early to assess results for 9, and a further 31 (35 percent of the sample) had no recorded evidence of results. Nevertheless, given the often short timeframes and high demand for products and services, ESMAP demonstrates its capability for rapidly generating targeted materials and processes to answer client needs. The trust fund also faces challenges to continue to meet these high-level objectives through

producing high-quality, independent studies, tools, and assessments, while also engaging clients in targeted training and knowledge exchange beyond the traditional realm of Bank interventions.

Going forward under the new work program, one key challenge that ESMAP will need to consider carefully is the trade-offs between targets and objectives that lend themselves to operational ease and alignment with the World Bank, and those that are guided by the expressed demands of clients and external stakeholders. ESMAP already has many excellent examples of operational leveraging (the use of rural electrification best practices in the scale-up of energy access in the Africa region, for example). The shift to block grants gives the regions greater operational control, which in turn creates opportunities for increased operational leveraging, but also presents the loss of direct interaction and exchange between ESMAP and the World Bank implementing intermediary.

ESMAP has made great strides in recent years and months (post-2009) in defining and tracking results of its activities and products better, such as taking measures to enforce grant reporting and monitoring requirements, launching an internal online portal (results-based monitoring system) to track results and enable learning, and requiring all planning documents to include a baseline description and indicate which ESMAP objectives the project addresses. However, over most of the evaluation period, ESMAP struggled to simplify its monitoring and evaluation (M&E) system to a point of both relevance to its high-level objectives and practicality for the purposes of operationalization and alignment with World Bank systems. The new M&E design is comprehensive, but may be difficult to implement; there is insufficient evidence from the evaluation period to support the conclusion that ESMAP uses data generated through the M&E system for feedback, decision making, and learning. It is hoped that the improved ties between ESMAP activities and high-level objectives, as clearly seen in planning documents from 2009 onward, will translate to more targeted effectiveness on the ground. Going forward, ESMAP needs to decide to what degree it wants to focus on measuring outputs and outcomes, respectively, and then focus efforts on improving reporting levels as well as using M&E data regularly for both internal and external purposes. Impact studies, while helpful for capturing longer-term outcomes, are not a replacement for the systematic collection and reporting of results generated by ESMAP activities and products.

Over the course of the evaluation period, ESMAP has largely fulfilled its strategic roles as a think tank, knowledge clearinghouse, and facilitator of operational leveraging. ESMAP has been successful in cultivating its think tank role by supporting high-quality research and publications that have been timely and relevant, especially to developing country governments, but also to economies in transition and emerging economies. ESMAP has also demonstrated its comparative advantage in terms of being housed in the World Bank, which helps leveraging follow-on finances and set expectations for a reputation of quality and reliable work; and ESMAP products typically precede World Bank investment. Improvements have already been made in terms of ESMAP's knowledge clearinghouse function, but there is more work to be done in terms of visibility, outreach, dissemination, and knowledge exchange with a wider array of stakeholders—nationally, regionally, and internationally.

ESMAP activities that appear to be most effective at consistently contributing to stated objectives generally have a strong client/stakeholder commitment; are built directly on previous work in the region/sector; are managed by a team/Team Task Leader (TTL) capable of adaptive management; respond to a distinct need; have widespread distribution or dissemination; and work in tandem with other partners/initiatives. Based on the desk sample and field visits, excluding the small sample size of the Africa Renewable Energy Access (AFREA) Program and “other,” respectively, the product lines each fairly consistently achieve intended objectives with knowledge products (KPs) and economic and sector work (ESW), performing on average slightly more strongly than TA and partnerships. In terms of ESMAP program themes, of the 50 desk review projects in the evaluation sample, the themes of clean energy, renewable energy (RE), energy assessment strategies programs (EASPs), energy efficiency (EE), and energy access appear to perform more or less equally effectively in contributing to high-level objectives, with clean energy performing slightly better than the other sample cohorts. High-achieving activities also tend to be highly replicable for transnational and transregional exchange in the use of their models, tools, and analyses. Replicable activities and products are, above all else, timely and focused on a specific need or demand, but may also lend themselves to high levels of interest (especially global studies) because of their “first mover” status.

On an operational level, the transition to core/programmatic funding improves the level of predictability of funds flowing to regional offices in theory. However, this evaluation has found insufficient evidence to assess whether there has been any significant change in the effectiveness of planning and management as a result of the shift to a multidonor trust fund (MDTF). This may be a sign that the transition has gone smoothly, but it is also a factor of the small amount of time that has elapsed since institution of the new mechanism, which prevents the stakeholders from seeing and appreciating the full effects of the transition.

For the purposes of quality control, ESMAP has already significantly increased its operational alignment with the World Bank, but there might be some room for improvement for the purposes of World Bank TTLs and country/regional staff. Although approved at the country level and disbursed through the regional units, clients and stakeholders perceive ESMAP as Washington, DC-based and seamlessly operationally linked to the World Bank. On the whole, it appears that ESMAP has not systematically engaged various external actors. Variation depends on how the ESMAP products are developed and used in a country context, and the extent to which ESMAP's contribution is directly supporting local, national, and regional priorities.

Given its relative size in terms of both staff and budget, ESMAP has been very successful in influencing World Bank lending operations, and depending on context has been relatively successful in catalyzing private sector investment; and moderately successful in influencing the donor community. The main factors of ESMAP's ability to influence World Bank investment relate to existing relationships and reputation of the World Bank in client countries, as well as existing demand and timing of delivery of ESMAP products. There does not appear to be a pattern associated with the effects of ESMAP activities and products on either private sector investment or other donors; rather, it depends largely on the nature of the intervention and country context.

### *Efficiency*

Value for money is seen as good for ESMAP activities. Although it is difficult to measure the specific impacts, and the actual contribution of ESMAP activities to those impacts, the level of effort is seen as appropriate and good value. The overall program level of achievement is satisfactory based on the reporting for FY09 and FY10. However, a number of milestones have not been achieved, particularly relating to renewable energy and energy access projects, despite these areas having a high budget allocation. Levels of achievement in EE are excellent and are satisfactory in EASPs.

ESMAP's project cycle timeline is satisfactory despite the fact that the majority of ESMAP activities are delivered late. In most cases, reasons for the delays are not provided in documentation. Those delays noted are largely associated with implementation constraints at the country level that are beyond ESMAP's direct control. Some delays are also associated with the procurement of services, and in the review process. Nevertheless, the majority of TTLs are happy with the project proposal response time and fund disbursement. Management of funds and the project cycle is also seen as efficient. The reforms ESMAP has gone through over the evaluation period have also allowed for more streamlined processes.

It is not possible to provide an accurate assessment of the most cost-effective area of operations because there is insufficient information available to measure cost-effectiveness. There is no systematic recording of outputs and impacts against expenditure at either a project or program level. However, from the information available for projects completed in FY09 – FY11, the most cost-effective support for investment leverage seems to be for EASP activities, followed by EE.

The actual allocation of budget executed does not reflect that projected in the Business Plans for the relevant period, or in the work programs. There are data inconsistencies in reporting that make measurement of the level of execution of budget difficult. The key finding of the cost analysis is that there are substantial variations in the costs of activities within the same category. Budget allocation is high for energy access activities, yet this area of work is currently underperforming and has low leverage rates.

The basic responsibilities of the ESMAP Core Team are clear. The percentage of budget for management and operations is reasonable and in line with, or better than, that estimated in the Business Plan. For the majority of stakeholders involved with ESMAP, there is little awareness of the changes before and after the MDTF. Key informant interviews indicate, however, that the key changes here relate to the enhanced predictability of budget envelopes for planning purposes and the more structured and focused approach to work planning.

#### *Institutional arrangements and management*

As an institution, ESMAP is credited for having a global vision for the energy sector and is generally valued as a source of mature knowledge on international experience and best practices. It is also seen as a solid clearinghouse for research/analytical work in the energy sector by other outfits within the Bank working on energy policy issues.

In light of the evolving work program, at the organizational level, the current management has made commendable efforts to ensure adequate management of the core ESMAP staff team and its relationships with other actors within the Bank. The staff profile and hiring history suggest that, as the program has grown and evolved over time, staff were hired by ESMAP based on the areas of focus of the work and have contributed to this good performance overall in achieving Business Plan objectives. Current management has brought in a welcomed emphasis on a more flexible approach to human resources management. That is not to say, however, that internal human resources fully meet all the needs of the Business Plan and demands from clients. To supplement the need for such expertise relevant to ESMAP's areas of focus, ESMAP management also has close working collaboration with the Energy Anchor unit and builds on its own rosters of experts, which it should continue to do to adapt to evolving needs.

The expertise of ESMAP staff and their skill sets are valued by its Bank clients. ESMAP staff feedback is generally seen as timely and efficient. The assessment points to the flexibility and rapidity of the ESMAP application process, when compared to other trust funds at the Bank, also an indication of staff and organizational management performance within ESMAP. The pledging system in place at ESMAP for donor contributions, and the staggered and often unpredictable timing of the donor contributions from year to year, requires a highly conservative approach to resource management in general, but also to staffing.

The Technical Assistance Group (TAG) and ESMAP management are seen as efficient and effective structures. It is recognized that the management structure, in particular, has undergone and continues to undergo significant changes to ensure strengthened effectiveness and efficiency. It is the view of the Evaluation Team that the new operational manual adopted in 2011 will be instrumental in strengthening accountability, as will the ESMAP Quality Assurance Guidelines adopted in 2010.

In terms of institutional structure, the key accountability mechanisms are the TAG reviews and the Consultative Group (CG) meetings. Recently, ESMAP management has invested in the development of a new M&E system to provide enhanced accountability and reporting on result achievements. The importance of strengthening reporting on results as well as an independent evaluation function of ESMAP is noted. With adoption of the new M&E framework, all new projects now need to report on performance, providing a basis for enhanced accountability on portfolio performance. At this stage, it is too early to say how instrumental to decision making the M&E system will become in the future for ESMAP management. The effectiveness section of this evaluation report highlights a number of challenges ESMAP is facing in implementing the M&E system that will need to be addressed to make it instrumental to enhanced accountability. There are nevertheless early indications that ESMAP is doing a better job at reporting against results.

The latest CGs have been operating efficiently and effectively in view of their roles and responsibilities, with a focus on strategic guidance, though more space could be provided to ensure more donor dialogue and coordination on such strategic discussions. In its minutes, the CG provides recommendations, but they do not appear as clear decisions and their integration into programmatic design/strategic direction of ESMAP is not as detailed as they could be to allow a straightforward assessment of this dimension. In addition, minutes could benefit from a



summary table of actions to be implemented and designated responsible persons/services/stakeholders, so that the accountability function can easily be followed over time.

The TAG and its annual reports to the CG are the main mechanisms available to the CG to hold ESMAP accountable to its mandate, and ESMAP relies heavily on them. The portfolio review, which is to be carried out annually as part of the M&E framework implementation, is a first step in accounting for how ESMAP's activities have achieved results in terms of their goal and purpose. In terms of the information needs of the CG in order to enhance effectiveness of the governance structure, the recent developments adopted at the 2011 CG meeting appear very likely to result in more effective and efficient management of the program. The addition of observers, and the possible expansion of the CG to new donors, are also welcomed as positive developments.

The TAG has been playing and continues to play a crucial and effective role in advising the CG in strategic discussions and decisions, and fulfills an essential function in that respect. Over the period evaluated, TAG advice generally focused on strategic issues, prioritization, and development of Business Plans. It is clear that a number of TAG recommendations were taken on board by the CG and acted upon by management. The relationship between TAG and ESMAP management was a difficult one, especially between 2006 and 2009. During that period, the TAG was seen by some as “second guessing” management, and too operational in focus. This led to a reform of the TAG in 2010, which since then has been perceived as an improvement in the management of this function. The present TAG is perceived as competent, with adequate expertise to provide the required assessment and advice needed by the CG. The skill set required for new members, as well as the terms of reference, are the same as those agreed upon at the 2010 CG meeting and are generally seen as balanced, and the selection process transparent.

As there is no representation of client countries at the CG, it is fair to say that their interests are not directly represented at that level. Although projects that request ESMAP funding are developed in partnership with client countries and through consultative processes in most cases, recipient country representation on the CG, to ensure that country voices are heard directly, especially in strategic discussions, would be a welcome development. This change would also be consistent with recent trends in representation in other governance structures for Bank-managed trust funds and for other multilateral funds. The 2010 revisions to the role of the TAG—and its limited travel budget—will likely limit future potential for TAG member country visits and thus the potential to bring their views on board, giving one more reason to assure adequate representation at the CG level to increase accountability vis-à-vis client countries. At the project and program level, to varying degrees, ESMAP activities typically plan and budget for participation, consultation, dissemination, and workshop feedback in the regions from a variety of stakeholder groups.

### *Sustainability*

ESMAP's annual compounded growth rate between calendar year 2006 and financial 2010 was 22 percent, including disbursements to AFREA (since 2009), and 16 percent between CY2006 and FY 2009, without AFREA; provisional figures for FY suggest a further jump to 30 percent. These sudden increases present a number of challenges, such as maintaining effective internal communications, controlling rapidly increasing budgets, and ensuring that staff recruitment keeps pace with growth.

While ESMAP-CG-TAG communications went through a difficult period during 2010, the position is now hugely improved. It remains to be seen whether management will take up some of the earlier TAG suggestions for improved information exchange, and what impact implementation of the M&E framework will have on this dynamic going forward. TTL-ESMAP communications appear to be relatively strong, with approval rates in the 90 percent range for a range of three parameters, and one response (communication of expectations and procedures) rating at 75 percent satisfactory or highly satisfactory. Communications through the regional coordinator as a primary contact appears to be the main reason for this relative lower rating.

Between the two business programs under this evaluation, budget allocation shifted from classification by thematic areas to program components, limiting direct comparison. However, there remains a wide divergence between the budget allocations in the 08-13 Business Plan and the actual disbursements over the first three years of the plan. Percentage spent on management and administration was at a very reasonable level of 10 percent in 2010.

While the total number of projects over the evaluation period doubled, according to annual reports, staffing growth went up by 33 percent, from 21 to 28 from 2006 to 2010. However, this figure does not include collaboration with institutional partnerships and work completed through the World Bank Energy Anchor group. Overall, however, it would appear that ESMAP staff is “stretched too thin,” with (World Bank-encouraged) high turnover.

Because demand for ESMAP products and services has kept up or exceeded its rate of growth, it would appear that the program has not yet reached its optimal resource level. Furthermore, the retraction of unspent funds allocated to regional units before adoption of the 08-13 Business Plan and the lack of full utilization of block grants do not appear to be valid indications that the regions have reached their capacity to absorb funds. As demand from client countries remains high, ESMAP will need to carefully consider how to establish a steady and diversified resource base that is not over-reliant on a limited number of large donors.

Since 2009, when ESMAP began to make a concerted effort to develop internal partnerships with the World Bank, for short- and long-term purposes, the number of ESMAP mission objectives and the extent to which they are tied to World Bank operations have increased significantly. From among the field visit country-specific projects, approximately half of ESMAP activities have a direct link to the World Bank. The internal partnerships has provided ESMAP with a broader and deeper base of expertise for specific functions such as outreach and specialized subsectors such as small and medium enterprises (SMEs). External partnerships have also increased significantly in number and the extent of overlap with ESMAP work programs, especially institutional partnerships such as with the Climate Development Knowledge Network (CDKN) and the United Nations Environment Programme (UNEP) Risoe Centre on Energy, Climate and Sustainable Development (UNEP-Risoe). Long-term local (regional or in-country) partnerships—beyond consultations and stakeholder workshops—are still few, with no apparent intent to grow. While it is yet unclear which partnerships will last as designed, and whether the additional demands of coordination and collaboration will put a strain on ESMAP’s relatively small core size, these new working relationships appear so far to be mutually beneficial.

ESMAP’s overarching stated goal (BP 2008-13) is to reduce poverty and promote environmentally sustainable development by enhancing client capacity on the design and execution of energy policies and programs. However, the desk review, interviews, and mission visits have indicated that the energy poverty objective is least likely to be affected by ESMAP activities, and suggests instead that increased energy security is the most significant development impact of ESMAP’s activities. This is in large part a reflection of the fact that energy poverty impacts tend to be longer term and less direct, while energy security is a broad issue upon which practically all ESMAP activities can be expected to have at least some impact. Client country and stakeholder perceptions of ESMAP’s development impacts vary widely by country and region, in recognition, character, and degree of effectiveness. In countries like Tanzania and India, for example, development impacts are strongly perceived but broadly attributable to ESMAP, whereas in Morocco and Moldova, for example, more technical work on policy and regulatory input have a limited client base with a very clear link from outcomes to ESMAP studies and products, but because of their upstream nature, have little to no perceptible wider development impact.

Given its core functions of “think tank” and “knowledge clearinghouse,” internal learning theoretically plays a prominent role in ESMAP’s planning and organizational development. Despite intent to emphasize internal learning, as outlined in the 2005-07 Business Plan, however, at the start of the evaluation period (2007-11), ESMAP showed little motivation or structure around learning from its experiences. Reforms took a secondary position to what was seen as more pressing administrative tasks, and there is little evidence that lessons from the previous business period were carried over into the new work plan. The situation more recently has improved significantly, and in the 2008-13 business period the new annual block grants and planned new M&E system were expected to foster internal learning and review. Although conducted as part of ESMAP’s input in the World Bank energy strategy development, and therefore not motivated primarily by a perceived need to promote internal learning, ESMAP has recently undergone

a substantial “horizon-scanning” exercise. It is still too early to assess whether recent changes to encourage internal learning have yielded expected results.

The identification of risks at a program and project level has been relatively weak, but it is likely to improve with the development of the M&E framework. The peer review process is a clear and valuable mechanism for the identification of risks, yet the process does not always bring forward the most pertinent risks. Because there has been no systematic reporting of risk management at a program or project level, it is difficult to ascertain how ESMAP has managed its risks. Nevertheless, ESMAP has convincingly identified and adapted to evolving global environmental trends, and has been successful in mapping out priorities for new activities that address both slow- and fast-paced changes. It has recognized the energy impacts of an increasingly urbanized world and proposed the Energy Efficiency in Cities Initiative to address this, alongside responding to shorter-term external shocks such as the credit crisis’s impact on the energy sector. Development of the clean energy theme has provided greater clarity to ESMAP’s work relating to climate change by bringing together a number of strands addressing climate change. ESMAP’s adaptability and responsiveness are mainly in response to clients and the regions, as well as to advice from CG and TAG. One of the potential challenges facing ESMAP is to balance this ability to adapt to the evolving global environment with the important task of keeping adequate focus at the same time on other long-term and slowly evolving but crucial issues in the energy sector, such as energy access/poverty.

## **Recommendations**

The Evaluation Team recommends the following to improve performance of ESMAP vis-à-vis each of the evaluation dimensions covered.

### *Relevance*

1. While continuing to adapt to changing global and regional concerns (for example, steady high oil prices, new opportunities offered by natural gas, gender issues), ESMAP should maintain a clear and well-delineated area of concentration in order to avoid overextending resources, including funding and expertise. ESMAP should reinforce its position in those areas with greatest gain relative to need and its comparative advantage, such as with global cross-sectoral work and well-targeted innovative tools and models.
2. In order to keep a stronger orientation on strategic-level focus, ESMAP program objectives should be more clearly and systematically referred to in project planning documents and products/outputs. Clarity and consistency are especially important to integrating new programs in the Business Plan, in particular through relevant wording in the names of the new programs and well-identified positioning within the program and result framework.
3. ESMAP should pursue and reinforce efforts to mainstream gender and social aspects into project planning and implementation, for example, by integrating social and gender issues in project templates (Project Concept Note, Project Summary Form), and implementing the follow-on recommendations from the workshop(s) under the Gender & Energy Development Strategies Program. M&E reporting should include gender-disaggregated and social indicators at project level, in order to monitor actual results.

### *Effectiveness*

4. ESMAP continues to need a comprehensive communications and knowledge management plan and dissemination protocol for papers, reports, and other activities. Implementation of such a plan will not only improve visibility, it will also advance the reach of outputs and outcomes by engaging a wider audience.
5. In order to account for and track progress along key ESMAP high-level objectives, management must either devote further resources to identifying a standard methodology for assessing the quality and potential of upstream activities and products, or increase the depth and frequency of impact-assessments of follow-on results long after project closing, or both.

*Efficiency*

6. In order to collect and assess meaningful results on efficiency of ESMAP operations and management, ESMAP should improve project-level reporting on outputs, costs, and outcomes and link this improved reporting to expected and actual cost data.

*Institutional Arrangements and Management*

7. Building on the work that has already been done over the current Business Plan period to streamline and ensure a more coordinated approach to business and work planning, the CG meeting structure and agenda should be adjusted. It should accommodate the need for more donor interaction to discuss strategic issues among donors themselves as a first step during meetings, and to allow for a consolidated discussion of such issues with ESMAP management as a second step.
8. ESMAP should expand the representation on its CG, not only to emerging donors, but also to integrate recipient country representation. This would ensure that their views are carried directly into the strategic-level discussions and decisions on the future of the program and into an enhanced North-South dialogue framework. Furthermore, ESMAP should consider the need to continue to integrate recipient country perspectives from different categories of stakeholders directly in TAG assessments and provide the TAG with the resources required to ensure this.
9. The Evaluation Team echoes concerns already expressed by the TAG in 2011 and recommends that a more predictable pledging and contribution system by donors under a multiyear framework be instituted. It would go a long way in making human resources, business, and activity planning more in line with evolving and emerging needs in the energy sector.

*Sustainability*

10. ESMAP should strengthen its process of risk identification and management through its new M&E system.
11. Two key areas are identified for broadening the beneficiary group. One is to increase and improve on the dissemination and knowledge-sharing activities of ESMAP at the country and regional levels, and second to improve knowledge sharing with the donor group. ESMAP can make improvements by making more information publicly available, through translations into local languages, through South-South exchange, by extending the reach of dissemination workshops, and finally by promoting ESMAP's website. Knowledge sharing with donors could include regular workshops and advice provision to bring more dynamism to the donor knowledge-sharing platform.

# 1. Introduction

## 1.1. Background

Energy is central to economic development, and there is a clear correlation between energy consumption and living standards. It is estimated that more than half of the world's population living in rural areas still has no access to modern forms of energy.<sup>1</sup> Whereas this situation has been known for a long time, the debates around energy in developing countries have become much more audible since climate change has come to the forefront of the international agenda.

**Access to energy services** is a fundamental prerequisite for poverty reduction and sustainable human development. Of the more than 7 billion people in the world today, 2.5 billion depend on traditional biomass for cooking and heating, around 2.6 billion live on less than US\$2 a day, a billion lack clean water, and 1.6 billion lack access to electricity. Millions of people, mainly in the developing world, are not connected to a main electricity grid.

**The dissemination of renewable energy technologies** is, alongside the improvement of energy efficiency, crucial to “prevent dangerous anthropogenic interference with the climate system,” the ultimate goal of the United Nations Framework Convention on Climate Change (UNFCCC). While developed countries still bear the responsibility for reducing their vast majority proportion of global emissions, the majority of emissions from emerging economies is energy-related and is set to grow significantly over the coming decades. Small off-grid renewable energy systems have been promoted for many years for isolated populations, but require tremendous scaling up in order to improve energy access on a more sustainable path. Together with improved technologies and declining costs of the technologies, renewable energy systems have garnered increasing attention as a key component of improved national and regional energy strategies.

**Energy efficiency (EE)** is defined as the decreasing use of energy per energy service without substantially affecting the level of service.<sup>2</sup> EE is seen as a major potential contributor to climate change mitigation, because it is generally cheaper to save 1 MW than to produce it, and there are significant nonenergy benefits to EE, such as reduced air pollution levels. Decoupling economic growth and energy consumption is possible and desirable, and should be promoted by means of leapfrogging, for which technology cooperation is needed.

**Enhanced international cooperation** is central to achieving the required energy transition, and the large number of stakeholders involved in the energy sector call for improved coordination in their interventions. The World Bank is one of the major financiers of energy programs in developing countries and home to a number of initiatives that build and shares best practices in energy, provide additional climate financing for energy projects, and target specific needs in the energy sector. The World Bank supports developing countries' efforts to provide cleaner and more stable electricity services to households and businesses through its financing instruments, policy advice, partnerships, and knowledge transfer.

In this context, the Energy Sector Management Assistance Program (ESMAP) is extending its engagement with client countries to encompass the nexus of energy security, energy access, and climate change, mirroring the changing landscape of global energy challenges. The program focuses “upstream” through three core functions—think tank, knowledge clearinghouse, and operational leveraging—all aimed at helping client countries make better informed choices, enhance capacity, and adopt cutting-edge solutions.

### **Regional energy challenges**

The rapidly evolving energy contexts in the different regions that ESMAP covers require a challenging adaptation capacity from ESMAP management. A summary of the main regional energy features is presented below, elaborated from the information available on the World Bank website and publications.

### Europe and Central Asia (ECA)<sup>3</sup>

Before the current economic crisis hit the Europe and Central Asia (ECA) Region in 2008, energy security was a major source of concern in Central and Eastern Europe and in many of the economies in the former Soviet Union. Energy importers were experiencing shortages leading to periodic brownouts and blackouts. An energy crisis seemed imminent.

The unexpected fall in economic activity resulting from the financial crisis staved off the energy crunch. But this is a temporary reprieve. As economic production begins to grow, the energy-hungry economies in the Region will again face shortages. This is especially true of ECA's energy importers, who will again be squeezed between their wealthier neighbors to the west and the big oil and gas suppliers in the east. The countries in the region can avert this potential energy crunch.

But given the long lead times associated with most energy investments, they need to act now. In addition, they need to act responsibly. This involves pursuing environment-friendly options to manage demand. It involves creating an enabling environment to attract the large investments that are needed. The countries also need to cooperate at the regional level to optimize supply security and cost-effectiveness.

### East Asia and Pacific (EAP)<sup>4</sup>

Despite impressive economic growth, more than 1 billion people still lack the most basic access to electricity and modern cooking solutions in the East Asia and the Pacific (EAP) Region. With approximately 170 million persons lacking access to electricity, EAP lags all other Regions in this respect except South Asia and Sub-Saharan Africa.

Meeting the enormous challenge of providing for universal access to electricity and modern cooking fuels and advanced cooking stoves in EAP requires the governments of EAP countries to work simultaneously on two paths:

- First, achieve universal electricity access by accelerating both grid and off-grid programs while employing appropriate policies and innovative technical solutions to reduce costs, improve reliability, and provide timely service to all households.
- Second, a major push is needed to increase access to clean cooking fuels (natural gas, liquefied petroleum gas, and biogas) and advanced cooking stoves, particularly for biomass in poor rural areas.

If the goal of universal access to electricity and modern cooking solutions is to be achieved by 2030, efforts to promote them must be scaled up massively.

### Latin America & the Caribbean (LCR)<sup>5</sup>

Electricity demand and CO<sub>2</sub> emissions are expected to double in the Latin America and the Caribbean (LAC) Region between 2008 and 2030. Although the financial crisis has temporarily slowed economic growth and growth in energy demand, it has also increased the challenge of obtaining infrastructure financing to increase capacity for future growth. Uncertainty in oil markets also has led to deep concerns over energy security. Development of domestic energy resources is deemed critical in oil-importing countries, notably renewable resources, such as hydro, wind, and solar power.

Other critical issues in the Region include: improved efficiency of energy supply and use; increased access to modern energy, especially in countries with low rates of rural access such as Peru, Bolivia, Nicaragua, and Honduras; and mitigation of climate change, including reducing carbon emissions by moving toward low carbon growth scenarios, especially in larger countries such as Mexico and Brazil. An additional challenge is to adapt institutional and regulatory frameworks in the energy sector to meet these new challenges.

### Middle East and North Africa (MENA)<sup>6</sup>

The Middle East and North Africa (MENA) Region has about 57 percent of the world's proven oil reserves and 41 percent of proven natural gas resources. MENA is also endowed with unique solar resources. However, great gaps exist between countries rich in natural resources and countries dependent on such resources. Many MENA countries

have close to 100 percent access to electricity, but an estimated 28 million people still lack access to electricity, especially in rural areas, and about 8 million people rely on traditional biomass for all their energy needs.

In many MENA countries, petroleum product prices are distorted, cost recovery in electricity is low, efficiency of supply leaves a lot to be desired, and energy intensity is relatively high. Carbon intensity is, on average, higher than in industrialized countries, and the potential for renewable energy is underexplored. The Region is also lagging in implementing reforms in the electricity sector and lacking in private sector investment.

Population growth, rapid urbanization, and economic growth are putting pressure on existing infrastructure and relatively high demand for new investments. Over the next 30 years, the total investment needs in energy in MENA are estimated at more than US\$ 30 billion a year, or about 3 percent of the Region's total projected GDP (which is three times higher than the world's average).

The continued high and volatile prices of fuels are straining the finances of many net importing countries, at both the government and the utility levels, and increasing costs of subsidized energy at home for the oil exporters.

#### South Asia (SAR)<sup>7</sup>

In South Asia, the demand for infrastructure, and particularly electricity, is growing rapidly. Improved electricity supply is a key to sustaining economic growth and improving social services. Electricity is still not available to about half of the Region's 1.5 billion population, especially in rural areas, which adversely affects efforts to reduce poverty. The lack of access to modern forms of energy prolongs the widespread traditional use of biomass, with adverse environmental and health consequences.

In this context, advancing electricity sector reforms, aimed at improving the efficiency and quality of electricity service, commercial viability of electricity industry, institutional and governance arrangements, accountability of service providers, and investment climate are critical to ensure sustained growth of the sector and optimal development and use of energy resources.

National energy systems are autarchic, with weak or nonexistent interconnections. There is indeed little cross-border trade in electricity, with the exception of India-Bhutan trade, and none in natural gas. Consequently, optimal development of the region's internal energy resources is hampered, and access to the significant energy resources in the neighboring countries denied, which increases the cost of energy supply and reduces energy security of the individual countries and of the Region as a whole.

#### Sub-Saharan Africa (SSA)<sup>8</sup>

Today some 25 countries in Sub-Saharan Africa are facing a crisis evidenced by rolling blackouts. Although the African continent is well endowed with both fossil fuels and renewable resources, these are not evenly distributed, creating windfall profits for some countries and exacerbating the crisis in others. Key issues in Africa's energy sector are:

- Low access and insufficient capacity—Some 24 percent of the population of SSA has access to electricity versus 40 percent in other low-income countries. Excluding South Africa, the entire installed generation capacity of SSA is only 28 gigawatts, equivalent to that of Argentina.
- Poor reliability—African manufacturing enterprises experience power outages on average 56 days per year. As a result, firms lose 6 percent of sales revenues in the informal sector. Where back-up generation is limited, losses can be as high as 20 percent.
- High costs—Power tariffs in most parts of the developing world fall in the range of US\$0.04 to US\$0.08 per kilowatt-hour. However, in SSA, the average tariff is US\$0.13 per kilowatt-hour. In countries dependent on diesel-based systems, tariffs are higher still. Given poor reliability, many firms operate their own diesel generators at two to three times the cost, with attendant environmental costs.
- Shortcomings in the power sector threaten Africa's long-term economic growth and competitiveness. The cost to the economy of load-shedding is equivalent to 2.1 percent of GDP on average.

## 1.2. Rationale for this evaluation

### 1.2.1. Changes within ESMAP

Besides the changing energy contexts described above, ESMAP has implemented numerous internal changes in its governance structure and management and its funding scheme, as well as within the profile of the projects funded, during the last five years (the period covered by the evaluation process is July 2006 to June 2011). The terms of reference for this evaluation for instance mention that:

- Under its current Strategic Business Plan 2008-13, ESMAP is taking due account of the changing landscape of global energy challenges, to encompass the nexus of energy security, energy access, and climate change.
- For operational flexibility in accommodating the multiyear funding requirements of all core programs, a new, single, programmatic multidonor trust fund (MDTF) was established in November 2009.
- ESMAP has also put in place a comprehensive portfolio monitoring and evaluation (M&E) system and a dedicated team to assess better the effectiveness of the core functions in terms of timely and sustainable delivery of client outcomes.
- The 2010 external desk review recommended that the Technical Advisory Group (TAG) membership be limited in size and diverse in terms of professional and technical backgrounds, and that the primary role of the TAG should be to provide strategic advice and avoid micromanagement.

The way those elements are being implemented shall be regarded with objectivity and will be assessed within the framework of this evaluation, in order to formulate recommendations for the future.

### 1.2.2. Summary of past evaluations

Since 1990, the evaluations and reviews of ESMAP activities described in table 1 below have been conducted.

**Table 1 - Summary of Past Evaluations**

Evaluation/Review	Year	Summary
<b>Evaluation of ESMAP</b>	1988	At the ESMAP donor conference in May of 1987, donors decided to undertake a comprehensive evaluation of the program, with the cooperation of UNDP and the World Bank. The task was delegated to the governments of Canada and the Netherlands, who appointed an evaluation team.
<b>Review of ESMAP</b>	1990	The review commission suggested a number of changes in program governance, most of which became effective during the year, including the establishment of a Consultative Group of Donors (CG) for ESMAP and the Technical Advisory Group (TAG).
<b>Donor-funded energy programs: Final Report of the External Review</b>	2000	Conducted by the Bank’s Operations Evaluation Department, this external review covered ESMAP, the Asia Sustainable and Alternative Energy Program (ASTAE), the Regional Program for the Traditional Energy Sector (RPTES), and the Africa Rural and Renewable Energy Initiative (AFRREI). The main purpose of this review was to examine the effectiveness of those programs; to confirm that they are properly coordinated and managed; to verify that they have clear objectives in line with the Bank’s evolving priorities in the energy sector; and to formulate recommendations to Bank Management and to Donors on the continuation of these programs and on possible ways to improve their coordination and effectiveness.
<b>Quality assessment of Global &amp; Regional Programs and Partnership (GRPPs)</b>	2009	Conducted by the Quality Assurance Group (QAG) of the World Bank, the purpose of the review was to assess the value for money for ESMAP’s analytic and advisory services and non-lending TA focusing on relevance, quality of the analysis, and likely impact. Under the assessment, the QAG suggested recommendations aimed at enhancing the impact of ESMAP’s work program and activities.



<b>Desk review of external advisory bodies of other Global Programs and Partnerships that are managed by the Bank</b>	2010	Commissioned by ESMAP management, in order to identify best practice governance structures of such groups. The purpose of the review was to help inform the CG in revising the TAG's terms of reference to maximize TAG's effectiveness
<b>ESMAP Portfolio Review 2005-2007: An Assessment of Impact of the ESMAP Portfolio</b>	2010	In February 2008, the TAG recommended that ESMAP carry out a retrospective review of the 2005-2007 Business Plan, by thematic area and region as well as key functions, to look at how issues had evolved and lessons learned, in order to contribute to future planning of the ESMAP portfolio. Given this recommendation, an independent assessment of the impact of the ESMAP Business Plan 2005-2007 was undertaken by the ESMAP team. The Evaluation was conducted in two phases. The first phase included a pilot rapid review of a few projects from the portfolio and a formulation of an inception report and evaluation design. The second phase included an implementation of the evaluation by the team and in depth assessment of the sampled cases of the portfolio.
<b>ESMAP Annual reports</b>	2006, 2007-2008, 2009, 2010	Annual reports provide portfolio status updates, and discuss trends and particular highlights for the reporting period. The primary audience of these reports is CG members and other partners.
<b>TAG's independent reviews of ESMAP</b>	2006 2007 2008 2009 2010 2011	Prepared annually for the CG, the TAG's assessments are based on an extensive review of ESMAP activities and interviews with ESMAP staff and other stakeholders, mostly the Bank's regional operations staff carrying out ESMAP-funded activities. The TAG reports directly to the CG, and TAG findings and recommendations are typically discussed at the annual CG meeting

Given the changes described above, both internally and externally, and in line with the Bank's Independent Evaluation Group's (IEG's) guidelines that the Bank GRPPs carry out an external programmatic evaluation every five years, the CG agreed, at the 2010 ESMAP's annual donors meeting, to implement a new external evaluation of the program. The specific objectives of this evaluation exercise are presented in the next section.

### 1.3. Objectives and scope of the evaluation

Through this mandate, the consultants have performed an independent review of the outcomes and achievements of ESMAP for the last five years (from July 2006 to June 2011, including the last year of the 2005-07 Business Plan and the first four years of the 2008-13 current Business Plan).

In line with the learning objective of the exercise, the evaluation process has involved stakeholders at all levels and beneficiaries, and included regular consultations with ESMAP staff, the program manager, and several members of the CG during inception and completion of phases on design, methodology, tools, and findings. By informing the CG and the Bank/ESMAP management, this evaluation process aims to improve the program's effectiveness and provide relevant analyses influencing future strategic planning.

As stated in the terms of reference (ToR) (Annex 7), the primary objectives of the evaluation are:

- Assess the effectiveness of ESMAP as a global TA program
- Assess the major factors that have influenced results either positively or negatively
- Draw up key lessons learned
- Recommend how better to meet the objectives of the program. In addressing these objectives, the evaluation will assess what impact ESMAP has had in helping to achieve poverty reduction in client countries.

The evaluation process has therefore considered the five Development Assistance Committee (DAC) criteria, that is, the relevance, effectiveness, and efficiency of ESMAP's mission and related business plans (program-level

effectiveness and results, including governance, country-level, and activity-level performance of ESMAP's portfolio), and strategy for continued sustainability of the program, including resource mobilization and financial management. ESMAP's impacts on poverty reduction in client countries were also considered by the Evaluation Team. Finally, overall institutional arrangements were deeply assessed in terms of relevance, effectiveness, and efficiency.

The evaluation questions provided pages 6-9 of the ToR have driven the evaluation process, as detailed in the next sections of this report and in the proposed evaluation matrix (Annex 1).

## 2. Evaluation approach and methodology

The evaluation was undertaken in three phases: (i) the inception phase, which was meant to plan and scope the evaluation and develop the evaluation tools; (ii) the data collection phase, which included extensive documentation review, surveys, interviews, and field visits; and (iii) the analysis and reporting phase, during which the team synthesized and analyzed all the collected data and prepared the evaluation report.

### 2.1. Frame of reference for the evaluation

This section presents a reconstitution of the intervention logic for ESMAP as a tool for grounding the operational analysis framework (evaluation questions, judgment criteria, indicators, and source of information described in Annex 1). This framework will be used as a tool for structuring, collecting, and analyzing information for the whole evaluation process.

Based on the preliminary documentation review (ESMAP Business Plans, annual reports, TAG reports, and other recent documents and presentations provided at the evaluation launch meeting at ESMAP headquarters in October 2011), the Evaluation Team reconstituted the intervention logic (see Annex 2) for ESMAP in an impact diagram, which includes the expected outcomes, outputs, and activities.

### 2.2. Inception phase

During this phase, the Evaluation Team refined the final methodology and the work plan and formulated proposals regarding sampling, survey, field visits, and overall organization of the evaluation exercise and methodological approach. The team also prepared a detailed evaluation matrix (Annex 1) that served as the main data collection tool during the assignment.

#### 1. Preliminary literature review

The purpose of this initial review was to provide context for the evaluation, as well as the necessary data for refining the methodology and establishing the evaluation matrix.

#### 2. Kick-off meeting in DC, mission scoping, information collection, and exchange of data

Soon after the contract signature, the Evaluation Team traveled to DC in order to meet with the ESMAP Team, including management, regional coordinators, and other staff. The meetings organized were used to explore a number of issues related to ESMAP history, organization, and strategic business plans, in order for the team to understand the overall context surrounding ESMAP. Methodological issues and expectations from the evaluation exercise constituted another important subject, in order to clear up any confusion that might exist regarding the use of DAC criteria, terminology, scope of the evaluation, and so forth, and to clarify the sampling criteria for case study countries, use of the online survey tool, and other items.

This visit also allowed the team to collect a number of key documents and meet in person and exchange with key staff at the Bank (in particular ESMAP management, operation officers, regional coordinators, and program team leaders), allowing a strong and early involvement of ESMAP staff in the process.

#### 3. Refining the methodology and preparing the inception report

On the basis of these first two stages, the Evaluation Team was then in a position to refine the methodology outlined in the ToR. Inter alia, the team gave particular attention to the items described below.

##### ▪ *Organizing the questions*

As noted above, there are five sets of questions prominent in the ToR. All are worthy of attention in different parts of the final report. The Evaluation Team thus undertook some restructuring of the evaluative questions following

development of a common understanding of the intent behind each of the five sets of questions identified above. This is translated into the evaluation matrix presented in Annex 1.

- *Preparing the sampling methodology*

The team exchanged views and opinions in order to define a sampling methodology for desk review and field visits adapted to the constraints of the evaluation and its timeframe. Based on this initial discussion, and subsequent exchanges, the criteria used for the desk study sampling (further described in Annex 4) are:

1. **Sample Size:** A sample size of 50/~300 projects in the portfolio
2. **Geography:** A geographically representative mix of global, regional and by country, and split by region
3. **Project Phase:** At least 2/3 completed projects with the rest ongoing
4. **Themes/Activities:** A representative mix of the types of portfolio activities and products.

Furthermore, the criteria for the field visits were to complement or illustrate the desk review findings and include:

1. **Geography & Sample Size:** At least one country from each of the six ESMAP/World Bank regions ( EAP, ECA, LAC, MENA, SAR, SSA), including a proportionately representative (to the portfolio) sample of regional projects (for which only some national components could be visited in given countries, not the entire project).
2. **Project Phase:** The majority of activities to be reviewed were to be completed projects in each of the Regions, supplemented by additional ongoing projects where available.
3. **Themes:** A representative mix of ESMAP activities (energy access, energy efficiency, energy assessment and strategy, renewable energy, and market transformation) when viewed across all regions, with at least one AFREA project.
4. **Output:** A representative mix of types of outputs (strategy report, policy reform, capacity development, energy assessment) when viewed across all regions.
5. **ESMAP Presence in Country:** At least two field visits to countries with a long-term, sustained relationship with ESMAP, and at least one field visit to a country with a relatively new portfolio of ESMAP activities.
6. **Performance:** A mix of well-performing and more challenging projects.
7. **Accessibility:** Project sites and stakeholders that are relatively easily reached.

Based on these criteria, the Evaluation Team put together two sets of country field visit options of closed projects for the ESMAP management team to choose from. The final list of field visited countries is: India, Moldova, Morocco, Peru, Philippines, and Tanzania.

- *Preparing the inception report, evaluation matrix, and work plan*

Based on the preliminary literature review and first meetings in DC, the Evaluation Team prepared an inception report reflecting the improved understanding of the assignment and incorporating a detailed work plan for the mandate. In particular, the evaluation matrix represented an important structuring tool for this whole evaluation process. Building on the evaluation questions provided in the ToRs for this evaluation, it details the judgment criteria on the basis of which answers to these questions were to be formulated, and the relevant qualitative and quantitative indicators that were meant to inform these criteria.

As there may not be information or data on all indicators, not all could be used to the same extent in the final analysis of the portfolio. Furthermore, although the desk review sample is of a statistically significant size out of the total universe of projects under the evaluation period, not all evidence gathered in this matrix will necessarily lead to statistically significant analyses. The evaluation matrix also provided the possible data collection methods/sources of information to be used to inform the value of each one of these indicators. For each evaluation question, the referred level of analysis based on the ESMAP reconstituted logic (Impact, Outcomes, and Outputs), and the OECD/DAC evaluation criteria covered by the question were also identified.

## 2.3. Data collection phase

### 4. In-depth documentation review

The purpose of this phase was to conduct an in-depth analysis of the ESMAP key documents, files, program and activity documentation, operational management and governance systems, performance measurement and M&E system, and the results achieved to date. Given the large quantity of available documentation, project-level information was subject to relevant sampling and analysis, always focusing on responding to the evaluation questions.

### 5. Online survey and key informants interviews

In order to integrate experiences from a rather large number of World Bank task team leaders (TTLs), an online survey (using *FluidSurveys*<sup>9</sup>) was launched at the beginning of the assignment. As discussed during the kick-off meetings in Washington, DC, the survey specifically targeted ESMAP task team leaders at the Bank, since many stakeholders are unable to distinguish between ESMAP activities and World Bank activities. A survey of other stakeholders was considered impractical because ESMAP and the World Bank provide a bundled service. The information generated from the TTL survey complemented more in-depth information collected during interviews, providing information from a larger number of TTLs. Out of the 127 TTLs solicited, 67 complete responses were posted on *FluidSurveys*, giving a response rate of 53 percent.

Besides the survey, 30 people (excluding interviews in case-study countries) were interviewed. Selected key informants (ESMAP core staff, Bank operations staff and sector managers, ESMAP regional coordinators and TTLs) were interviewed in Washington or by phone, and other informants, notably past and present TAG members and CG donor representatives as well as a former ESMAP manager, were contacted by phone for direct, semistructured interviews as well. Face-to-face meetings in Washington were particularly important in order to conduct in-depth interviews with the management team and relevant World Bank staff. The relevant questionnaires and discussion guides were derived from the evaluation matrix.

### 6. Field work and country case studies

Visits to six case-study countries allowed the Evaluation Team to deepen its analysis and understand the key determinants of the program implementation history, the strengths and weaknesses of the ESMAP programming as regards country/local situation and context, and the limits to the local challenges and possible ways for improvement. This also involved an analysis of the strengths and weaknesses of existing governance and management arrangements from the perspective of the partners.

Much of the information required came from semistructured interviews with all key actors and relevant stakeholders involved in or concerned by the ESMAP activities. Onsite visits to relevant locations illustrating ESMAP's interventions and exchanges with beneficiary communities were also necessary to collect primary information on their views and perspectives as regards the ESMAP value added. Such visits allowed the team to assess the degree to which ESMAP interventions have influenced local policies/decisions regarding energy issues, and what are therefore the likely impacts of those interventions.

Country visits allowed for meetings with the main stakeholders involved in/concerned with ESMAP activities at the country and project levels. They focused on ESMAP partners (national counterparts, partners from the private sector, nongovernmental organizations [NGOs], and so on) and beneficiaries, but also included visits to other organizations working on energy security, energy access, and climate change in the country to get an outsider's perspective. This allowed for in-depth analysis of the context around the ESMAP implementation process in the country, its relevance, effectiveness, efficiency, impacts and sustainability challenges, as well as the level of involvement of the different stakeholders and concerned communities.

The six country visits were conducted in parallel and successively. The first three were conducted jointly by consultant pairs, so as to establish a common approach and information-gathering process; the three other country visits were conducted separately. Case-study summary reports have been drafted for internal purposes only as a basic

data-sharing tool among Evaluation Team members, to be used during the data analysis phase. Methods included semistructured interviews, focus group discussions, matrix ranking, and direct observations. Qualitative data were triangulated using these different methods.

## 2.4. Analysis and reporting phase

### 7. Data analysis

At this stage, the team compiled and analyzed all collected data on results achieved and gaps reported, if any. This stage included comprehensive and statistical analysis of key relevant quantitative data. At this point the team rigorously reviewed outcomes and ensured the full integration of strategic elements of the field work and documentation review. All members of the team were involved in the two major features of this stage: verification of data and articulation of key findings, lessons learned, conclusions, and recommendations.

#### ▪ *Primary triangulation of information*

In order to ensure that the information was collected and cross-checked by a variety of informants, data triangulation (confirmation from various sources) was a key tool for the verification and confirmation of the information collected and for support of the findings presented.

#### ▪ *Shaping key findings, preliminary conclusions, lessons learned, and recommendations*

Building on the analysis of context, the team documented the reported achieved results, in order to: (i) confirm some qualitative short-term (inputs<sup>10</sup>) and mid-term (outcomes) results, and, (ii) facilitate the interpretation of key findings and lessons learned, as well as the formulation of subsequent preliminary conclusions.

### 8. Preparation of the first draft evaluation report

For the purpose of a fact check from ESMAP, the team first prepared a comprehensive preliminary draft evaluation report, structured in a way that enabled it to evolve into a draft final report. The preliminary draft evaluation report was structured around the above-mentioned five sets of key questions in the ToR. It integrated elements from the literature review, the document and file review, interviews, data analysis, and answers to the evaluation questions. It also integrated the recommendations from the Evaluation Team.

### 9. Final draft evaluation report

On the basis of the analysis conducted and fact checking from ESMAP management on the preliminary draft evaluation report, a final draft evaluation report is hereby submitted to the CG, ESMAP, and TAG three weeks before the CG meeting of May 2012 (May 8-10).

### 10. Presentation of preliminary findings and recommendations at CG meeting

The evaluation results were presented at the CG meeting in May 2012. Besides written comments received on the draft evaluation report from the CG, ESMAP, and TAG, additional comments from the CG meeting participants have been duly collected, discussed and further integrated into the final evaluation report.

### 11. Final evaluation report

This final evaluation report includes, whenever possible, clarification points, factual information, as well as relevant observations, views, and suggestions expressed by the CG.

## 3. Analysis and findings

### 3.1. Relevance

#### *3.1.1. Consistency of ESMAP objectives with global/regional challenges and priorities of client countries*

***To what extent are ESMAP's objectives and program design consistent with current global/regional challenges and concerns in the energy sector and with the needs and priorities of its client countries and groups?***

Overall, ESMAP's objectives and program design are consistent with current global/regional challenges and concerns in the energy sector. During the last two relevant business periods, ESMAP has integrated an increasing number of global and regional issues—such as energy security, renewable energy, climate change and energy efficiency, and gender and energy—into its main areas of focus, with strong coherence to program activities. ESMAP has demonstrated its capacity to adjust its design or strategy of thematic areas, or type of products, because of new information or client concerns. However, in order to remain operationally and strategically viable, ESMAP's main areas of focus will need to remain clear and limited in number, so as to avoid confusion and overstretching of limited resources.

ESMAP's objectives and programs are also consistent with the needs and priorities of its client countries and, though less often, to specific groups, bearing in mind the following lessons learned: an excellent knowledge of a country's context and its priorities in the energy sector is crucial to avoid responding to the priorities of a particular group or administration. Those priorities may differ from the greatest area of need or concerns of the client country; in so far as possible, nongovernment groups need to be consulted and involved in the study processes, and their particular needs and priorities duly considered in decision making that uses ESMAP products or activities as input.

#### **Extent to which ESMAP addresses identified global/regional challenges in the energy sector**

In World Energy Outlook 2011,<sup>11</sup> the International Energy Agency (IEA) identifies the following main global challenges, concerns, and trends in the energy sector:

- **Climate Change:** We cannot afford to delay in tackling climate change. New energy efficiency measures make a difference, but much more is required. The most important contribution to reaching energy security and climate goals comes from the energy that we do not consume.
- **Oil Prices:** Rising transport demand and upstream costs reconfirm the end of cheap oil.
- **Natural Gas:** Factors on both the supply and demand sides point to a bright future, even a golden age, for natural gas.
- **Renewable Energy:** Capital-intensive renewables are being pushed toward center stage with environmental benefits and minimal fuels costs.
- **Coal:** Coal has met almost half of the increase in global energy demand over the last decade. Widespread deployment of more efficient coal-fired power plants and carbon capture and storage (CCS) technology could boost the long-term prospects for coal, but there are still considerable hurdles.
- **Nuclear Energy:** While creating opportunities for renewables, a low-nuclear future would also boost demand for fossil fuels.
- **Energy Access:** Achieving energy for all will not cost the earth. It is estimated that, in 2009, around US\$9 billion was invested globally to provide first access to modern energy, but more than five times this amount, US\$48 billion, needs to be invested each year if universal access is to be achieved by 2030. Some existing policies designed to help the poorest miss their mark. Only 8 percent of the subsidies to fossil fuel consumption in 2010 reached the poorest 20 percent of the population. Universal access by 2030 would increase global demand for fossil fuels and related CO<sub>2</sub> emissions by less than 1 percent, a trivial amount in relation to the contribution made to human development and welfare.

Within the United Nations (UN) system, the United Nations Development Programme (UNDP) considers that “Energy services are intrinsically linked to poverty reduction, climate change, and the Millennium Development Goals (MDGs). Unless urgent action is taken, lack of modern energy access will become a bottleneck to achieving the MDGs (...) Access to affordable and reliable modern energy services is paramount to broadening people’s opportunities and choices.”<sup>12</sup> In the same spirit, UN-Energy, an interagency mechanism to promote coherence in the United Nations System’s response to energy challenges, establishes three main clusters for action: energy access (grouping energy security and poverty reduction aspects), energy efficiency, and renewable energy (which addresses both climate change and energy security aspects). Therefore, ensuring access to secure energy, while addressing climate change concerns, is the equation to be solved for the energy sector globally.

**ESMAP’s key objectives and energy sector challenges**

ESMAP’s 2005-07 Business Plan was formulated at a time when there was momentum for reaching the MDGs, a growing trend in higher hydrocarbon prices, a shift in the distribution of world demand for energy, and the move toward a low-carbon global economy with implementation of the Kyoto Protocol. The core objective of the 2005-2007 Business Plan was to secure energy for poverty reduction, which is at the center of ESMAP’s activities and operational framework.<sup>13</sup>

While the world’s attention was focusing on climate change, preparing for the Copenhagen COP15 international negotiations, ESMAP’s Business Plan 2008-13<sup>14</sup> pushed for the integration of climate change/low-carbon challenges, and identified three main global challenges for the program to address:

- **Energy Security:** Sustained increases in fossil fuel prices have increased the vulnerability of countries with large net oil imports, in some cases reversing poverty reduction trends. In addition, the global financial crisis has reduced the availability of funds for energy sector investments, which has a direct impact on low- and middle-income countries’ economic growth, employment, and access to essential infrastructure services for the poor. This, in turn, can delay the achievement of the MDGs.
- **Energy Poverty:** It is now clear that meeting the MDGs will be difficult for many developing countries. In this context, environmentally sustainable energy development will be an even further challenge on top of meeting the basic needs of a significant portion of the global population.
- **Climate Change:** Energy is at the center of the problem and is the solution to limiting greenhouse gas emissions. Proactive adaption is recommended to address energy sector vulnerabilities.

Global challenges are nuanced at the regional level, accounting for the particular context of needs, adversities, and opportunities of each region and country. Key regional issues such as conflicts, political and economical cooperation strategies, and bioclimatic events need to be duly considered by program designers and ESMAP management.

As illustrated in table 2 below, there is strong coherence between ESMAP objectives as detailed in the two Business Plans (2005-07 and 2008-13) over the evaluation period of 2007-11, and identified global and regional challenges and concerns.

**Table 2 - Coherence Matrix between ESMAP Objectives and Challenges in the Energy Sector**

		ESMAP objectives		
		Energy Security	Energy Access	Clean Energy
Identified global or regional concerns in the energy sector	Generalized access to affordable and reliable modern energy services	√	√	
	Energy and gender issues		√	
	Efficient coal-fired power plants and carbon capture and storage technology	√		√
	End of cheap oil	√		
	Golden age for natural gas	√		√
	Climate change and energy efficiency	√		√
	Sufficient energy production and resources in all regions/countries	√	√	
	Development of renewable energies	√		√
	Adaptation to climate change of energy production facilities	√		√
	Sustainable management of natural resources	√	√	√
	Indoor air pollution		√	√



ESMAP's 2005-07 Business Plan aimed to reflect the World Bank's commitment to address the energy issues in a manner that will ensure progress toward energy security, toward the transition to a low-carbon economy, toward accelerating access by the poor and in the poorest economies to reliable modern energy, and toward improving the performance of energy markets and the sector governance.<sup>15</sup> The 2008-13 Business Plan components and subcomponents are clearly aligned to at least one of these key objectives/strategic priorities (termed as energy security, energy poverty, and clean energy). For example:

- **Component 1: Energy Assessments and Strategy Programs (EASPs)**
  - Subcomponent 1A: Country Energy Sector Vulnerability Assessments Program (CESVAP) (energy security)
  - Subcomponent 1B: Regional Energy Integration Strategies Program (REISP) (energy security)
  - Subcomponent 1C: Low Carbon Growth Country Strategies Program (LCGCSP) (clean energy)
- **Component 2: Pro-Poor Energy Access-TA Programs (PEA-TAP)**
  - Subcomponent 2A: Energy SME Development Strategies-TA Program (ESMEDS-TAP) (energy poverty)
  - Subcomponent 2B: Rural Electrification Strategies-TA Program (RES-TAP) (energy poverty)
  - Subcomponent 2C: Gender and Energy Development Strategies-TA Program (GEDS-TAP) (energy security, energy poverty, clean energy)
- **Component 3: Energy Efficient Cities Initiative (EECI):** (energy security, energy poverty, clean energy)
- **Component 4: Renewable Energy Market Transformation Initiative (REMTI):** (energy security, clean energy)

There are four work program themes that cross-cut ESMAP components and subcomponents: energy assessment and strategy (EASP), energy access, clean energy, and energy efficiency. Over the evaluation period, the portfolio of projects is distributed as shown in table 3 below.

**Table 3 - Project portfolio distribution within ESMAP's work program themes**

Theme	Total Portfolio Projects	Total Disbursements
<b>CLEAN ENERGY</b>	86	\$ 21 625,26
<b>EASP</b>	104	\$ 16 918,99
<b>ENERGY ACCESS</b>	76	\$ 22 582,09
<b>ENERGY EFFICIENCY</b>	45	\$ 7 019,13
<b>Grand Total</b>	<b>311</b>	<b>\$ 68 145,46</b>

The desk review provides evidence to confirm a high level of coherence between ESMAP objectives and global and regional concerns. Planning documents generally establish a clear link between project objectives and global challenges, and a large majority of completed projects reviewed directly or indirectly address those global/regional challenges. Some projects also contribute to more than one of these challenges, such as energy efficiency and renewable energy projects that also indirectly addressing climate change. However, a number of projects do not clearly address regional or global challenges, but usually their expected impacts on the energy sector are linked to, for example, improving access to energy, energy security, which in turn reduce poverty and help meet the MDGs.

The country case studies have also revealed ways in which ESMAP projects and activities seek relevance with national and regional context. In Tanzania, for example, ESMAP has focused its activities on energy access, as this is a major national priority and a major pillar of the Poverty Reduction Strategy Paper (PRSP) for Tanzania. By doing so, the program is fully aligned with global concerns on poverty reduction and the multilateral strategy to meet the MDGs. In Morocco, ESMAP's main focus is on energy reforms, in particular, those favoring the development of renewable energy as a means to energy security. In Peru, ESMAP has mostly concentrated on rural electrification,

most directly addressing energy access and energy poverty. In Moldova, ESMAP activities sought to address critical financial and institutional issues surrounding the capital city's combined heat and power system, in order to reach longer-term goals of energy security and reliability through improved availability, quality, and efficiency of supply and services. In the Philippines, activities concentrated on renewable energy development and market reform, which falls within ESMAP's clean energy and energy security objectives. Finally, in India, ESMAP has mostly provided support to the development of clean energy and energy efficiency, which are directly tied to climate change and energy security in the country.

#### **Box 1 - Regional Importance of Morocco Renewable Energy Development**

Morocco has no hydrocarbon energy sources in its territory but faces an increasing demand for energy. On the other hand, the country has great potential for wind and solar energy. As such, the development of renewable energy as a means to increase and secure its electricity supply has been a key development objective. The national strategy also aims to position Morocco as a regional leader in green energy production and supply, alongside developing a large array of services and industrial subcontractors around energy production. The demand for renewable electricity is growing at a regional level, in part because the European Union has committed its member states to specific supply targets; renewables therefore represent an important potential export market for the region.

#### ***Adapting thematic areas to changing global concerns***

The Business Plan for 2005-07 initiated a considerable change based on the lessons learned from implementation of the 2002-04 Business Plan. At the donors' request to maintain ESMAP as an instrument to catalyze their energy programs to achieve greater results than when executed independently, and based on the ideas emerging from continued formal and informal dialogue with client country representatives, donors, private sector, NGOs, World Bank, and other colleagues, four thematic areas were proposed:

- Two areas that represent a deepening of work initiated in previous Business Plans: energy-poverty and market efficiency and governance
- Two new areas to address challenges: energy security and renewable energy.

The 2008-13 Business Plan priorities have been adjusted on the basis of increasingly formidable global circumstances. Growing concerns about climate change, specifically preparation for Copenhagen COP15, have pushed forward the need for cleaner energy and energy efficiency. This Business Plan retains two priorities from the previous plan—energy security and energy poverty—and has introduced one on climate change in order to clearly orient the program's activities toward this major challenge. This change is justified in the Business Plan as follows: "Consensus has been reached on the need for global scale, immediate, multilateral actions to limit greenhouse gas (GHG) emissions along the energy production chain and in its end use while, simultaneously, promoting sustainable economic growth and poverty reduction in developing countries."

On a program basis, Business Plan 2008-13 shows how it has responded to challenges and requests from clients, for example, through the CESVA and the EECI programs:

- Country Energy Sector Vulnerability Assessment Program: "In response to demand from client countries, ESMAP will increase support for country-specific energy assessments," and "In response to the financial and credit crises, ESMAP will support client countries that need to carefully reassess and prioritize their use of public resources, protect existing energy sector assets, and maintain long-term investments in strategic energy infrastructure."<sup>16</sup>
- Energy Efficient Cities Initiative: "Following a stocktaking exercise of representatives from 10 cities and 8 (internal and external) partner organizations ESMAP launched a multiyear programmatic initiative—the Energy Efficient Cities Initiative."<sup>17</sup>

Table 4 below summarizes some of the major differences, described above, between the two Business Plans covered by the evaluation period of 2007-11.

**Table 4 - Business Plan 05-07 and 08-13 Comparisons**

<b>Comparative advantages</b>	1. A global program 2. Recognition as an innovator and knowledge builder 3. Response capability 4. Honest broker status	1. Well positioned to exploit synergies across the World Bank Group 2. Leverage expertise of the global energy practice 3. Engage stakeholders and energy champions from client countries	ESMAP went from global innovator to strategic leveraging partner
<b>Core purpose/global challenges addressed</b>	Securing energy for poverty reduction	1. Energy security—diversify energy supply; reduce energy sector vulnerability to global crises 2. Energy poverty (also called “poverty reduction”)—energy access for the poor; enhance poverty reduction impacts of electrification, energy efficiency of systems 3. Clean energy (also called “climate change”)—efficient cities, deploy RE technology	Expanded from one aspect of energy poverty to three distinct areas
<b>Core functions</b>	1. Think tank 2. Knowledge clearinghouse 3. Operational leveraging	1. Think tank 2. Knowledge clearinghouse 3. Operational leveraging	Same
<b>Thematic Programs</b>	1. Energy security (new) 2. Renewable energy (new) 3. Energy poverty (old) 4. Market efficiency and governance (old)	1. Energy assessment and strategy programs 2. Energy Efficient Cities Initiative 3. Renewable energy market transformation (REMTI) 4. Pro-poor energy access TA programs (PEA-TAP)	Still four each; two are alike, but more recent BP turns governance into assessment and strategy and puts energy security under a global challenge.
<b>High-level outcomes</b>	n/a, fall under each program rather than ESMAP as a whole	1. Influence World Bank lending/strategy 2. Inform/enhance government policy 3. Build or enhance client capacity 4. I Introduce cutting-edge solutions to the client	n/a
<b>Outputs/products</b>	n/a, fall under each program rather than ESMAP as a whole	Reports, studies, assessments, policy notes, toolkits/databases/how to guidance, capacity building/knowledge management (KM)	Major “product lines” now: TA, ESW, KM, other

Therefore, ESMAP has demonstrated its capacity to adjust its design or strategy of thematic areas or type of products because of new information from clients on challenges or concern. As it appears, during the last five years, ESMAP has integrated more and more global and regional issues, for instance, energy security, renewable energy, climate change and energy efficiency, and gender and energy, into its main areas of focus, providing a strong coherence between those issues and the program’s activities. However, there is a risk of spreading staff and resources over too many different themes, creating confusion among clients and diluting expertise. Interviews conducted revealed, for instance, that many stakeholders lack a clear vision of ESMAP’s objectives and main areas of focus, because of repeated modifications and possibly inappropriate communication. This risk should not be overlooked in the discussions for the next Business Plan.

### **Extent to which ESMAP addresses expressed needs and priorities of client countries**

On the basis of the desk review and country case field visits, there is little evidence of a change in the issues of concerns to the clients before or after ESMAP interventions. Because ESMAP mostly works at a high government level, its counterparts generally have a good knowledge of the main challenges faced in the energy sector. Clients also often have a clear vision of what needs to be done, but change is difficult because of political or capacity limitations, for instance. Therefore, ESMAP support is often a welcome catalyst agent to launch a process of change, bringing its expertise, its notoriety, and experience, and its step-by-step methodologies.

However, there is ample evidence of client countries integrating ESMAP products into their own decision making, policies, regulations, and strategies. Such integration occurs at different levels.

- **At the decision-making level:** ESMAP facilitates greater awareness on how to deal with a specific energy issues, what kind of solutions can be implemented, and the potential ways forward. For example, in Morocco, the experience from other countries on gas subsidy reforms has been analyzed in a benchmark study highlighting best practices and risks associated with such processes. This work is of great value to decision makers in order to plan and pilot liquefied petroleum gas (LPG) subsidy reform in the country. Notwithstanding that nothing has been launched so far, the country visit revealed a strong awareness of the possible options and strategies for conducting reform, in particular, the need to launch a number of social/energy reforms ahead of the new possible subsidy system.
- **At the regulatory level:** ESMAP draft regulation proposals become integrated in national laws. In Peru, ESMAP work has permitted the integration of new tariff rules for small hydropower generation. In Morocco as well, ESMAP has strongly contributed to drafting the new renewable energy regulation.
- **At the administrative level:** Administration officers and government officials use ESMAP products, such as guidelines or decision-assistance tools. For instance, the Tool for Rapid Assessment of City Energy (TRACE) was tested by city officials in the pilot city, Gaziantep, Turkey, and then was used in Da Nang, Vietnam; Cebu, Philippines; and Surabaya, Indonesia.<sup>18</sup>

#### **Box 2 – “Integrating SMEs in Tanzania’s Rural Energy Initiative”**

A clear example of the integration of ESMAP products in national policies and plans is provided by the project “Integrating SMEs in Tanzania’s Rural Energy Initiative,” supported by ESMAP and the Swedish International Development Cooperation Agency (SIDA). Outputs from this project included a range of documents that were adopted by the Energy and Water Utilities Regulatory Authority (EWURA) and now form the regulatory basis for small renewable electricity projects. These documents included guidelines for project developers, standardized power purchase agreements, guidelines for tariff setting,

### ***National Governments***

National priorities on energy security, energy access, and poverty reduction are often very similar to ESMAP high-level priorities. Within the sample of projects of this evaluation exercise, ESMAP studies have been found generally to embrace national energy plans and strategies. At the country level, however, different situations may play out:

- The energy reform process is ongoing but needs specific support to catalyze the debates through knowledge inputs and to coordinate the brainstorming/exchange process thanks to thematic workshops and consultations from the different parties (Morocco).
- The national energy development objectives are clearly established but require the establishment of specific regulations and incentives in order to engage the private sector and development banks investments (Tanzania, Morocco, Peru).
- Considerable public and private interest does exist for a specific energy production in the country, but the government needs to establish a regulatory framework in order to control industrial development and avoid industry from developing in an ad hoc manner (biofuels in Mozambique);
- Poverty reduction strategies and rural electrification programs aim to increase access to energy, but solutions used so far have had little impact. ESMAP work and international experience help to consider different options for boosting access to energy the work on productive uses in Peru). For instance, ESMAP assisted the governments of Rwanda and Kenya in developing energy access scale-up plans, using geographic information system (GIS) tools and applying a sectorwide approach. The developed plans were adopted by the respective governments and presented at a donors’ conference. This helped the governments raise substantial funding that was channeled through a World Bank–financed project to implement parts of ESMAP-developed electricity access plans.

ESMAP interventions are generally demand-driven, with strong involvement of national counterparts, though a portion of that “demand” is also the result of a discussion process between the World Bank and the national government. This means that ESMAP studies generally do meet essential needs and fill an important information

gap for its client counterparts (typically a specific department in a given ministry), but may not be perceived by all stakeholders as responding to the most prominent or important priorities of a given government/country or other national stakeholders. This has been mentioned, for example, in Peru, where ESMAP's concentration on rural electrification and renewable energy tariffs appears very useful but is not acknowledged by all stakeholders as a primary concern of the country. However, this perception is highly dependent on individual opinion and does not illustrate a general view, which means that as long as broad and open consultation processes are properly conducted and considered, and designed projects do receive government's approval, ESMAP is fulfilling its role and responding to expressed needs in key areas of interest.

### ***NGOs and Other Actors***

Nongovernment groups (energy sector practitioners, civil society organizations [CSOs], NGOs, communities, local government) are not typically strongly involved in the work supported by ESMAP, in particular because ESMAP deals often with policy and regulatory issues at the national level of government. Careful consideration is therefore required so as to ensure proper nongovernment stakeholders' engagement and consultation within ESMAP activities. In Tanzania, for instance, nongovernment partners and beneficiaries were very positive about the Lighting Rural Tanzania project, citing the "bottom-up," private sector-driven design as being especially relevant to Tanzania's needs.

Nongovernment groups seem to be more easily involved in activities directly related to communities, particularly for investments with benefits that are physically visible. For example, in Peru, NGOs, energy sector practitioners, and the Ministry of Energy have successfully worked together on a project aimed at enhancing productive uses of electricity in rural areas. The full project was based on a close partnership between the Ministry of Energy, an implementing partner NGO that had been selected through a call for proposal, and the local power distribution company. Unique to this experience is the work through local NGOs as key partners in the pilot ESMAP project, instead of external expertise. This way, ESMAP has benefited from the strong local experience of the NGOs, gained from their longstanding work with the chosen communities. This has been a key contributing factor in the success of the program. In this particular case, the concerned NGOs are convinced that this support from ESMAP is fully in line with national priorities of rural electrification and poverty reduction, among other benefits.

However, it is the nature of ESMAP to deal with more complex regulatory and technical issues, at a higher level of decision making. ESMAP's work is less visible and does not necessarily provide direct concrete benefits at the community level, although its leveraging effect is often important at this level long after implementation closing. This is why nongovernment groups often do not know about ESMAP or do not distinguish ESMAP from the World Bank. The example of Moldova demonstrates that, even when ESMAP work is tailored to the needs of a particular government client, there is still a need to secure the consultation processes involving all relevant stakeholders throughout the analytical process in order to build momentum behind formulated recommendations. An extensive consultative process was implemented for more than two years on the topic of the "District Heating Restructuring" project in Chisinau, and the results of the study have been discussed and disseminated at a workshop in May 2011 (where the government expressed its preference) and in numerous bilateral meetings with most stakeholders both pre- and post-workshop. Despite this due diligence on the part of ESMAP, a relatively small number of key stakeholders, including (nonclient) government and nongovernment stakeholders, still did not see the final decision as coming from a set of all possible good options (and their respective trade-offs) that could be laid out by the study, but simply as the choice favored by the client.

Although information on NGOs' buy-in to national priorities is rather limited and difficult to assess, there are a number of examples where nongovernment groups' engagement in national priorities is strong. In Tanzania, for instance, the two AFREA rural lighting projects appear to have been embraced with enthusiasm by a wide range of private sector players, ranging from well-resourced international consultancies to local SMEs and social enterprises. The Peruvian example mentioned above is also a case where NGOs and regional power companies will continue developing "productive uses" projects on the basis of the ESMAP pilot project, simply because the methodology developed under the ESMAP pilot project responds to their objectives and is in line with national and regional priorities.

### 3.1.2. New business lines and priorities, and program objectives

#### ***How successfully has ESMAP identified and developed new business lines and program priorities? To what extent are the business lines and program priorities appropriate for achieving its objectives?***

Over the course of the evaluation period, new business lines and program priorities have been opened regularly to adapt to client needs and respond to its high-level objectives in an efficient manner. The CESVA and the GEDS programs are important initiatives from the last Business Plan; EECI was launched at the end of 2008, REMTI in 2009, and the most recent, the Results-Based Funding for Energy Sector Development, will run FY12-13. A number of tools have also been developed and proposed to clients: compact fluorescent lamps (CFL) program design toolkit (2009), TRACE (2010) and MACTool (2012).

New business lines and program priorities are generally very coherent with ESMAP's overall objectives, as most develop out of existing initiatives under longstanding intended outcomes. New initiatives draw on a large array of information sources, including lessons learned from previous ESMAP and World Bank operations, state-of-the-art expertise in the targeted (sub)sector, research, consultation with partners and stakeholders, exploratory missions, and household energy surveys.

#### **Extent to which ESMAP identifies and develops new business lines and program priorities**

Three main drivers for opening new work streams or modifying the main thematic areas have been identified from documentation review and interviews:

- **Clients' feedback and expressed needs:** Most of this information is channeled formally or informally through World Bank TTLs, but may also flow from workshops and other planned information exchange. For example, the recent EECI program is based on feedback from a Practitioner's Roundtable Discussion, held in October 2008, which was co-hosted with the World Bank's Urban Anchor, and at which client cities and potential partners shared examples of their energy efficiency activities, and of what work was still needed. Another example is the response given to the increasing demand for CFL-based Demand Side Management programs from all Bank Regions: the Bank's regional energy TTLs had expressed interest in ESMAP putting together the CFL program design toolkit through an internal brainstorming meeting on this topic, which was held in May 2008.<sup>19</sup>
- **Evident gaps in existing tools and programs:** Analysis of World Bank programs sometimes reveals important gaps to be filled, and this is often where ESMAP is most pertinent. Such initiatives usually have a direct impact on World Bank lending. For example, REMTI, launched in 2009, was designed to complement and leverage several existing and emerging multilateral initiatives, facilities, and funds within The World Bank Group and related international financial institutions.<sup>20</sup> Another example is ESMAP's work on the household energy sector over the past two years. As a result of a study revealing the very low World Bank lending percentage for access to clean cooking solutions, ESMAP supported another study that released a report entitled "Household Energy Access for Cooking and Heating: Lessons Learned and Way Forward." The report stimulated debate on how the World Bank's sustainable development network can help mainstream household energy in World Bank energy lending. Also, with the renewed momentum on household energy for cooking, brought out by the creation of the "Global Alliance for Clean Cookstoves" (GACC) and the "Sustainable Energy for All Initiative," ESMAP provided technical expertise as well as funding to develop the Africa Clean Cooking Alliance (ACCI). It also assisted in the development of the "Clean Cooking Initiative of the East Asia and Pacific Region." All this work has contributed to the inclusion of "household energy" as a key business line within the fiscal year 2012 work program of the World Bank's Sustainable Energy Department.
- **Rising concern over specific global issues:** Global issues gain importance in the ESMAP portfolio when the prominence of particular issues or increased urgency justifies a revision of the main thematic areas or the design of new programs. For example, CESVA has been designed to address a changing global environment with new challenges (the global financial crisis, highly volatile energy prices, and climate change).<sup>21</sup> Another example is the Gender and Energy Development Strategies Program. Gender issues have gained the attention of donor countries in the context of energy, and there is momentum for addressing gender not

only as a cross-cutting/mainstreaming issue in all activities, where it is very often overlooked, but also as full study programs.

As summarized in the 2011 TAG report “ESMAP has a convincing track record when it comes to identifying priorities for new activities: The EECI (more than 50 percent of the world's population lives now in cities) and ESMAP’s support to the climate agenda are eloquent testimonies of this foresight and preparedness. This flexibility in thematic focus reflects trends in client demand. ESMAP has responded well to what can be perceived as changing goal posts by having first focused exclusively on energy access to the poor, then to getting energy in the most cost-effective way, and then responding to the questions and holistic solutions demanded by adapting and mitigating climate change.”

The most recent example of this statement is the Results-Based Funding for Energy Sector Development program,<sup>22</sup> running during FY12-13. This program aims to assess how, and under what circumstances, results-based approaches can be used to improve outcomes and scale up financing for energy sector development, and has been initiated as a response to the increased interest in results-based approaches, from both client and donor countries.

ESMAP also develops decision support tools in order to respond better to clients’ needs.

- The Tool for Rapid Assessment of City Energy (TRACE) was launched in 2010. It offers a quick and easy way for city officials and decision makers to assess their energy efficiency options and identify sectors to improve.<sup>23</sup>
- The Marginal Abatement Cost Tool (MACTool) was developed in partnership with the World Bank’s Latin America and Caribbean Region and enables comparative cost-effectiveness analysis of greenhouse gas emission mitigation options. The tool helps determine the potential incremental investments of the private sector by running complex economic calculations on large volumes of data, and displays the results in a manner that can be understood by nonspecialists. MACTool is expected to be available in mid 2012.<sup>24</sup>

ESMAP therefore appears as very active in developing new programs and tools. At the same time, it has been mentioned during interviews at the country level that it is sometimes difficult for clients to get a clear vision of ESMAP’s objectives and services because of frequent changes in the main objectives (or their exact wording; for example, “low-carbon” vs. “clean energy” vs. “climate change,” and so forth) and frequent new programs (referring to important changes that occurred in Business Plan 2005-07 and then BP 2008-13). Consistency in communicating ESMAP’s key objectives is therefore of significant importance to the coherence of its main business lines in the eyes of clients and stakeholders, even if they do not need to or care to know precisely how these objectives are structured within the program. The World Bank staff survey conducted during this evaluation reveals that 92 percent of World Bank TTLs consider ESMAP to be either satisfactory or highly satisfactory in making its themes and strategic priorities clear to them. If ESMAP expects to have high visibility in client countries, however, that understanding will need to be transferred more consistently to target audiences in developing countries.

### **Extent to which new business lines and programs are designed to address ESMAP objectives**

The Evaluation Team found that the new business models and programs developed by ESMAP are generally highly coherent with ESMAP’s overall objectives. For instance, in Business Plan 2008-13:

- CESVA vulnerability assessments and subsequent policy advice and capacity building are in line with energy security objectives.
- Saving energy in cities (EECI) addresses objectives of energy security.
- LCCS is in line with ESMAP’s overall objectives, particularly if climate change is included as one of the key priorities (in line with BP 2008-13).
- REMTI particularly addresses energy security and climate change and, indirectly, energy access. Each of the secondary objectives/high-level outcomes is also indirectly addressed by the program by enhancing or informing policy and strategy, capacity building, offering new cutting-edge solutions, and helping to leverage additional lending/finance.

- The new clean energy and results-based financing business lines, as well as the new consolidated program for Africa and Small Island Development States, all fit within the objectives set out in the Business Plan.

It is difficult to assess whether “all possible relevant information” has been used by ESMAP in the development of new models and programs, as much of these processes is a matter of undocumented individual and collective judgment. However, as demonstrated above, the project review and field visits conducted reveal that ESMAP uses information from various levels for the design of new programs, models, and tools (such as those described in the section above), as well as from various sources: from previous ESMAP and World Bank operations, state-of-the-art information in relevant (subsectors (incorporating new data and findings from other studies), cooperation in the research arena, consultation with partners and stakeholders, surveys (household energy surveys in Yemen and Peru), exploratory missions, multicountry benchmark studies, expert panels, and so on. While much of ESMAP’s work builds on previous ESMAP/World Bank experience, the program seems to take advantage of all relevant information sources and usually benefits from the best available expertise in its areas of focus.

Therefore, new business lines and program priorities are generally very coherent with ESMAP’s overall objectives, as most develop out of existing initiatives under longstanding intended outcomes. New initiatives draw on a large array of information sources, including lessons learned from previous ESMAP and World Bank operations, state-of-the-art expertise in the targeted (sub)sector, research, consultation with partners and stakeholders, exploratory missions, and household energy surveys.

### ***3.1.3. ESMAP’s comparative advantage in the energy sector***

***Does ESMAP have a comparative advantage in the energy sector, and if so, was it correctly identified and articulated? To what extent is ESMAP competing with other programs or entities that are providing similar goods and services?***

Portfolio review and country visits reveal that the perceived main comparative advantages of ESMAP are:

- ESMAP’s privileged link with the World Bank, facilitating access to World Bank loans and exceptional expertise
- ESMAP’s unique positioning at the institutional/regulatory levels, providing information and advice to support regulatory and institutional development and remove barriers to energy sector development
- As a global program, ESMAP’s capacity to conduct global/regional sector studies and benchmarks, building on its strong technical expertise and on the experience gained with other countries by ESMAP and the World Bank
- ESMAP’s timely and high-quality response capacity.

These comparative advantages are not perceived the same way by all categories of stakeholders, and perceptions differ significantly from one country to the other, depending on ESMAP positioning, activities conducted by other donor organizations, the level of development of a given country, and its capacity to access world-class expertise on its own. In addition, the distinction between ESMAP and the World Bank is widely unknown to stakeholders and often by clients.

There is also a significant difference in the recognition of ESMAP’s specific niche and comparative advantage between global and country levels. Although ESMAP is sometimes seen as a unique option for supporting energy sector reform processes or establishing new regulations and standards (institutional support), which is in line with the program-level vision, this specific function is not always clearly established. This important role could be further reinforced through better communication and dissemination of regional/international studies in client countries, and by maintaining a strong focus on activities where ESMAP clearly makes a difference, at both the country and global levels, respectively.

On the basis of this evaluation, there is little evidence of ESMAP competing with other donors at country or global levels. ESMAP usually has a specific niche, being a global expertise center uniquely located within the World Bank and able to also tap the World Bank’s complementary expertise, and its work very often also serves the interests of other organizations, favoring investments and loans.



## Extent to which ESMAP activities have a clearly identified niche and demonstrate a comparative advantage

ESMAP's Business Plan 2005-07 identifies its comparative advantages as a global program, recognition as an innovator and knowledge builder, response capability; and honest broker status (see table 4 above). The 2008-13 Business Plan states "Since its inception 25 years ago, ESMAP has achieved a comparative advantage as a client-centered partner that serves the global energy practice and as an honest broker that addresses issues in a balanced way." Also "ESMAP's comparative advantage is being well positioned to exploit synergies across the World Bank Group, leverage expertise of the global energy practice, and engage stakeholders and energy champions from client countries." This privileged link with the World Bank has been confirmed as an important comparative advantage by many interviewees. On the one hand, ESMAP activities do influence—and prepare for—future World Bank lending and favor subsequent investments; on the other hand, ESMAP allows the country programs to access funding rapidly for specific expertise needs so as to complement World Bank loans and fill in important information gaps.

At country level, ESMAP and World Bank TTLs evolve in highly variable contexts, with important differences among countries regarding the diversity of actors involved in the energy sector. Donors such as USAID, Agence Française de Développement (AFD), KfW Entwicklungsbank/Gesellschaft für Internationale Zusammenarbeit, Japan International Cooperation Agency, SIDA, and regional development banks are regularly mentioned as important operators in the energy sector. Consultations conducted reveal no evidence of a "competition" with other programs and entities. ESMAP usually has a specific niche (see examples in Box 3), and its work very often serves the interests of other organizations, favoring investments and loans. For instance in Morocco, ESMAP work on the renewable energy regulation has clearly benefited the many investors now participating in various solar/wind energy projects, including AFD and the African Development Bank.

ESMAP's niche and specific comparative advantages also vary greatly from one country to another, depending on the local energy sector context and the history of activities conducted by the other donor organizations. For example, while in the Philippines ESMAP is one of the many sources of support in the energy sector, with no clearly defined niche or comparative advantage compared to other donors, in Morocco ESMAP is seen, together with the World Bank, as a unique actor with regard to policy reform in the energy sector (Box 4).

In addition, the distinction between ESMAP and the World Bank is generally unknown to stakeholders. ESMAP is mostly seen as a World Bank program and not as its own entity per se, which is in fact a good reflection of the nature of ESMAP as a trust fund rather than an implementing agency. The position of ESMAP in the energy arena at the country level is therefore often highly dependent on World Bank activities and history in the sector.

### Box 3 - Country Visits Reveal Varying Perceptions of ESMAP's Niche

In Morocco, interviews revealed that ESMAP, as a tool, is particularly appreciated versus other actors for: (i) the type of studies conducted, which foster critical policy dialogue, and (ii) the rapidity of implementation resulting from its independence from large funding schemes. Therefore, ESMAP is considered relevant to the urgent needs of the government and constitutes a unique opportunity for going beyond project-level funding and provide more strategic thinking.

In Peru, ESMAP carved its niche in the various activities conducted to support the rural electrification program of the government, which has historically benefited from strong World Bank support. Whereas other donor organizations focus on climate change and renewable energy investments, ESMAP, as a fund dedicated to energy, is a unique complement to other activities in the country, given its specific focus on filling information gaps in the energy sector.

In Tanzania, views on whether ESMAP has a clear identity and niche are somewhat mixed and uncertain. At the beneficiary level, there is a general impression that neither ESMAP nor any other donor occupies an easily identifiable niche. Conversely, at the donor level it is mentioned that ESMAP has a particular strength in the area of providing support for small enterprise in the energy sector, while an interviewee expressed the view that ESMAP, along with SIDA, had created an influential niche in the area of facilitating South-South knowledge exchange.

Overall, as a multilateral program with a global agenda, ESMAP is usually well recognized for global/regional sector studies. Nevertheless, this depends on the dissemination level of those studies, as it appeared during country visits that most stakeholders are not aware of ESMAP’s work outside their own country, depending on their title or position. For instance, in Moldova there are only a small handful of mostly government interviewees who are familiar with ESMAP as a knowledge hub that developed early and ground-breaking energy sector studies. In Morocco, ESMAP is very appreciated for its multicountry benchmark studies,<sup>25</sup> and is seen as a unique actor for this type of work that can feed into lesson learning and best practice identification for the country. In Peru, very few people were actually aware of any ESMAP study conducted outside of Peru, including Latin American studies that were relevant to their respective work.

ESMAP’s niche and comparative advantage at the country level also depend on the country’s relative level of economic development. Some client countries are developing rapidly and gain capacities for conducting and financing studies themselves, in response to their specific needs. Even though the need for capacity-building activities generally remains strong among these governments, particular attention must be paid to the type of activity ESMAP finances as compared to what the government can actually perform or contract alone. The fact that such information arose during field visits indicates that the comparative advantage of ESMAP is not necessarily obvious for some types of work, as the government may have the option independently to contract world-class experts to develop particular studies. The challenge for ESMAP in these contexts is to clearly distinguish and communicate the type of support it can provide as a global multilateral program housed in the World Bank, the quality of lessons and expertise it can draw from a wide array of country experiences, as well as the potential to open the door for World Bank lending. In poorer countries that severely lack financial and human capacities, the situation is rather different, as ESMAP support is often one of a limited number of options for the government.

**3.1.4. Definition of stated objectives in the strategy documents**

***Are the stated objectives of ESMAP consistent with this comparative advantage [see Section 1.3] and clearly defined in strategy documents? Are the program results measurable?***

Overall, ESMAP strategy documents provide numerous references to the program’s comparative advantages, but they do not necessarily explain clearly how planned objectives actually capitalize on or enhance them. At the activity level, planning documents generally clearly detail the rationale of the project, its objectives and how the project builds on ESMAP and World Bank experience, how it will make use of the specific expertise gained internationally, why ESMAP is a preferred partner to respond to a specific need or request, and how the project will allow future World Bank investments.

ESMAP program results are not easily measurable, because of a number of challenges in the M&E of nonlending activities. Although a new M&E framework was set up during 2010, there is still a low level of reporting on performance indicators for the portfolio reviewed, and both ESMAP-specific planned objectives and actual results are therefore lacking in project documentation over the period reviewed. However, with new projects designed under the new M&E framework, project activities and products are more closely tied to program-level objectives, and this situation is expected to continue to improve in the coming years.

**Extent to which ESMAP strategy documents state how objectives enhance comparative advantage**

ESMAP’s overall goal is to “increase know-how and institutional capacity of ESMAP client countries to plan, manage, and regulate the implementation of policies, strategies, and programs that deliver clean, reliable, and affordable energy services required by their citizens for poverty reduction and environmentally sustainable economic growth.”<sup>26</sup>

The 2009 annual report states, “ESMAP has a comparative advantage as a client-centered partner that serves the global energy practice as an honest broker, addressing issues in a balanced way.”<sup>27</sup> However, in this same report, there is very little discussion specifically on how this comparative advantage is enhanced by ESMAP’s objectives. Nevertheless, a couple of other statements come to reinforce the aim to be client-centered:

- “ESMAP focuses ‘upstream’ through three core functions: think tank, knowledge clearinghouse, and operational leveraging—all aimed at helping client countries make better informed choices, enhance capacity, and adopt cutting-edge solution.”<sup>28</sup>
- “[ESMAP] is setting up a comprehensive, programmatic Monitoring and Evaluation system to assess the effectiveness of its programs in achieving timely and sustainable outcomes for clients.”<sup>29</sup>

Comments from the minutes of the CG Meeting in 2011 would appear to lend support to ESMAP’s aim to be “an honest broker” with a “balanced” approach: “CG members endorsed the decision to balance ESMAP’s past focus on operational leveraging with more think tank and knowledge clearinghouse activities. There was also praise for ESMAP’s decision to engage with energy experts outside the World Bank through activities such as the Global Energy Assessment and virtual panels.” ESMAP’s status as an “honest broker” is also enhanced by the fact that the “Consultative Group (CG) members chose the global thematic challenges—energy security, energy poverty, and climate change—that underpin funding priorities for each ESMAP business plan cycle. These global thematic challenges, in turn, inform the choice of energy practice areas for ESMAP during each business plan cycle.”<sup>30</sup>

Overall, ESMAP strategy documents provide numerous references to the program’s comparative advantages, but do not necessarily articulate the nature or reasons why objectives actually enhance them. From the documentation review and country visits, there is, however, evidence that the ESMAP objectives of “providing cutting-edge solutions adopted by clients” and “enhancing policies/strategies” that embrace the program’s capacity to fill in information gaps at the institutional and regulatory levels; improving client capacity and influence over World Bank lending are also clearly in line with World Bank/ESMAP alignment and facilitating access to World Bank loans and expertise.

At the activity level, the project review demonstrates evidence of a consistent strategic relationship between ESMAP objectives and its identified comparative advantages. Projects objectives generally relate to improving energy access and energy security, and reducing poverty, by providing high-level support to improve clients’ capacities, enhance policies, and open access to World Bank funds. This is clearly in line with ESMAP’s privileged link with the World Bank and its capacity to respond to specific client needs. As a fund dedicated to energy, ESMAP has also gained considerable experience in the sector, complemented by specific World Bank experience, and activities always make use of this experience and related pool of expertise for project design and implementation, building on this comparative advantage to reach objectives.

This is well illustrated in the documents of the project “SME Engagement in the Provision of Decentralized Energy Services,” which states, “The program will provide ESMAP with the opportunity to (a) engage more deeply at the country level and test out concrete options for SME engagement in energy service delivery; (b) capitalize on the ESMAP’s comparative advantage for bringing together lessons from various parts of the world through both its global and country based projects; (c) capitalize on its experience at building-up effective global, thematic and multi-sector partnerships; and (d) leverage policy reforms and financing resources for large-scale technical assistance and investment projects with local stakeholders SMPP programs and donors.”<sup>31</sup>

### **Extent to which ESMAP program results are measurable**

Considering the documentation made available to the evaluation team, the desk review arrives at the conclusion that program-level results measurement is relatively poor. Whereas expected outcomes and outputs of the activities are generally well presented, very few projects clearly define and utilize performance measurement SMART<sup>32</sup> indicators. As a direct consequence, relatively little longitudinal reporting/evaluative evidence, whether monitoring or assessment is provided for the majority of projects.

Apparent difficulties in applying standard M&E approaches to this particular program has led to a number of discussions and debates surrounding the measurement of ESMAP work. During the 2006 CG meeting, the acting manager of ESMAP discussed the challenges faced by ESMAP in the M&E of its nonlending activities, such as the intangible nature of ESMAP products (technical assistance, policy advice, upstream sector analysis), the long gap

between ESMAP activities and downstream impacts on the ground, and the complex interactions among many nonlending activities that lead to policy reform and actual project design and implementation. The discussion among participants included the pros and cons of using quantitative indicators or storyline methodologies to monitor the impact of ESMAP activities.

However, five years late, a new M&E system has been set up, as mentioned in the Operational Manual: “In March 2010, the CG endorsed a new Monitoring and Evaluation (M&E) system for ESMAP, in order to assess the effectiveness of activities implemented under the 2008-2013 Strategic Business Plan. The M&E system strengthens the focus on outcomes at the level of beneficiaries while ensuring relevance to ESMAP’s mission and implementation strategy. It goes a step beyond the delivery of goods and services (outputs) and focuses on specific impacts. The M&E [framework] will be a key management tool to track ESMAP’s progress and performance during the business period.”<sup>33</sup>

Considering that the portfolio of projects under this evaluation include those designed from July 2007 through June 2011, most projects were formulated in 2010 or earlier, which explains, with the exception of recent ESMAP Project Summary Forms, the relatively consistent absence of ESMAP-relevant indicators and themes in planning documents. The 2010 annual report lists a total of 27 outputs, with 51 indicators (some outputs have several indicators), each of which is a count of the number of particular categories of output produced (for example, “number of climate vulnerability assessments carried out” or “number of practitioners workshops conducted”). There is no narrative summary of progress provided, and there are no indicators for monitoring whether the use of outputs has led to the desired outcomes. However, the full description of the M&E system suggests that such indicators are present in the overall program log-frame: “The M&E system goes beyond the simple delivery of outputs to ascertain if the outcomes achieve the objectives of ESMAP’s programs and initiatives,” and “Development impact is determined by the extent to which ESMAP’s products influenced the adoption, application, or mainstreaming of strategies and policy recommendations in client countries.”<sup>34</sup>

Full implementation of the new M&E framework should permit the measurement of actual program results and, in the end, inform program-level indicators.

**Figure 1: ESMAP Outcomes and Indicators<sup>35</sup>**



**3.1.5. Appropriateness of activities, outputs, and products to the objectives of the program**

***In each area of the work plan, are the identified activities, outputs, and products appropriate to the objectives of the program?***

Identified activities, outputs, and products are generally appropriate to program objectives in each area of the work plan. However, planning documents are not as clear as they could be on how each product or activity contributes to the achievement of ESMAP program objectives.

**Extent to which ESMAP work plans reflect program objectives at each level of project planning and implementation**

Across the sample of 50 desk review projects analyzed, half of them have planning documents that make clear reference to ESMAP objectives, although some of these references are indirect. Those projects launched during and after 2009 have a significantly higher likelihood of including objectives in their planning documents. Only 8 out of 25 (32 percent) projects in the desk review sample that began before 2009 had clearly stated objectives, whereas only 3 out of 25 projects that began after 2009 *didn't* include clearly stated objectives (88 percent did include objectives). Project goals and planned activities generally refer to ESMAP objectives using the following wording: energy security, energy access, poverty reduction, renewable energy development, energy efficiency, building client capacity, enhancing policies. The other half of the sample of projects' planning documents make no explicit statement as to how the activity will contribute to the achievement of ESMAP objectives, although in a number of cases the activities presented demonstrate a link with program objectives. The same tendency applies to project outputs and products, which address the main objectives of ESMAP at a global level, but don't systematically make reference to those objectives.

Therefore, although the description of project goals, planned activities, and expected outputs is typically in line with ESMAP program objectives, planning documents frequently do not explain how an activity contributes to the achievement of ESMAP program objectives. On the basis of planning documents, for example, it would be difficult to formulate a coherence matrix between the project objectives and program-level objectives. This is especially important for those projects (for example, Energy Sector TA to Jordan, P110853, which included a study to explore the technical potential and institutional capacity to implement carbon capture and storage) that stand outside ESMAP's main program objectives and may not appear relevant at first glance.

***3.1.6. Incorporation of gender and social issues***

***To what extent has ESMAP incorporated and promoted gender and social issues in its work program?***

About one-third of the projects reviewed addressed social issues in planning documents. Apart from a few notable exceptions in more recent interventions, gender issues are almost completely absent from the project portfolio. Available evidence therefore suggests that little attention was given to gender and social issues at the activity level over the 2007-11 timeframe.

In program-level documentation, gender and social issues are generally well covered, however, which suggest that there is an apparent disconnect between stated policies and intentions and the realization of those intentions in practice. Furthermore, other than compliance with World Bank safeguards, no systems appear to be in place in order to ensure that social and especially gender issues are systematically integrated at the project level. Mainstreaming gender and social issues across the portfolio remains a challenge, but new efforts to promote gender and social issues in ESMAP activities, outputs, and outcomes are underway and now must be pursued and reinforced in order to assure results in this regard at the activity level.

## **Extent to which ESMAP's work program identifies how its activities, outputs, and outcomes are relevant to gender and social issues**

Within the sample of 50 projects reviewed, about one-third actually include social issues in planning documents as an element of the project. Very often, this is limited to a few sentences mentioning the possible positive social impacts of the activity, its potential role in poverty reduction, or the triggered social and environmental safeguards to be addressed within the activity. Such language is referred to in the documentation of the Renewable Energy Education Project (REEP) in West Africa as well as the Institutional Capacity Building of the West African Power Pool (WAPP) project. These planning documents refer to the use of existing environment and social management frameworks developed by other ESMAP projects in the region, namely the Burkina Faso Energy Access Project and the Ghana Energy Development and Access Project.

Gender aspects are almost absent from the project portfolio, with only scarce references to “the role of women” or “gender equity.” In some cases, however, the gender implications for the activity are very clear but there is no explicit mention of gender issues. For instance, the “Improving Indoor Air in Bangladesh” project refers to three Millennium Development Goals (reduction of child mortality, environmental sustainability, and poverty reduction) but, given the well-documented links among cook stoves, indoor air pollution, and women’s health, the planning documents make little reference to the possible gender-specific benefits of the project. ESMAP has also significantly contributed to enhancing the role of women for the production and commercialization of improved cook stoves.<sup>36</sup>

This analysis does not permit full capture of what is accomplished at the level of implementation, where gender and social aspects maybe duly considered even if absent from project documentation. Nevertheless, as a program focusing on energy, social and gender considerations are not always very relevant to the work, especially for highly technical projects, for instance, within an analysis on renewable energy regulation or a study on wind-energy potential. In some cases, such issues are simply beyond the scope of the project, and some interviewees even highlighted that if these issues are considered when not directly relevant it may negatively affect the overall credibility of the work. This is supported by the workshop proceedings of the Gender & Energy Development Strategies Program, which point out that the “publications portfolio covers a very wide range of subjects, many of which justifiably will not address, and not need to address, any gender issues at all.”<sup>37</sup>

For instance, for the Peru “Natural Gas Study,” a decision meeting during the study review process “agreed on mentioning environmental and social considerations for gas transportation while clearly stating that these issues were not the core of the report,” and noted that “Peru already has strong experience in integrating social issues into development work.”<sup>38</sup> In other words, social considerations were not the core priority of the study and the inclusion of a new component on this would amount to a considerably more extensive study. Furthermore, the inclusion or exclusion of gender or social issues can also be a sensitive political issue that can complicate or compromise ESMAP’s and the World Bank’s relationship with the client if they are asked to frame or address these matters in a way that duplicates or conflicts with their own country’s initiatives or policies.

In a number of cases, however, ESMAP would certainly gain from more due consideration to gender and social aspects, at both the planning and implementation levels. The “Mozambique Modern Biofuels Assessment” project is, for example, one of the ESMAP activities mentioned in the final report of project “Gender and Energy” as representing “missed opportunities from a gender perspective.” As a positive example, ESMAP’s work on “Gender and Youth in Extractive Industries” contributed in part to implementation of the “Gender and Extractive Industries Program” of the World Bank’s Oil and Mining Unit (SEGOM). The ESMAP-supported Guidance note, “Mainstreaming Gender into Extractive Industries Projects - Guidance Note for TTLs,” provides a consistent and structured approach to identifying gender-sensitive activities during project design and preparation.

With regard to program documentation and business plans, gender and social issues are generally well covered, highlighting the need to “genderize,” or mainstream these issues into the activities proposed. Template documents used at project design stage (Project Concept Note and Project Summary Form), however, do not include any reference to gender and social issues, and therefore do not encourage or track their integration. In its Workshop Proceedings, the “Gender & Energy Development Strategies Program” provides a number of recommendations to “genderize” ESMAP operations, including “Appoint a gender coordinator in the Energy Anchor, to lead the implementation of the Action Plan, lead the preparation of the Flagship study, and the preparation of the Guidance Note to staff,” and “Set up a Thematic Group on Gender and Energy to share best practices.”<sup>39</sup> This evaluation verifies that this program is underway, but progress is unclear on the progress note to staff or degree to which the presence of a gender coordinator has changed the integration of gender into project-level or program-level results yet. A gender expert reviewer of all project concept notes, for example, is becoming standard practice in many donor agencies, such as SIDA, and would be a strong step forward for ESMAP.

#### **Box 4 - Gender and Energy in Ghana and Burkina Faso**

A good example of gender consideration is a project in Ghana and Burkina Faso, “Capacity Upgrading for West African Partners.” In this project, the participation of women in the project activities will be encouraged by allocating 20 percent of places available at training programs and workshops to women and using the annual stakeholder consultation workshops to bring together women practitioners in the renewable energy industry. At the student level, Women In Engineering (WINE), an association of female engineering students at KNUST (Kwame Nkrumah University of Science and Technology) will be helped to participate actively in this project and also facilitate linkages with their female counterparts at 2iE (Institut International

### **Extent to which ESMAP’s work program promotes integration of gender and social issues into activities, outputs, and outcomes**

Interviews conducted reveal that the perceived level of integration of gender and social issues in ESMAP work is relatively low among clients and stakeholders. Social aspects are sometimes a full component of specific studies, but the integration of gender aspects is perceived as very low.

There are, however, examples where ESMAP’s work has significantly modified a situation or level of interest on social and gender issues (see the example of India in box 7). In addition, as far as gender is concerned, significant efforts have been made in recent years at the program management level in order to promote gender mainstreaming into activities and products.

- ESMAP commissioned gender analysis of the project portfolio and held a workshop on this topic in 2008 to discuss the “current needs of the gender-energy nexus in developing countries, critical areas of work (both at the research and operational level), and ways in which ESMAP can enhance its support to World Bank operational teams and counterpart developing countries to tackle the gender-energy nexus challenges.”<sup>40</sup>
- Linked to this workshop, the recent “Gender and Energy Program” aims to develop and mainstream good practices in applying a gender-sensitive approach to energy policies and projects. Significant outcomes on gender have been achieved under this program. For instance, in Senegal, ESMAP supported the inclusion of gender equality into the second phase of the “Participatory Energy Management Project” (PROGEDE II), and the development objective now explicitly states: “The project development objective is to contribute to increase the availability of diversified household fuels in a sustainable and gender equitable way, and to contribute to increase the income of participating communities while preserving the forest ecosystems.” In

#### **Box 5 - Social Safety Net for LPG Subsidies in Morocco**

A sample activity with social aspects as a prominent aspect of the work is “Social Safety Net for LPG Subsidies in Morocco.” The study has realized an in-depth analysis of the possible and necessary compensation needed for the poorest population as a consequence of LPG subsidy reform. The study has enabled the government to realize that changes in the LPG subsidy are not possible before a number of social reforms are implemented. Once the social foundation is laid, the LPG reform can be more easily and widely accepted.

Mali, assistance is being provided to AMADER, the Malian Household Energy and Rural Electrification Agency, in assessing the gender dimensions of the World Bank–financed “Household Energy & Universal Access Project,” and in preparing an action plan. The assistance resulted in AMADER nominating a gender focal point within its organization and a gender impact assessment being included in the additional financing for the “Household Energy and Universal Access Project.” Additional financing was approved in August 2011 that will help strengthen energy- and gender-sensitive aspects.

This is corroborated by the successive TAG reports: The 2007 TAG report states that “in the absence of a special effort, gender mainstreaming activities are unlikely to develop spontaneously in many proposals through the current system of block grants.”<sup>41</sup> The 2009 TAG report notes progress on planning gender mainstreaming in energy, and the 2010 TAG report “is pleased to note the gender and energy team has been established for the first time, with cooperation formalized across the Energy Anchor, the Africa Energy Unit, and the Social Development Department (SDV) of the Bank.”<sup>42</sup>

#### **Box 6 - Evidence of the Integration of Gender and Social Issues in ESMAP’s Work in India**

None of the projects reviewed explicitly integrated gender or social issues in their conception or design, and at first sight it would appear that none would be expected to have a particular gender focus. However, the project “Organisational Transformation and PPPs in Maharashtra State Electricity Transmission Co Ltd (MSETCL)” appears to have had a very profound impact on the role of women in the field of transmission network maintenance, an area where women were previously completely absent. Before ESMAP’s involvement, MSETCL (also sometimes referred to as “MahaTransco”) was “very traditional in its outlook.” Nobody within the organization was monitoring whether it was conforming to the mandatory (state-legislated) requirement for 33 percent of all hires to be reserved for women. To the extent that women were recruited, they were placed exclusively in desk-based jobs.

The ESMAP project led to a transformation in the attitude of MahaTransco to women, and to the opportunities open to women. One result of this was that MahaTransco recruited an intake of 500 women for technical positions, running special women-only sessions of their standard month-long training course in their training centre near Pune. In order to facilitate the childcare requirements of many the trainees, additional accommodation was made available for accompanying children and careers. As of early 2011, 120 lineswomen had been fully trained and were working across Maharashtra on maintenance of the high-voltage transmission network. It is considered locally that this, and other, very deep social transformations would not have occurred without the involvement of World Bank/ESMAP.

### ***3.1.7. Lessons learned and recommendations on relevance***

#### ***Main Lessons Learned on Relevance***

- In order to avoid dilution of the relevance of ESMAP in view of the specific niche it was meant to fill, a balance must constantly be struck between responsiveness to development and sector challenges on the one hand, and realistic focus in view of financial and human resources available on the other hand.
- Consistency in communicating objectives is very important to the coherence of an organization’s main business lines in the eyes of its clients and main stakeholders, even if they do not need to or care to know precisely how these objectives are structured within the organization. Concurrently, clearly communicating within the organization on the link between objectives and how results at the activity level contribute to them is paramount to assure accountability to program impacts and outcomes and focus in the use of limited resources.

#### ***Recommendations on Relevance***

- While continuing to adapt to changing global and regional concerns (for example, steady high oil prices, new opportunities offered by natural gas, gender issues), ESMAP should maintain a clear and well-delineated area of concentration in order to avoid overextension of resources, including funding and expertise. ESMAP should reinforce its position in those areas with greatest gain relative to need and its comparative advantage, such as with global cross-sectoral work and well-targeted innovative tools and models.



- In order to keep a stronger orientation on strategic-level focus, ESMAP program objectives should be more clearly and systematically referred to in project planning documents and outputs. Clarity and consistency are especially important in integrating new programs into the business plan, in particular through relevant wording in the names of the new programs and well-identified positioning within the program and result framework.
- ESMAP should pursue and reinforce efforts to mainstream gender and social aspects into project planning and implementation, for example, by integrating social and gender issues in project templates (Project Concept Note, Project Summary Form), and implementing the follow-on recommendations from the workshop(s) under the “Gender & Energy Development Strategies Program.” M&E reporting should include gender disaggregated and social indicators at project level, in order to monitor actual results.

## 3.2. Effectiveness

### 3.2.1. Management flexibility in reaching program objectives

*To what extent does ESMAP management have the flexibility to design and execute effectively the activities to achieve program goals?*

ESMAP has largely exhibited flexibility in effectively designing and executing activities in order to achieve program goals. The design and execution of most projects are accomplished with an appropriate level of quality, adjustability, and timeliness in order to manage operational and implementation challenges. Most activities and publications are planned, adjusted, and executed according to client priorities and at the time those needs are critical. Some internal barriers remain in terms of communicating and streamlining procedural expectations, as well as ensuring the long-term effectiveness of activities and products through an adaptable but structured inclusiveness of stakeholders, especially in terms of dissemination and follow-up after publications and activities. Furthermore, especially in the context of global studies, ESMAP needs to gauge properly the level of need and concerns at national/regional levels to see whether the global challenges addressed actually align with more immediate priorities.

#### Extent to which ESMAP management exhibits flexibility in reaching program objectives

ESMAP's overall goal, according to the 2008-13 Business Plan results framework, is "To increase know-how and institutional capacity of ESMAP client countries to plan, manage, and regulate the implementation of policies, strategies, and programs that deliver clean, reliable, and affordable energy services required by their citizens for poverty reduction and environmentally sustainable economic growth." This represents a shift in focus from the previous 2005-07 Business Plan, which had the goal "to provide energy solutions to reduce poverty. [ESMAP's] purpose is to improve access to affordable, adequate, reliable, and environmentally sustainable energy services to the poorest people and countries." Each current program subcomponent, such as Pro-Poor Energy Access TA Program (PEA-TAP) and Energy Assessments and Strategy Program (EASP), also has a key objective that must address one or more global energy challenge: energy security, energy poverty, and climate change.

Evaluation findings revealed several ways in which ESMAP exhibits flexibility in designing and executing activities at the project and program level in order to achieve high-level goals.

- *Design*
  - **Adjustments in Business Plans** (program-level): ESMAP management and governance shift the focus or thematic areas in order to respond to client needs and flexibility in use of funds within the existing Business Plan in order to reach high-level objectives. The 2005-07 Business Plan, for example, maintained the previous focus of securing energy for poverty reduction, but set into motion major management changes, such as ESMAP contracting with the World Bank's regional teams to implement key thematic programs, more direct management by ESMAP of analytical think tank activities for assurance of alignment with ESMAP goals, and increasing focus on facilitating scaling up of investments with preparatory activities.
  - **Peer review** (project-level): ESMAP management, World Bank staff, and consultants adjust approach and strategy in light of regular expert review of project concept notes and final reports, including comments that may identify risks and query analytical methods or findings. ESMAP provided TA for the Least-Cost Energy Sector Master Plan of Djibouti, for example, which underwent a peer review of the project concept note (PCN) and of the final report. Each review was particularly useful for creating a more robust analysis and final report by drawing out potential risks, such as the implementation requirements for the proposed master plan, and by pressing for a reassessment of one key assumption: future energy demand forecast of the country.
- *Design and Execution*
  - **Adjustments during implementation** (project-level): ESMAP TTLs respond to barriers or new challenges that develop during implementation, including requests made by clients through regional

offices to collect and package additional information, or make other adjustments in funding amounts or in the nature of planned activities. Several examples from the desk review are described below.

- **Working with other donors** (program- and project-level): ESMAP TTLs and World Bank country/regional staff work with other donors in the sector/region to ensure commitment to specific activities or long-term objectives. The UK's Department for International Development (DfID's) Decentralized Energy Services is a global program for which ESMAP has provided TA to remove barriers to energy services provided by SMEs in Sub-Saharan Africa. In light of delays and risks to its success, ESMAP wanted to maintain active involvement in support for SMEs in the region, and integrated these projects to its Energy SME Country Portfolio, while still giving DfID credit for projects it initially funded (DfID financing phased out in 2008).
- **Drawing on stakeholder input** (project-level): ESMAP and World Bank staff and consultants use workshops, trainings, and focus groups as input in design and adjustment of activities. In preparation for the adoption of new energy efficiency standards in Lebanon, ESMAP held a Stakeholder Consultation Workshop pertaining to its TA/implementation support. The final report incorporated the observations and comments of consultation participants while contributing to high-level objectives of improved client capacity and facilitation of knowledge exchange.
- *Execution:*
  - **Hiring flexible consultants** (project-level): Ability and willingness of consultants or consulting firm hired to complete a study/report to adjust to changing needs and/or funding in order to fulfill objectives. The consultants selected by ESMAP and The Public-Private Infrastructure Advisory Facility (PPIAF) to conduct the "Chisinau Heat and Electricity Supply Institutional and Financial Restructuring Study," for example, were lauded by the Ministry of Economy client not only for the quality of their work, which built on previous regional experience, but also for their willingness to comply with new requests and revisions to the work resulting in part from the politically sensitive nature of the content.

Of the types of flexibility described above, documentation and interviews suggest that the most frequent means for elicitation and integration of new information are: peer review processes, both internal and external expert review; soliciting stakeholder input through interviews, workshops and focus groups, and making adjustments during implementation in light of new information or requests from clients and implementing partners. While peer review and stakeholder engagement are more formal practices of World Bank quality assurance measures (ESMAP began to implement its own Quality Assurance Guidelines in 2010), internal stakeholder interviews and World Bank staff survey results reveal the perception that, in comparison to other trust funds housed in the World Bank, ESMAP is particularly adept at remaining a flexible, open, and knowledgeable partner to both clients and World Bank staff working on ESMAP projects. ESMAP is described as a "TTL-friendly" trust fund because of its relatively readily available and flexible use of funds, and for providing high-quality and timely responses to queries.

Of the desk review sample, at least 10 out of the 50 projects appear to have been adjusted to circumstances such as difficulties in meeting clients' interests, methodological concerns, in-country administrative problems, and higher-level political shocks. For example:

- A coup d'état caused the project suspension and eventual closing of activities for the project "SMEs in Rural Electrification" in Guinea.<sup>43</sup>
- During "Financial Intermediary for Energy Efficiency" in Poland, a major study partner decided to disengage from the ESMAP project. As a result of this development, the ESMAP team continued to work on a financing program for the Gdansk housing projects even though it did not involve a pooling agent and therefore fell outside the ESMAP terms of reference.<sup>44</sup>
- The "Economics of Adaptation to Climate Change" study authors adjusted their methodology during project implementation. From the outset, the two objectives (global plus local country work) were somewhat at odds with each other. This change in methodology was discussed with the donors, who then gave their approval, and the change was adopted by the team.<sup>45</sup>

- In “Coal-Bed Methane Strategy,” the concept note and Activity Completion Summary (ACS) refer to recommendations for Shanxi Province, yet the final report is for the whole of China. It seems that the ESMAP activity was adjusted to become nationwide since the Final Report covers all China with some specific recommendations for Shanxi. The reasons for this change are not set out anywhere, but may have developed out of feedback from public workshops or requests from the client.
- The REMTI “Geothermal Knowledge Exchange” project encountered a conflict where an absence of information forced the team to abandon their initial course, following the preparation of country diagnostic reports.<sup>46</sup>

In at least four of the six case study countries, interviewees commented positively on World Bank staff working on ESMAP-supported projects as “competent,” “responsive,” and “timely.” At least three case study country ESMAP clients also stated that the consultants hired to complete the work were receptive to comments and requests that led to changes to the respective studies they were developing, sometimes well beyond the expectations of their original ToRs. The case studies also highlighted the manner in which ESMAP, through the World Bank, works with other donors to be more responsive to country priorities, which has been made easier in recent years in some countries by energy sector donor coordination meetings. In the case of Tanzania and Moldova, for example, these meetings are held regularly among donors, government stakeholders, and sometimes CSOs and NGOs, and hosted/chaired by SIDA on a rolling basis. In the case of India, on the other hand, the government plays a much stronger role in influencing the coordination of bilaterals and development banks, and therefore the conditions surrounding ESMAP activities diminish the potential importance of its management flexibility.

### ***Challenges in Flexibility toward Reaching Goals***

The obstacles ESMAP management faces in remaining flexible while meeting program objectives include operational and implementation challenges. In terms of operations, feedback from the World Bank staff survey indicates that, for example, ESMAP has greatly improved in recent history in terms of the simplicity of proposal format (both for block grants and own-managed activities), timeliness, and responsiveness to review of project proposals, and that quality control had become more aligned with World Bank procedures. Nevertheless, several respondents expressed that ESMAP was still overly “process oriented,” sometimes “obsessed with disbursement over quality,” and that some delays in disbursements, in publishing knowledge products, and confusion over processes could be avoided in advance with clearer up-front communication of expectations. Some TTLs also preferred more direct support from ESMAP instead of exchanging information through regional coordinators. Case study interviews also reveal that some World Bank procedures through which ESMAP must operate often remain obtuse and unclear to the client, and even those that are clear, such as procurement processes, were often unnecessarily tedious and frustrating. Finally, a small number of interviewees and survey respondents felt that management flexibility appears to be exhibited in favor of reaching ESMAP’s strategic priorities but at the cost of addressing clients’ expressed priorities.

In terms of implementation challenges, two case studies (out of six) were inconclusive on whether the consultants and/or TTLs were flexible toward reaching goals, and one set of interviewees from one case study felt the reverse: that the consultants/project team should have been much more flexible and better prepared. ESMAP-supported initiatives also face the frequent challenge of working around emergencies (a coup in Guinea) and the low absorptive capacity of many countries, especially in Africa, where disbursement delays can inhibit room for adaptive management once implementation is underway. Also, ESMAP projects typically have a relatively short duration (less than a year in many cases), and therefore there is less need for an adaptive management or risk management plan, but also less time for adjustments than longer-term interventions. This elevates the importance of ESMAP’s level of understanding of precisely how high-level objectives and the identified global energy challenges actually align with immediate country risks and interests in the course of project development rather than learning during implementation.

While many of these barriers are unavoidable, many interviewees and staff survey respondents commented that the ESMAP team should adapt the manner in which materials are produced and disseminated. In line with these sentiments, the 2005-07 desk review evaluation concluded that ESMAP needed a better “plan for dissemination activities of the report or product after completion with a broader audience in mind.” While many of the

dissemination workshops are well attended, some observed that reaching program goals involved a more sustained multiyear effort and follow-up with countries after the publication of reports, a more deliberate plan for dissemination of materials to client governments, and a better mechanism for knowledge sharing with other donors and across other countries/regions, including support for South-South mechanisms. Not only do results tend to be greater for those activities where a post-report/activity consultation plan was an integral part of the project design, but too much flexibility and the lack of structure narrow windows of opportunity for appropriately packaging and sharing lessons learned and best practices program-wide.

### 3.2.2. Achievement of objectives across work programs

#### *To what extent do products, outputs, and activities achieve the intended objectives?*

ESMAP has achieved relatively strong success across the three main high-level objectives for its client countries: better informed policy making, enhanced client capacity, and adoption of cutting-edge solutions. On average, according to the desk review sample, approximately two-thirds of projects tend to achieve their respective intended high-level objectives. Given the often short timeframes and high demand for products and services, ESMAP demonstrates its capability for rapidly generating targeted materials and processes to answer client needs. The trust fund also faces challenges in continuing to meet these high-level objectives through producing high-quality, independent studies, tools, and assessments while also engaging clients in targeted training and knowledge exchange beyond the traditional realm of Bank interventions. Some conclusions on evidence gathered on efforts to reach the high-level objectives are:

- The client's commitment and participation are critical to reaching ESMAP high-level outcomes. Requiring confirmation of the client's approval before project approval, and continued involvement of clients in project identification in order to improve the likelihood of ESMAP products achieving lasting effects.
- All three of the high-level objectives could benefit from increased attention to a more deliberate and proactive structure for accessible and user-friendly knowledge dissemination. This applies to both client governments as well as to a wider audience of stakeholders who can benefit from lessons learned and best practices demonstrated by ESMAP-supported products and activities, including other donors. ESMAP may need to strengthen the collaboration and coordination with the World Bank Institute or other partners that can help leverage efforts to reach an external audience.
- ESMAP will need to consider carefully the trade-offs between targets and objectives that lend themselves to operational ease and alignment with the World Bank, and those that are guided by the expressed demands of clients and/or external stakeholders. ESMAP already has many excellent examples of operational leveraging (the use of rural electrification best practices in the scale-up of energy access in Africa, for example). The shift to block grants gives the regions greater operational control, which in turn creates opportunities for increased operational leveraging, but also presents the loss of direct interaction and exchange between ESMAP and the World Bank implementing intermediary.

#### **Extent to which ESMAP achieved its objectives across all work programs**

In addition to its goal of operational leveraging,<sup>47</sup> ESMAP has three main high-level outcomes to fulfill the program's long-standing primary objective of "promoting and securing access to energy for poverty reduction and economic growth"<sup>48</sup>:

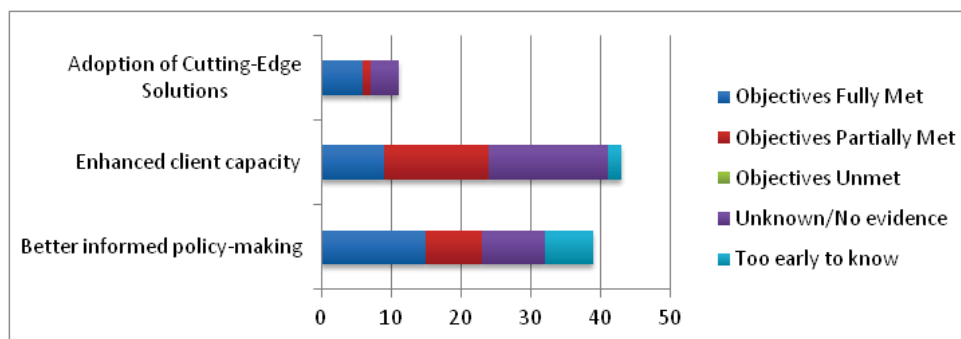
- *Better informed policy making*: Client countries adopt a new energy policy or legislation, or achieve compliance with an existing energy law/regulation that promotes sustainable growth
- *Enhanced client capacity*: Client countries improve institutional know-how and capacity or ability to develop and implement measures and strategies for short-, medium-, and long-term challenges to their national energy systems
- *Adoption of cutting-edge solutions*: Client countries are able to adopt or harness new technologies, innovative ideas, and know-how.<sup>49</sup>

This section discusses evidence of the effectiveness of reaching these objectives across the various themes, products, and activities implemented over the course of the evaluation period. Table 5 below summarizes the nature of the desk review sample in terms of intended high-level objectives and the breakdown of the number of projects that have achieved those objectives based on the desk review analysis, and the diagram below illustrates the desk review “project results” (from the table), respectively. The following section further elaborates on findings under each objective from all evaluative sources, including desk review.

**Table 5 – High-Level Objectives of Desk Review Sample**

High-Level Objective	Desk Review Sample				Project Results					
	Total Planned <sup>50</sup>	Country, Regional, Global	Total Closed	Total Disbursement (\$000)	Objectives Fully Met <sup>51</sup>	Objectives Partially Met <sup>52</sup>	Objectives Unmet <sup>53</sup>	Unknown/No evidence <sup>54</sup>	Too Early to Know <sup>55</sup>	Percentage Fully and Partially Met
<i>Better informed policy making</i>	41	25, 3, 7	26	\$10,197.04	15	8	0 <sup>57</sup>	9	7	72%
<i>Enhanced client capacity</i>	45	21, 5, 13	29	\$10,177.75	9	15	0	17	2	59%
<i>Adoption of cutting-edge solutions</i>	12	6, 1, 3	9	\$2,143.68	6	1	0	4	0	64%

**Figure 2 - Results of Desk Review Projects by High-Level Objectives**



***Better Informed Policy Making***

Over the course of the evaluation period, ESMAP has succeeded in informing or directly influenced national policies on energy and sustainable development. The 2010 Portfolio Review provided evidence that 38 ESMAP activities have influenced energy policies in more than 30 countries since fiscal year 2008. These products and activities include, but are not limited to:

*Feasibility Studies*

- Clean: The 2010 DFID-funded program, “Pillar II: Energy for Low Carbon Economy and Climate Mitigation,” under the Multi Donor Trust Fund for Clean Energy Investment Framework, has supported low-carbon development studies that demonstrate technically feasible measures to reduce GHG emissions. The studies found that implementing these measures often requires large financial investments and incentives, institutional development and capacity building, leveraging of public-private partnerships, as well as international cooperation and financing in order to achieve expected results.

*Policy Options*

- EASP: A 2008 study, “Structuring of PPP in Natural Gas for the Government of Egypt,” was intended to develop options for structuring private sector participation schemes in natural gas distribution services, including market arrangements for future evolution of the sector. As a result of this input to the decision

making, the ACS notes that new legislation was drafted, the government issued a government decree, and a new national strategy has been adopted.

#### *Regulatory Options*

- The ESMAP-supported EASP initiative assisted the government of Vietnam by reviewing the 2006–15 Gas Master Plan for Southern Vietnam, which includes the Gas Master Plan’s key priority of meeting 40 percent of its energy needs through gas-fired plant by 2015. In light of inadequate economic and financial planning and market development, the review outlined a qualitative framework—including sector planning principles, a method for determining optimal utilization, pricing principles for gas, regulatory methodologies, and gas market design options—to form the basis for specific gas sector and policy development decisions.

Out of the sample of 50 desk review projects from 2007 to 2011, approximately 41 intended to directly or indirectly inform better energy policies, 26 of which were closed at the time of review. Of the sample, approximately 15 fully achieved this objective, 8 partly achieved this objective, and there was not enough evidence to conclude results for another 9 projects. Combining the “fully” and “partly” met objectives, approximately 72 percent of projects intended for this objective satisfactorily achieved it. Integration of ESMAP studies and assessments into policies and regulation appears to be most likely when the product or activity:

- Is requested directly by the client to solve a particular (and sometimes long-standing) issue at the time it is requested
- Employs the full range and extent of stakeholder involvement and engagement in framing the study
- Clearly outlines the costs and the trade-offs, and intended and unintended consequences of each option
- Uses experts extensively familiar with the country and/or regional context so that the study is linked to regional policy and market trends.

#### *Enhanced Client Capacity*

ESMAP has placed itself strategically as a knowledge broker and conduit for strengthening institutional and individual capacity on policy formulation and implementation. During FY09–FY11, the portfolio review concluded that 26 ESMAP activities have contributed to capacity building in more than 40 client countries and that the EASPs have enhanced client capacity in more than 20 countries. Products and activities under this objective include:

#### *Advisory Services*

- Energy Access: In 2009, AFREA and ESMAP launched the Africa Electrification Initiative (AEI), a capacity-building program to create a living body of practical knowledge to be sustained by a network of practitioners in Sub-Saharan Africa. Acting as a knowledge broker and exchange medium, the initiative pools the collective experience of electrification agencies and funds; government ministries; regulatory bodies; and state, community, and privately owned utilities, and provides comprehensive assistance to governments in the Region. Ethiopia, Kenya, and Rwanda were covered during 2009.

#### *Technical Notes*

- Clean Energy: The global project, Trade Policies for Liquid Biofuels, developed the study, “Considering Trade Policies for Liquid Biofuels,” which has brought international attention and praise from internal and external peers, including TAG. Published in 2007, the ACS noted that developing country policy makers and advisors have read the paper and made “numerous” requests to the World Bank/ESMAP to come speak on the topic.

#### *Best Practices*

- Energy Access and Clean Energy: ESMAP’s REMTI has been helping the government of Peru to develop power system planning tools for better integration of RE into interconnected regional grids, and providing training for country stakeholders. In Peru, REMTI supports dissemination of design and contracting/construction standards and procedures; promotion of domestic manufacture of ancillary components, such as control and communications equipment; and training in operation and maintenance of these plants.

Out of the sample of 50 desk review projects from 2007 to 2011, approximately 45 intended to enhance client capacity and build institutional know-how, 29 of which were closed at the time of review. Of this cohort, approximately 9 fully achieved this objective, 15 partly achieved this objective, and there was not enough evidence to conclude results for another 17 projects. Combining the “fully” and “partly” met objectives, approximately 59 percent of projects intended for this objective satisfactorily achieved it. Improvement of client capacity appears to be most likely when the product or activity:

- Responds to a specific need among stakeholders or clients and is packaged in way that is user-friendly and accessible to the intended audience/beneficiaries
- Engages in-country professionals through academia and/or networks of practitioners who directly support and advise the public and private sector
- Uses virtual/IT and other practical means to connect people quickly and appropriately, without replacing the remaining need for face-to-face meetings.

### ***Adoption of Cutting-Edge Solutions***

During the evaluation period of 2007-11, ESMAP added to its Business Plan the objective of developing and disseminating cutting-edge solutions and innovative tools and practices in the energy sector. According to the FY09-11 program review, 15 ESMAP activities have been developed to introduce innovative products intended to benefit the wider energy practice in client countries. Some examples of these innovative solutions include new:

#### *Tools*

- **Energy Efficiency:** TRACE, the Tool for Rapid Assessment of City Energy, was developed by ESMAP with the input of a panel of experts and city officials. It helps decision makers to evaluate urban energy efficiency options across six sectors: transport, buildings, water, public lighting, solid waste, and power/heating. The tool has two components: (i) a city energy-benchmarking tool and (ii) a “playbook” of tried and tested EE interventions. The user-friendly software application enables the user to follow a series of sequential steps to build matrix of tailored recommendations for EE options, as well as possibilities for implementation and financing.

#### *Business Models*

- **Energy Access:** The new organizational scheme that ESMAP, through the World Bank, helped put in place for off-grid photovoltaic systems in Peru brought a complete change in the way PV is used for rural electrification. This 2008 rural electrification project enabled local communities to receive service and maintenance of PV systems, which were often failing and poorly managed. In the new approach, the regional electricity company works with local firms that are responsible for installing and maintaining the systems and the quality of services. This new model is supported by a special tariff on electricity, written contracts with every beneficiary, and a national compensation scheme to reduce their electricity bills. Despite some criticisms, this novel approach has provided excellent results so far.

#### *Partnerships*

- **Energy Access:** “Lighting Africa” is a program supported by ESMAP and the wider World Bank Group to stimulate off-grid lighting markets in Sub-Saharan Africa. Among other major accomplishments, it has contributed to dissemination of quality lighting products and the latest cutting-edge technologies such as light-emitting diode (LED). The quality assurance processes have led to the development and publication of a low-cost methodology for testing the quality of off-grid LED systems. Lighting Africa Associates, an affiliation of market actors, including manufacturers and distributors, saw a 450 percent increase in sales, and overall, Lighting Africa has helped enable access to lighting to 2.5 million people. In 2010, Lighting Africa assisted governments in Ethiopia, Liberia, Mali, Senegal, and Tanzania in replicating successful approaches piloted by Lighting Africa in Ghana and Kenya. Expansion to additional countries, such as the Democratic Republic of Congo and Nigeria, is now being explored. Efforts are also being made to harmonize quality assurance systems across the continent in order to foster market transformation.

Out of the sample of 50 desk review projects from 2007 to 2011, approximately 12 intended to introduce innovative or cutting-edge tools and practices to clients, 9 of which were closed at the time of review. Of that sample, six fully



achieved this objective, one partly achieved this objective, and there was not enough evidence to conclude results for another four projects. Combining the “fully” and “partly” met objectives, approximately 64 percent of projects intended for this objective satisfactorily achieved it. Innovations and cutting-edge solutions appear most likely to have uptake when the product or activity:

- Responds to a specific need among stakeholders or clients and is packaged in way that is user-friendly and accessible to the intended audience/beneficiaries
- Engages in-country professionals through academia and or networks of practitioners who directly support and advise the public and private sector
- Uses multiple media, including virtual/IT and other practical means, to connect people quickly and appropriately, without seeking to replace face-to-face interaction.

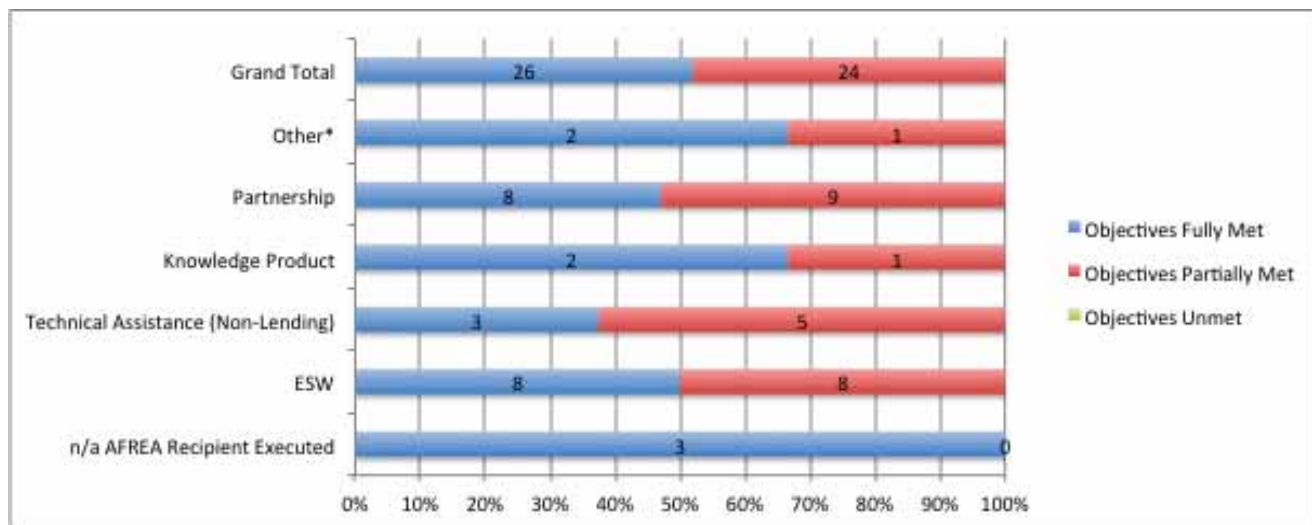
### ***Products and Activities***

In observing the evaluation period portfolio by number of objectives met<sup>58</sup> under the respective product lines and activities, ESMAP *fully* achieves on average 52 percent its goals, and of the sample with evidence of achievement, there is no record of objectives unmet. However, out of a possible 88 objectives to meet, it was too early to assess results for 9, and a further 31 (35 percent of the sample) had no recorded evidence of results. Furthermore, the proportion of objectives fully or partly met fluctuates greatly by the relatively small sample size of the six product line classifications spread across the desk review cohort. Therefore, excluding projects with levels of achievement “unknown” and “too early,” all ESMAP objectives in the desk review sample are either fully or partly met. With the exception of the outstanding and small samples for AFREA, which met all three of its objectives across three projects, and “other,” which only had evidence for three out of nine possible projects, the product lines KP and ESW appear to have the highest levels of objectives met within the desk review, with 50 percent and 67 percent full achievement of intended objectives, respectively, within their product line. This is followed by partnership and technical assistance, with 47 and 38 percent, respectively.

**Table 6 - Product Lines and High-Level Objectives for Desk Review Sample**

Product line	Products and Objectives Overview				Desk Review Project Objectives Results <sup>59</sup>						
	Total Projects	Total Disbursement	Total Desk Review Projects <sup>60</sup>	Total Desk Review Disbursed (\$000)	Total Number of Objectives <sup>61</sup>	Objectives Fully Met <sup>62</sup>	Objectives Partially Met <sup>63</sup>	Objectives Unmet <sup>64</sup>	Unknown/No Evidence <sup>65</sup>	Too Early to Know <sup>66</sup>	Percentage of Objectives Fully Met <sup>67</sup>
AFREA	21	\$4,299.43	3	\$360.40	3	3	0	0	0	0	100%
ESW	87	\$20,827.27	15	\$3,540.09	24	8	8	0	8	2	50%
Knowledge Product	43	\$7,047.08	7	\$2,769.26	13	3	5	0	2	3	67%
Partnership	30	\$5,070.59	5	\$838.89	8	2	1	0	5	0	47%
Technical Assistance (Non-Lend)	102	\$25,304.19	14	\$2,537.63	30	8	9	0	10	3	38%
Other <sup>68</sup>	27	\$5,496.90	6	\$1,194.85	10	2	1	0	6	1	67%
<b>TOTALS</b>	<b>311</b>	<b>\$68,045.46</b>	<b>50</b>	<b>\$11,241.11</b>	<b>88</b>	<b>26</b>	<b>24</b>	<b>0</b>	<b>31</b>	<b>9</b>	<b>52%<sup>69</sup></b>

Figure 3 - Desk Review Project Product Line Results by High-Level Objective



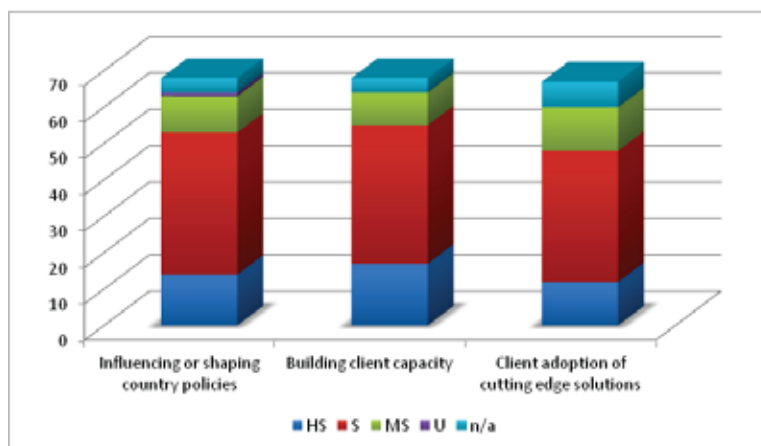
Perceptions of World Bank staff who manage Bank-implemented ESMAP projects largely reflect evidence from documentation and case studies. A full 72-81 percent of e-survey respondents believe ESMAP to have a “Satisfactory” or above rating across each of the three main objectives. A full quarter of respondents believed building client capacity was “Highly satisfactory,” while 21 and 18 percent, respectively, thought ESMAP was Highly satisfactory in influencing or shaping country policies and client adoption of cutting-edge solutions.

Several of the respondents also chose “n/a” instead of a rating, which was a reflection of a variety of experience, or lack thereof, of the respondent on ESMAP work under that high-level objective. Most felt ESMAP support made a valuable and complementary contribution to the World Bank’s policy dialogue, and that “capacity,” especially, was difficult to measure or attribute to ESMAP, even though dissemination workshops are widely attended. Finally, responses noted a gradual shift by clients from older technologies to new ones, but that much needed to be done to further develop “process, products, and tools” that enable clients to utilize and fully own cutting-edge solutions to their energy needs.

Table 7 - World Bank Staff Survey – ESMAP Achievement of High-Level Objectives

	HS	S	MS	U	n/a	Total
Influencing or shaping country policies	14 (21%)	39 (57%)	10 (15%)	1 (1%)	4 (6%)	68
Building client capacity	17 (25%)	38 (56%)	9 (13%)	0 (0%)	4 (6%)	68
Client adoption of cutting edge solutions	12 (18%)	36 (54%)	12 (18%)	0 (0%)	7 (10%)	67

Figure 4 - World Bank Staff Survey – ESMAP Achievement of High-Level Objectives



### Challenges to Achieving Goals across All Work Programs

ESMAP faces several challenges to achieving the core high-level objectives, including practical operational constraints, as well as external factors.

- *Trade-offs in focus:* As with any limited resource pool,<sup>70</sup> ESMAP is faced with making choices as to what areas to focus work and which areas to phase out. For example, some observations from interviews, TAG reports, and survey respondents were that:
  - The current work program strongly supports renewable energy and energy efficiency but neglects much needed sector reform that is still critical to some countries.
  - A larger work program should be devoted to energy access because it is the window of opportunity for the World Bank to influence emerging energy policies.
  - More support is needed for the householder energy access business lines.
  - There is strong client interest in developing more work relevant to transport.
  - The “smart grids” work is weak, while the renewable energy work is strong.
  - A remaining gap, which ESMAP is beginning to fill, is advancing the low-carbon economy business lines by making available vulnerability assessment tools, as well as developing decision-making tools for options and financial instruments and technologies to reduce exposure to climate variability.

While remaining responsive to client needs, ESMAP also must maintain a work program that is focused and consistent for operational purposes. Some case study interviewees and World Bank staff felt that “setting priorities based on clients demand would enhance the results of ESMAP’s activities” and that “sometimes, ESMAP’s strategic priorities restrict [the] use of ESMAP [funding].” To nuance such a view, interviews with CG and TAG highlighted the need to keep in mind the function of ESMAP in “pushing the envelope” toward the adoption of innovative solutions and influencing the Bank energy strategy, which implies setting priorities not only based on clients’ demands or operational needs per se, but on strategic and emergent energy and cross-sectoral issues.

- *Ensuring involvement of and dissemination to a wider audience:* Based on documentation, interviews, and World Bank staff survey responses, in order to improve the chances of improving client capacity, ESMAP requires better mechanisms for sharing knowledge products, reports, and studies across a wider audience of stakeholders and donors and across various countries and regions by strengthening ESMAP as a knowledge platform. One World Bank TTL frankly stated that they had identified a “need of knowledge dissemination seminars/workshops at the country level, for which I had no funding.” Furthermore, targeted “knowledge events” and workshops around specific issues—whether South-South, regional, or international—have all been generally very well received and appear to have a strong multiplying effect on the likelihood of reaching high-level objectives. The remaining challenge in many cases, however, is to expand from improving the capacity of a limited number of high-level (and high-turnover) officials or clients involved in the project, to reach the potential wider beneficiaries through continuity and follow-up on the initiatives

undertaken, in addition to making material more accessible by, for example, ensuring translation into local languages.

- *Producing robust and independent analytical work:* Some of the World Bank survey respondents, interviews, and PCN and final report reviewer comments indicate that sometimes a stronger analytical basis, and quantitative work, would enhance ESMAP impacts. Starting in 2007, ESMAP undertook to manage directly the bulk of the analytical think-tank activities (through its portfolio of own-managed work), and this has been largely successful under the new operational framework. However, the TAG expressed concerns in 2010 that the burgeoning World Bank partnerships (Cities Alliance, InfoDEV, PPIAF, and the World Bank Institute) could compromise ESMAP independence, though they conceded this could be balanced with a number of external partnerships (Global Energy Associates, EU-PDF, GTZ, IRENA and WEC among others). Similarly, in 2011 the CG remarked that the shift to regional block grants (which are implemented by the World Bank's regional energy sector units) might reduce the extent to which cutting-edge analytical work is carried out, or that: (i) ESMAP runs the risk of merely 'servicing' conventional Bank operations rather than introducing innovative ideas; and (ii) one of the primary counterparts for ESMAP is now the regional operational units of the Bank, with country priorities for analysis identified and prioritized through the intermediary of Bank staff. Clearly a balance must be struck here to preserve what a majority of CG members interviewed see as the added value of ESMAP as a cutting-edge knowledge-sharing mechanism and a tool to leverage change in the Bank approach to the energy sector, which is what the ESMAP new business model, combining a portfolio of ESMAP own-managed work and Bank-implemented annual block grants, aims to achieve.

### ***3.2.3. Extent of a functional M&E system***

***To what extent does the program have an effective monitoring, reporting, and evaluation framework, including measurable indicators, systematic and regular processes for collecting data, and feedback processes to facilitate decision making and learning?***

ESMAP has made great strides in recent years (2009 onward) and months to better define and track results of ESMAP activities and products. These efforts include such measures as:

- Requiring all Proposal Summary Forms (PSFs) and Grant Funding Requests (GFRs) to indicate relevance to intended ESMAP outcomes, and more robust baseline statements
- Launching and using an internal online M&E portal (or Results-Based Monitoring System) to track outputs and results and improve learning opportunities
- Publishing an Operational Manual (November 2011) for staff that clarifies the internal procedures and guidelines for managing ESMAP activities
- Enforcing Grant Reporting and Monitoring (GRM) tracking requirements
- Presenting program-level outputs in annual reports (2010 onward), complemented by the results narratives of the annual portfolio review
- Requiring ESMAP internal reviewers to assess PSF relevance to ESMAP objectives, and require monitoring of regional activities from design through completion

However, it is fairly clear that over the majority of the evaluation portfolio period, ESMAP faced challenges to simplify its M&E system to a point of both relevance to its high-level objectives and practicality for the purposes of operationalization and alignment with World Bank systems. The new M&E design is comprehensive, but may be difficult to implement; there is insufficient evidence yet from the evaluation period to support the conclusion that ESMAP uses data generated through the M&E system for feedback, decision making, and learning. It is hoped that the improved ties between ESMAP activities and high-level objectives, as clearly seen in planning documents from 2009 onward, translate to more targeted effectiveness on the ground. Going forward, ESMAP needs to decide to what degree it wants to focus on measuring outputs and outcomes, respectively, and then focus efforts to improve reporting levels as well as the regular use of M&E data for both internal and external purposes. Impact studies, while helpful for capturing longer-term outcomes, are not a replacement for systematic collection and reporting of results

generated by ESMAP activities and products.

### Extent to which ESMAP has a functional M&E system

#### *Development of the M&E System*

The 2006 annual report (one year before this evaluation portfolio period) mentions some of the first discussions on developing ESMAP results indicators and an M&E system, and notes many of the challenges that ESMAP faces in systematically measuring and assessing the results of its activities and products, including the:

- Intangible nature of ESMAP products (technical assistance, policy advice, upstream sector analysis)
- Long time gap between the ESMAP activities and downstream impacts on the ground
- Complex interactions among many nonlending activities that lead to policy reform and project design and implementation
- Pros and cons of using quantitative indicators or storyline methodologies to monitor ESMAP impacts.

The 2005-07 ESMAP desk review subsequently recommends that ESMAP: (i) build a portfolio monitoring and tracking system along the Analytical and Advisory Activities (AAA) task cycle from design to completion; (ii) build a framework that systematically measures innovation in ESMAP programs and activities going forward in each of the subsector areas; and (iii) revisit the AAA architecture in the context of ESMAP to enable it to capture likely impact and results achieved by ESMAP activities.

In response to these recommendations and challenges, by March of 2010, the Consultative Group endorsed a new ESMAP results-based M&E system, as outlined by a concept note that describes its methodological foundation and characterizes a work program to implement the new results framework. The new M&E system became fully operational in FY 2011, and ESMAP has been retroactively tracking the achievement of objectives since FY 2009. The concept note states that ESMAP’s “overall mission is to assist low- and middle-income countries to increase know-how and institutional capacity to achieve environmentally sustainable energy solutions to contribute to poverty reduction and sustainable economic growth.”

#### *M&E System Design*

In the 2008-13 Business Plan results framework<sup>71</sup> ESMAP programming is made up of four major components (EASP, EECI, REMTI, PEA-TAP), and two of these components (EASP and PEA-TAP) have three subcomponents each. These programmatic areas are designed to achieve objectives across one or more of the three major global energy challenges that ESMAP addresses: energy security, energy poverty, and climate change. ESMAP’s core programs therefore address these respective challenges by seeking to improve energy security, increase energy access, and promote clean energy. Table 8 below described the relationship between programmatic components and subcomponents and objectives under these global challenges.

**Table 8 - ESMAP Results Framework Components and Subcomponents**

Components	Subcomponents	Energy Security	Energy Access	Clean Energy
<i>Energy Assessment and Strategy Programs (EASP)</i>	<i>Country Energy Sector Vulnerability Assessments Program (CESVAP)</i>	X		
	<i>Regional Energy Integration Strategies Program (REISP)</i>	X		
	<i>Low-Carbon Growth Country Strategies Program (LCGCSP)</i>			X
<i>Pro-Poor Energy Access Programs (PEA-TAP)</i>	<i>Energy SME Development Strategies-TA Program (ESMEDS-TAP)</i>		X	
	<i>Rural Electrification Strategies-TA Program (RES-TAP)</i>		X	
	<i>Gender and Energy Development Strategies-TA Program (GEDS-TAP)</i>	X	X	X
<i>Energy Efficient Cities Initiative (EECI)</i>		X	X	X
<i>Renewable Energy Market Transformation Initiative (REMTI)</i>		X		X

Each of these (sub)components (EASP, EECl, REMTI, PEA-TAP) of the ESMAP framework has its own program-level performance measurement framework with: (i) weighted outputs each with their own respective indicators, baselines, milestones, and targets (with sources of verification); as well as respective risks, ratings, and mitigation measures; and (ii) high-level outcomes (to which the output aligns/applies), each with secondary outcomes and indicators; and a final “Outcomes Baseline & Milestones by Year” column that applies across the entire component and describes the [suggested] “approach to evaluate baseline and milestone,” for which all component performance measurement frameworks state as (with additional remarks for special trust funds such as for the DfID funded low-carbon growth studies):

- A narrative description of the program subcomponent to be used for baseline and yearly milestones
- Short two- to three-page brief written by TTL or team members
- Timing: at initiation of the program subcomponent and every year thereafter until end of program period (2013) to evaluate progress.

The M&E concept note explains, however, that the efficacy of ESMAP is to be evaluated on a 4-point scale, “objective by objective,” instead of by components, themes or impact on global challenges. The March 2011 TAG report states, “The result measuring system has two levels of monitoring: (i) Scorecard (outputs), taking the business plan list of deliverables and counting up. (ii) Outcomes, taking the ESMAP portfolio for the last 4-5 years that have been completed and trying to measure outcomes defined along four broad indicators (a) influence on Bank’s strategy and lending program, (b) client capacity building, (c) impact on informed policy making, and (d) extent to which cutting edge innovative solutions have been adopted.”

The 2010 annual report remarks that as outcome data collection accrues according to the new M&E plan, ESMAP will make an effort to enhance the M&E system by the following:

- Design and develop a web-based portal of the M&E system
- Align the M&E framework with World Bank systems to demonstrate better ESMAP’s impact on leveraging Bank resources
- Continue to improve mechanisms for baseline data collection and identification of milestones
- Sharpen systems to track development and delivery of outputs, identify appropriate indicators, and conduct ex post assessments of all ESMAP-supported activities.

Several M&E system operationalization design flaws that made the coherence of M&E materials and the gathering of portfolio-level results practically impossible before appear to have been recently improved by the launch and use of the web-based internal M&E system (Results-Based Monitoring System) and accompanied by the new operational manual and annexes, which were produced in November of 2011 (five months after the end of this evaluation portfolio period of July 2007–June 2011). The operational manual provides a comprehensive overview of ESMAP, including annual block grants and ESMAP own-managed work, and key operational and implementation guidelines (travel, reallocation of budget, publications, M&E). The annexes include, among others, forms for annual block grants, identifying and classifying AAA, the ESMAP high-level objective, publication proposal forms, and templates for own-managed activities. This operational manual has the potential to provide:

- More clarity on how project-level indicators feed into the program-level framework
- Simple guidance on aligning ESMAP operations with World Bank procedures and forms
- Improved understanding of ESMAP visibility and strategic role in the World Bank Group.

Some other policy and procedural requirements have included a more focused intent to gather and use information from the M&E system for the purposes of improving measurement of effectiveness and relevance, such as requiring all PSFs and GFRs to include the ESMAP outcomes it targets, and more robust baseline statements. Likewise, internal reviewers are requested to assess projects at the design stage for relevance to ESMAP objectives. Furthermore, to improve the volume and quality of assessment materials available to ESMAP for accounting for and learning from implementation, there are improved efforts to enforce GRM tracking requirements, and ensure that regional units monitor project design through completion. As a testament to this effort, the annual reports from

2010 onward include program output achievements across milestones and targets, which are complemented by the more descriptive annual portfolio review.

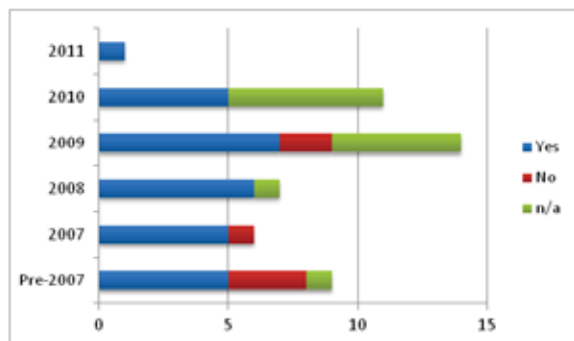
**M&E System Implementation**

Because the vast majority of the desk review sample has not been subject to the new M&E system as described in the 2008-13 business strategy, 2010 concept note, and ESMAP component performance frameworks, this evaluation has insufficient evidence to speak to the operationalization of the new M&E system. The desk review sample is composed of 50 projects that have implementation start years as early as 2004; 33 are completed and 17 were ongoing at the time of assessment, though an additional 3 “ongoing” projects had ACSs. All projects had project-level outputs, deliverables, and/or activities outlined in the PCN or other planning documents, but not ESMAP “indicators” at the output or outcome level. At the other end of the project cycle, however, 17 percent of projects did not have an ACS or some form of completion assessment report, and of those that did have a final completion report, only 37 percent had ratings for “development objectives,” and only two had ratings for the results indicators for those objectives. A full 40 percent of projects with a final completion report did not contain ratings for the intended objectives or indicators.

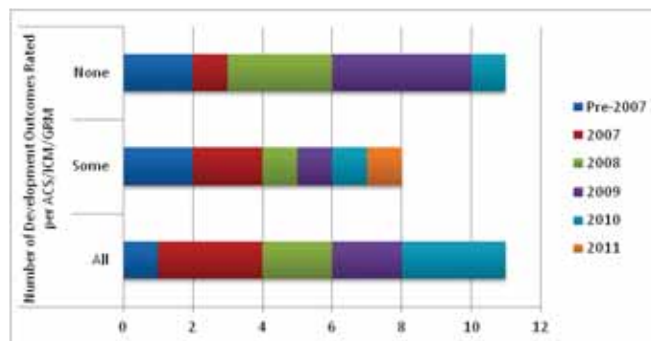
**Table 9 - Desk Review Sample of Final Assessment Materials**

Start year	ACS/ICM/GRM Available			Number of Development Outcomes Rated per ACS/ICM/GRM		
	Yes	No	n/a <sup>72</sup>	All	Some	None
Pre-2007	5	3	1	1	2	2
2007	5	1	0	3	2	1
2008	6	0	1	2	1	3
2009	7	2	5	2	1	4
2010	5	0	6	3	1	1
2011	1	0	0	0	1	0
<b>Total</b>	<b>30</b>	<b>6</b>	<b>13</b>	<b>11</b>	<b>8</b>	<b>12</b>
<b>Percent</b>	<b>83%</b>	<b>17%</b>		<b>37%</b>	<b>27%</b>	<b>40%</b>

**Figure 5 - Final Assessments Available per Start Year, Desk Review**



**Figure 6 - Final Assessment Ratings Provided for Objectives, by Start Year, Desk Review**



A 2010 TAG report notes that a final project completion summary would thereafter be required, even though most TA, grants, and other reports/studies that were nonimplementation did not commonly have final assessments available in the World Bank system. Based on implementation start dates, there appears to be an increasing amount of overall final assessment materials over the course of the five years (2007-11). However, monitoring information is almost entirely absent, possibly because it is not required and because the short timeframe for most ESMAP-supported interventions narrows the reporting window for activities. The low reporting numbers and general lack of evaluative material is one of many challenges apparent during the evaluation period. There were also several points of confusion that complicated portfolio-level assessment, as noted below.

- The availability of reporting, monitoring, and evaluative information depends heavily on the quality of staff and/or the team. Newer programs with more deliberate up-front structure, such as EECI and AFREA, for example, appear more likely to file monitoring and reporting documentation.
- Baselines and targets, respectively, were rarely noted as part of planning documents.
- The rationale behind or path to expected ESMAP high-level outcomes is rarely stated in the planning documents, even though the rationale behind World Bank support was commonplace.
- ESMAP program-level indicators are a mix of qualitative and quantitative indicators; but-project level indicators are almost entirely qualitative, preventing the aggregation of results across programs, objectives, and themes.
- Although reporting of finances appears to be the priority, other monitoring information/tracking of progress is generally absent.

Finally, because ESMAP forms overlap with World Bank forms, processes, and policies, but are meant to capture the nuanced complementary contribution of ESMAP to intended results, these differing systems present a lack of continuity for recording and reporting results across themes, programs, and objectives, and are a hindrance to enabling assessment. The inconsistent use of indicators makes it unclear to which high-level objective any given activity or product is meant to contribute. For example, ESMAP “grant-specific indicators” (in the eyes of the World Bank), complement Bank standard indicators; therefore, the types of design-level identified indicators (though usually “activities” and “deliverables” for the vast majority of ESMAP projects) in ESMAP planning documents differ from final completion report indicators. Although there is a positive trend in the proportion of the ESMAP portfolio with objectives in place at the design phase, only some of these objectives clearly overlap with standard World Bank reporting.

Table 10 below highlights some example of World Bank development indicators and their relevance to ESMAP. Based on documentation alone, it is not always clear when or how ESMAP indicators complement, support, or dovetail with World Bank indicators. In short, over the evaluation period, the documentation review did not reveal any systematic (table, check-off box, list) efforts to track one set of SMART indicators (between those laid out by ESMAP and the Bank, respectively) to collect ongoing data for assessment against expected results and objectives. Although the newer (post-2009) ESMAP PSF contains the thematic areas —energy security, energy markets, energy poverty, renewable energy, energy efficiency—to tick off (with M and S rating for main or secondary focus), as well as a section for noting ESMAP high-level objectives, too few projects in the desk review sample fell under this new system to form any analysis on its effectiveness.

**Table10 - Sample ACS “Development Objectives” and Relevance to ESMAP Objectives**

Activity Completion Summary “Development Objectives”	Relevance to ESMAP HL objectives?
1. Inform lending	Primary
2. Inform government policy	Primary
3. Build client analytical capacity	Primary
4. Develop/strengthen institutions	Secondary/supplemental to 2,3
5. Facilitate knowledge exchange	Secondary/supplemental to 2,3
6. Inform/stimulate public debate	If it supports 1,2,3
7. Influence development community	If it supports 1,2,3
8. Assist in client policy/program implementation	If it supports 1,2,3

**Extent of ESMAP’s M&E system use for feedback, adaptive management, and learning**

***M&E System Utilization***

This section so far has laid out many of the opportunities and barriers to how the ESMAP M&E system can become fully operational, but another question to answer is whether it has created space for feedback, adaptive management, and learning.



The new ESMAP operational manual (2011) states that the purposes of the M&E system are:

- *To assess the effectiveness* of ESMAP’s programs and initiatives in achieving timely and sustainable outcomes for clients
- *To promote accountability* in ESMAP’s program-level outcomes through the systematic assessment of results and performance effectiveness
- *To enhance the use of performance-based criteria* for making decisions about ESMAP strategies, program management, and activities
- *To facilitate feedback, learning, and sharing of knowledge and lessons learned*, thereby facilitating wider replication of its results and recognition of ESMAP’s achievements.

To juxtapose these purposes of the M&E system, the 2008-13 Business Plan states that “the results framework for the monitoring of the outcome indicators is to be used as an objective basis for the CG to assess the effectiveness of ESMAP and its partners in transferring know-how and innovative cutting-edge solutions on reducing energy sector vulnerability to crises to stakeholders in client countries and the global energy practice.”

An insufficient amount of time has passed in order to assess the utilization of information generated under the current M&E plan for each of these purposes outlined above. In terms of *internal* learning, feedback and adaptive management over the 2007-11 evaluation timeframe, section 2.1 above, outlines how ESMAP has utilized information sharing among staff and between implementing partners and describes the ways in which ESMAP is responsive and adept at shifting gears and demonstrates active learning during implementation of a project. In terms of *external* learning, accountability, and transparency, for the first time, the 2010 annual report included an annexed table of the respective statuses of the program components according to their indicators and milestones as presented in the respective component M&E performance frameworks. While it does not illustrate precise tracking of project-level results feeding into ESMAP high-level objectives, it does demonstrate a step toward enhancing the use of performance-based criteria for measuring effectiveness and improving decision making.

Overall, evidence is weak over the 2007-11 portfolio and strategy in terms of ESMAP demonstrating a culture of using the M&E system for the purposes of learning, adaptive management, and decision making; but it is especially weak pre-2009. In addition to the low levels of reporting in general, notably, in the current M&E performance measurement framework, there is no column/section for stating underlying assumptions or for monitoring of underlying assumptions and nor is there any other M&E tools used to enhance learning, such as a program-level theory of change, or other forms of systematic information sharing. Second, since ESMAP is preparing to align more closely its M&E with the World Bank energy strategy, this has unknown implications for the generation of ESMAP-specific M&E data that are complementary and supplemental to the World Bank system. Projects are already indistinguishable as ESMAP activities and products. One 2010 energy efficiency project in Belarus simply states, “The monitoring and evaluation of outcomes and results during implementation would follow standard Bank practice.”

### ***Challenges in the ESMAP M&E System***

Many of the technical and operational challenges outlined before the new 2010 M&E system still persist for ESMAP:

- *Capturing “client capacity”*: ESMAP itself does not “build” a client’s capacity but rather can provide the means, conditions, or tools helpful for the client or institution to own a self-defined path to improved capacity or understanding on a particular issue or set of issues. Very few of ESMAP products are tools designed by clients and stakeholders. Therefore, in order to improve client capacity, either activities must be explicitly designed for knowledge exchange and training, or products must be designed and implemented with a high level of stakeholder and client involvement. Many interviewees and survey respondents noted the difficulty in measuring this outcome and at the same time emphasizing the need for a deeper commitment to training and local participation. A 2007 TAG report additionally noted the considerable benefits of ESMAP undertaking a usersurvey to understand its audiences and assess whether its communications and outputs are reaching and/or are being used by the intended beneficiaries. It is unclear whether this kind of exercise has been carried out.

- *Capturing “cutting-edge” solutions and/or “innovation”*: Similar to the challenges in reaching and assessing whether client capacity has improved, the adoption of “cutting-edge” solutions is not the same as counting proposals or the number of tools that offer solutions. Two aspects of this high-level outcome are difficult to measure: when to consider something “cutting-edge” as opposed to “best practice” or “standard practice”; how to measure “adoption” or absorption of a tool or product, for which there are no standard practices (as mentioned by the 2010 M&E concept note).
- *Capturing outputs vs. outcomes*: Developing and measuring the “after publication” intended effect is much more difficult than measuring the production and publication of a report, integration of a study into policy, or the number of persons reached through a learning event or workshop. Some observations were that “ESMAP needs to follow up with countries for developing country capacities and policy dialogue,” and that “Generally ESMAP produced work is quite robust and comprehensive; however, oftentimes, the impact is difficult to measure because it is often due to external factors beyond the technical merits of the recommendations made to the clients.” The time lag of accruing results from the actual up-take ESMAP activities and products means the program must choose which outcomes it can reasonably monitor and/or account for operationally, and adjust its M&E system to capture systemic and behavioral change influenced by ESMAP products and activities. Additionally, regional and global projects also present further inherent difficulties in identifying and measuring their diffused effects at the outcome level, even if number of workshop attendees or publications circulated can be measured.
- *(Mis)Alignment with the World Bank systems*: Aligning the ESMAP M&E system with World Bank objectives and procedures already began with the shifting of the ESMAP business cycle to match that of the World Bank in 2008, for example, but challenges remain in developing a World Bank and ESMAP relevant results framework. In addition to the lack of standardized criteria for assessing TA and AAA, as the 2010 M&E concept note points out, the Bank’s data systems (SAP, IRIS, Business Warehouse, and Operations Portal) are complex and not adequately harmonized for M&E needs. Furthermore, there are few incentives and no regular practice of establishing baselines and collecting milestones for such activities, which account for the vast majority of ESMAP’s work program. Under the new M&E plan, the ESMAP evaluation criteria and definitions are fully consistent with World Bank standards such as those of the Independent Evaluation Group (IEG), the Quality Assurance Group (QAG),<sup>73</sup> and the Operations Policy and Country Services (OPCS) Department. As the M&E concept note explains, while the ESMAP M&E aligns further (especially) with World Bank regional operations, this must be “complemented by external evaluation to maximize transparency, independence, and impartiality in ESMAP’s program-level performance assessment, as well as in the ensuing findings and recommendations.”

### 3.2.4. Fulfillment of strategic role

***How has the program fulfilled its strategic role? How can this role be made more effective in the future, and what are the related options and possibilities going forward?***

Over the course of the evaluation period, ESMAP has largely fulfilled its strategic roles as a think tank, knowledge clearinghouse, and facilitator of operational leveraging. ESMAP has been successful in cultivating its think tank role by supporting high-quality research and publications that have been timely and relevant, especially to developing country governments, but also to economies in transition and emerging economies. ESMAP has also demonstrated its comparative advantage in terms of being housed in the World Bank, which helps leveraging follow-on finances and set expectations for a reputation of quality and reliable work; and ESMAP products typically precedes World Bank investment. Improvements have already been made in terms of ESMAP’s knowledge clearinghouse function, but there is more work to be done in terms of visibility, outreach, dissemination, and knowledge exchange with a wider array of stakeholders, nationally, regionally, and internationally.

### Extent to which ESMAP has fulfilled its strategic role

#### ***Operational Functions***

ESMAP has molded and remolded its strategic role over the past two decades in order to remain relevant to its overall mission “to assist low- and middle-income countries to increase know-how and institutional capacity to

achieve environmentally sustainable energy solutions to contribute to poverty reduction and sustainable economic growth.” Over the evaluation period, ESMAP has had three key strategic roles or functions through which it operates: think tank, knowledge clearinghouse, and operational leveraging.

### *Think Tank*

Most of ESMAP’s think tank activities are TA (nonlending), which the ESMAP M&E log-frame explains: refers to activities that: (i) are aimed at enabling external clients to implement reforms or strengthen institutions, (ii) are freestanding, and (iii) are attributed to a Bank unit with clear accountability. For example, the 2006 annual report describes how the 2007 flagship publication, “Developing Financial Intermediation Mechanisms for EE Projects in Brazil, China, and India (3CEE),” provided replicable tools and models for bringing energy market practitioners and domestic financial sector stakeholders together to promote measures. The “Low-Carbon Growth Country Studies Program” in 2007–09, is another very well-received example, noted by many interviewees, of how ESMAP aided the governments of six middle-income-countries—Brazil, China, India, Indonesia, Mexico, and South Africa—in initiating studies to assess their development goals and priorities for GHG mitigation, and subsequently calculated the additional costs and benefits of lower carbon growth and how to finance such measures.

To many early clients, ESMAP established its think tank function in the 1980s and 90s with groundbreaking energy sector analyses. In 2010, 27 activities lead to reports—comprehensive in-depth studies outlining policy recommendations—whereas the remainder produced policy notes that provide just-in-time advice to a client on a range of energy sector issues. The number of reports dipped to only 10 in 2009, though more than 30 were produced the previous two years. A number of other smaller publications and web stories posted over the evaluation period could also potentially be considered “think tank” materials.

Both before and since 2007, when ESMAP began to manage more directly the bulk of its think tank activities and products, the program has continued to produce high-quality, high-demand products that have not only influenced developing country governments but also the donor community and World Bank strategy. Some CG members interviewed as part of this evaluation have highlighted how they themselves make use in their own agencies of some of the analytical studies that ESMAP does to inform their own work in the energy sector. The 2011 TAG report notes that in preparation of the World Bank formulation of its new energy strategy, ESMAP developed five background papers using the extensive material available, including formal reports, technical reports, and knowledge exchange series.

On the whole, ESMAP performed well in this role, with the renewable energy and low-carbon growth studies frequently mentioned as important contributions to this function. Although not labeled as such, of the 50 project desk review sample, at least 22 appear to have intended to achieve a think tank function. The projects varied widely in theme and subsector, but each provided timely and targeted research to:

- **Enhance Policies:** The 2009 ESW on Modern Biofuels Assessment in Mozambique (i) provided assessment of the technical, economic, social, and environmental feasibility to produce and market biofuels in Mozambique as alternative renewable fuels for the transport, industry, power generation, and household sectors and for exports; and (ii) designed a Draft National biofuels Program and Development/Implementation Strategy, and elaborated a Policy and Regulatory Framework for the development of a sound biofuels sector.
- **Stimulate Public Debate:** For the 2008 “Structuring of PPP in Natural Gas in Egypt,” ESMAP, through the World Bank, provided analytical support to the government of Egypt to develop options for structuring private sector participation schemes in natural gas distribution services, including market arrangements for future evolution of the sector.
- **Mainstream Gender:** The Gender and Energy project, 2009, began coordinating a horizon-scanning workshop to discuss current needs of the gender-energy nexus in developing countries; critical areas of work (at both the research and operational levels); and ways in which ESMAP can enhance its support to World Bank operational teams and counterpart developing countries to tackle the gender-energy nexus challenges.

- **Develop New Energy Markets:** Ongoing TA on Promoting Mini-Hydro Potential in Mexico is designed to stimulate mini-hydro production by (i) leveraging existing knowledge and available studies- including sharing of best practices and international experience, and (ii) funding prefeasibility studies and environmental assessments of a select few pilot mini-hydro project sites that have already been identified as having good hydrological potential in Mexico.

The country case studies revealed that in all cases, the client can see the contribution of ESMAP work as a “think tank,” but the contribution of ESMAP is also completely indistinguishable from the World Bank. The low-carbon growth study and “renewable energy investment climate” work in India was especially indicative of ESMAP’s think tank function. In Moldova, because of the politically sensitive nature of the work, an outside expert opinion is precisely what was required, and ESMAP support very effectively fulfilled this role. In Morocco, bringing in international expertise and fostering policy discussions between stakeholders was especially helpful for the work on renewable energy regulation, and in light of the institutional transitions taking place at the time. When it comes to country-level work, ESMAP is, however, seldom known outside the direct client/local partners and therefore, practically speaking, any credit for cutting-edge or high-quality research and analysis, goes to the World Bank as the implementing partner.

The 2005-07 evaluation notes, however, that in some instances the think tank role is questionable when ESMAP efforts are repeats of parallel or previous activities or products. The evaluation names the indoor air pollution grants for stoves as an example of when tasks in the same subsector are repeated in regions and countries. Duplication of effort also brings up questions of cohesion and coordination of activities within ESMAP and with other donors or partners in the respective country or region. This was recognized in the interviews with CG members as being an area of potential improvement still currently relevant, and the corresponding need to foster further coordination from both ends (the donors themselves and ESMAP). In 2010, the TAG also raised the concern that ESMAP needs to report progress from a “think tank perspective” across the thematic energy challenges of poverty reduction, energy security, and climate change. This could potentially focus efforts better, improve ESMAP visibility, and enable identification of research gaps. The general lack of reporting on results following the publication of “think tank” material also presents a challenge to ESMAP in understanding its relative contribution.

#### *Knowledge Clearinghouse*

The ESMAP M&E concept note explains, “Knowledge Management Products refer to products (studies, toolkits, databases, workshops, outreach events) that have Bank staff and external groups and stakeholders as key audience and support the World Bank’s business through the production, retention, and dissemination of knowledge.” For example, the REMTI brochure explains how the program helps develop power system planning tools for better integration of RE into interconnected regional grids and provides training for country stakeholders.

Overall, ESMAP has been moderately successful in the role of knowledge clearinghouse. There are particular pockets of success and recent initiatives that have advanced this function for ESMAP, its partners, and its clients, such as the Low-Carbon Country Studies. The 2010 annual report presents a table of the status of program outputs according to indicator milestones and actual values. Out of a total of 51 possible indicators, 27 relate to the production of knowledge exchange products. For FY09, the targets for these indicators were met or exceeded on 19 occasions (70 percent success rate), while for FY10 they were met or exceeded on 18 occasions (67 percent). The desk review sample contained at least 22 (out of 50) projects that are pertinent to ESMAP’s role as a knowledge clearinghouse, and cover a variety of activities and mechanisms in order to:

- **Virtually Connect Communities of Practitioners:** AFREA and ESMAP’s Africa Electrification Initiative virtual network of practitioners discussion board and library on design and implementation of on-grid and off-grid electrification, 2009
- **Stimulate Debate/Improve Awareness/Cross-Pollination:** The 2007 “Coping with Oil Price Volatility” publication was shared by request with the Nigerian Minister of State for Energy, distributed in Uganda by the World Bank regional office to the Ministry of Finance, presented to the government of Malaysia, and caught the eye of a think tank in Argentina, which organized a presentation targeted at the business community.

- Sharing Best Practices and Lessons Learned: EECI's online case studies' showcase of energy efficiency policies and programs for cities, 2010
- Training on Standards and Regulations: REMTI support for Peru in the dissemination of RE design and contracting/construction standards and procedures; promotion of domestic manufacture of ancillary components, such as control and communications equipment; and training in operation and maintenance of plants, 2010.

Case study countries revealed mixed reactions to the idea of ESMAP as a knowledge clearinghouse. In all cases, interviewees found the workshops on international experiences to be useful and relevant (notably in Tanzania and Morocco), as well as in-house training, though most were not aware of ESMAP's support for these events. However, only two of the six country case studies revealed country clients' familiarity with ESMAP's role as a knowledge clearinghouse (Tanzania and Morocco), though this appears to be largely because of the disconnect between the use of the ESMAP products and services and their awareness that ESMAP supported their development; in the case of Tanzania, utilization of electronic resources was low in general. At least three interviewees from three different countries remarked that ESMAP publications were very high-quality research and analysis, but these reports also tended to remain on public office bookshelves. All interviewees noted dissemination as an area of possible improvement and expressed they would have appreciated it had the World Bank initiated the circulation of material whenever possible. Two clear positive examples of the knowledge management function among the case studies were: India's "Concentrating Solar Power" project, which included conducting two study tours for regulatory commission staff and staging a side event on the Country Strategy Program (CSP) at the 2010 Delhi International Renewable Energy Conference; and the Morocco LPG study, where the reform processes implemented in different countries have been duly analyzed in order to extract lessons learned, best practices, and main challenges to translate into the Moroccan context.

ESMAP's knowledge clearinghouse role is particularly important because in many countries and regions of the world, ESMAP studies and analytical work are the only ones available.<sup>74</sup> ESMAP is also particularly well positioned, with its different CG members, to act as the center of a knowledge-sharing platform that could bring together the experiences of the Bank and those of all its international partners. TAG reported in 2006 that ESMAP has taken conscious steps to improve its "documentation of lessons, visibility and effectiveness of ESMAP publications and other advisory activities," and established a communications and knowledge management team, including a web editor. However, for the majority of the program's work under the evaluation period, a systematic dissemination strategy and action plan was not in place as recommended in the 2005-07 desk review. The TAG further points out in 2008 that, while most activities integrate a built-in workshop or training event by design, the dissemination plans are not always well thought out and may not always carefully consider the client or audience, especially for regional and global projects. Many activities also generate proceedings reports and sometimes multimedia products, but often workshops or presentations are not tracked or evaluated in any way, and too often materials are not translated, distributed, or posted online, all of which reduces ESMAP visibility and leaves the details of dissemination and uptake on how people are using the materials and ideas a mystery.

#### *Operational Leveraging*

Since the vast majority of ESMAP activities and products are up-stream inputs to more extensive processes, systems, and behavioral changes, operational leveraging is a key aspect to sustaining and expanding the reach of project and program results. Section 4 of this evaluation also further expands on ESMAP's ability to leverage additional investments in detail, and section 2.8 below discusses ESMAP's influence on World Bank investment. A 2007 TAG report explains examples of operational leveraging, such as: under the energy poverty thematic area, the use of the review of rural electrification best practices in the scale-up of energy access in the Africa region involving both grid and off-grid electrification; the use of reviews of improved stoves and indoor air pollution to increase focus on improved stoves to reduce indoor air pollution in South Asia and Haiti; and plans for use by regional operations of energy guidelines for living standards measurement studies that will be used to guide national poverty plans.

Beginning in 2008, the annual block grants to regional operations departments intended to provide more opportunities for operational leveraging. This appears to have at least been successful in terms of leveraging World

Bank investment. A late 2010 portfolio review to assess the upstream work of the World Bank Group calculated that between 2008 and 2010, ESMAP influenced more than \$US2 billion in World Bank lending operations. Of the 50 desk review projects between 2007 and 2011, at least 12 had the intent of some kind of leveraging effect, whether in terms of policy, capacity, awareness, or enabling follow-on funding or scaling up of investment by the World Bank, government, private sector, and other sources. In most cases, however, largely as a result of the time lag between ESMAP activities and leveraging effects, there was insufficient information to assess whether the intended goals were fulfilled. Some of these effective activities and products, however, were represented in the portfolio and enabled countries to:

- Secure climate finance and tech transfer:-Indonesia uses the LCCS study results to leverage additional sources of carbon finance investment and technology transfer.
- Enhance policy dialogue: The 2005-07 evaluation notes that “leveraging” in middle-income countries such as Mexico, Brazil, China, and India is reflected as improved quality and frequency of policy dialogue.
- Leverage investment from government, the World Bank, and other donors: A 2008 TAG report notes that increased World Bank investment in the Middle and Near East and Central and Eastern Europe Regions appears to be evidence of ESMAP’s leveraging effect.
- Scale up existing approaches: The 2007 ESMAP coal bed methane strategy study for China resulted in mobilization of a new loan to implement the planned approach.

Some areas that do not yet appear to have strong leveraging effect but are building momentum, are scaling up electricity access in the Africa region (such as the ESMAP-AFREA Action Plan for Energy Access Scale-Up in Rwanda and Kenya), and financial leveraging of World Bank funds following on ESMAP-supported vulnerability assessments (as was the case in Egypt in 2010, where annual investment requirement jumped from a World Bank estimated US\$0.5 billion in 2009 to an estimated US\$3 billion<sup>75</sup> between 2010 and 2017 following the vulnerability assessment).

### ***Perceptions of ESMAP’s Strategic Role***

As already mentioned above, very few of the case study country interviewees, other than those few individuals who worked directly on ESMAP activities or reports, were familiar with any of its functions or even its role in the larger context of World Bank activities. Most interviewees, once ESMAP’s role was explained, agreed to their significance as a think tank, and when follow-on funding was expected or had already occurred, also agreed to their role in enabling operational leveraging. CG members interviewed also highlighted the success of ESMAP in this leveraging function, while some nuanced by pointing to the need to not lose sight of the innovative character expected of this ESMAP leveraging efforts. The weakest role appears to be knowledge management, since most interviewees were eager to see wider dissemination of ESMAP products and shared a strong preference for international knowledge exchange events among practitioners and decision makers who have faced or are facing similar specific energy challenges. World Bank interviewees in one case study country expressed that they do not think ESMAP is a think tank and believe that role sits squarely with the Energy Anchor at the Bank.

In terms of communicating its strategic priorities, the table below outlines perceptions of World Bank staff surveyed on how well ESMAP has communicated its strategic priorities as a program. A full 92 percent believe ESMAP has demonstrated satisfactory or highly satisfactory communication of its strategic role. Only 6 respondents out of 73 (8 percent) felt that ESMAP was only moderately satisfactory at making its strategic priorities clear, and none believed ESMAP had done an unsatisfactory job. One survey respondent noted that ESMAP’s strategic priorities actually hindered its ability to remain open and responsive to client needs. This was raised in interviews as well, in particular by a few interviewees who were more interested in the availability of technical assistance grant money to assist with the design of their programs or projects (in a situation where it is increasingly scarce at the Bank) rather than with the other functions expected of ESMAP support.

**Table 11 - Making Strategic Priorities Clear to World Bank TTLs**

Response	Chart	Percentage	Count
Highly Satisfactory		33%	24
Satisfactory		59%	43
Moderately Satisfactory		8%	6
Unsatisfactory		0%	0
Not Applicable/Unsure		0%	0
<b>Total Responses</b>			<b>73</b>

**Challenges in Achieving ESMAP’s Strategic Role**

In moving forward with ESMAP’s three roles, there are a number of sideline challenges (in addition to those expressed above under each role, respectively) that will need to be managed in order to keep a foothold on meeting functional priorities:

- *Maintaining Independence:* With the growing number of partnerships both inside and outside the World Bank, operational reliance on the regional bank offices, and increasing alignment with World Bank energy strategy, place additional pressures on the management to identify and focus on its visibility and on continuing to generate high-quality analysis and publications.
- *Identifying and Tracking of Results:* ESMAP activities and products are not labeled by their intended strategic function or by the major global energy challenge they intend to address. This makes reporting progress across these three functions and three global energy challenges difficult, and impedes opportunities to improve visibility, focus work programs, and identify research and needs gaps.

**3.2.5. Consistent contribution toward objectives and extent of replicability**

**Which activities are most effective in contributing to stated objectives, what are the characteristics of these activities, and to what extent have they been replicated, or could they be replicated, in other work plans?**

During the portfolio period, ESMAP activities that appear to be most effective at consistently contributing to stated objectives have the following characteristics: they strong client/stakeholder commitment; they are built directly on previous work in the region/sector; they are managed by a team/TTL capable of adaptive management; they respond to a distinct need; they have widespread distribution or dissemination; and they work in tandem with other partners/initiatives. Based on the desk sample and field visits, the product lines that consistently achieve intended objectives tend to be TA and ESW, with knowledge products, partnerships, and “other” following. Based on the desk review sample, each of the main themes—clean energy, energy efficiency and renewable energy, and energy access—performs fairly consistently toward achieving objective, with clean energy performing marginally better. High-achieving activities also tend to be highly replicable for transnational and transregional exchange in the use of their models, tools, and analyses. Replicable activities and products are, above all else, timely and focused on a specific need or demand, but may also lend themselves to high levels of interest (especially global studies) because of their “first mover” status.

**Extent to which ESMAP activities consistently contribute to stated objectives**

As described in section 3.2.2 above, ESMAP activities have generally met stated objectives across all activities under ESW, knowledge products, and technical assistance, in both number of projects and in amount disbursed, and appear to also have the highest levels of objectives met, ranging between 63 and 80 percent achievement of intended objectives. “Partnerships” and “other” product lines rated lowest, at 38 and 33 percent, respectively, with each meeting all or some objectives. The AFREA initiatives, though implemented through the World Bank or by recipients, achieved or exceeded all their objectives.

In terms of ESMAP program themes, of the 50 desk review projects in the evaluation sample, the themes of clean energy, RE, EASP, EE, and energy access appear to perform more or less equally effectively in contributing to high-level objectives, with clean energy performing slightly better than the other sample cohorts. Of the nine clean energy

projects in the desk sample with assessment information, eight fully achieved one or more of the intended high-level objectives and four partly achieved one high-level objective. Of the seven EASP projects with assessment information available, four fully achieved or exceeded at least one or more of their high-level objectives, and six at least partly fulfilled one or more high-level objective. Of the seven possible EE projects with assessment information available, four achieved one or more high-level objective and four partly achieved at least one or more high-level objective. Finally, of the energy access sample, of the six projects with assessment data available, three fully achieved one or more high-level objectives, and four partially achieved one or more high-level objective. Regardless of the year, knowledge products, ESW, and TA nonlending across these themes manage to have relatively high levels of reaching the intended high-level objectives and uptake into scaled-up initiatives, country policies and regulation (figure 3).

ESMAP-supported activities that are most effective in contributing to stated objectives tend to have the following characteristics:

- *Have very strong long-term commitment and government buy-in/motivation*, and consistency with the World Bank Country Assistance Strategy. Most activities require sustained, long-term commitment and integrated planning before outcome-level changes can be observed. In 2010, Peru’s authorities acknowledged the cooperation of the World Bank in the search for best strategies for the domestic natural gas usage and the need to define a plan governing the energy sector in which the supply and demand of natural gas and other energies are integrated under the same planning framework.
- *Build uniquely and directly from previous work (often ESMAP) and contribute directly to concurrent work (often World Bank operations) in the region, country, or (sub)sector*, often supported by ESMAP. Through the “Decentralized Energy Services” project, for example, ESMAP managed to coordinate a global thematic program on SME energy services delivery—based on many concrete country projects—that was received as a highly valuable contribution to the subsector.
- *Managed by a team that identifies risks early and exhibits adaptive management*. Many ESMAP-supported activities are relatively short-term engagements, and having the ability to adapt to changing circumstances greatly improves the likelihood of achieving results. The Guinea “SMEs in Rural Electrification” project was interrupted by a coup, but “has produced a number of important outputs, which can serve the newly elected Government.”
- *Respond to a distinct need*. AFREA’s Lighting Africa published off-grid market research for five countries—Ethiopia, Ghana, Kenya, Tanzania, and Zambia in two market segments—households and small businesses. The reports, which were presented to an enthusiastic audience in the 2008 Lighting Africa (funded by ESMAP) conference in Ghana, provide essential market and consumer information otherwise onerous and expensive for individual companies and entrepreneurs to obtain.
- *Have wide distribution of the product among clients and stakeholders*. The “EE Cities Outreach and Dissemination” partnership built on various expertise and experiences, such as from Cities Alliance and the World Bank’s operational units, to develop a cross-cutting programmatic approach for EECI, with ESMAP at the managerial hub. The program has been praised for its wide use of online tools and user-friendly interface.
- *Work in tandem with other partners and the private sector*. When ESMAP-supported activities develop through partnerships, they have the potential to utilize several comparative advantages at once. In 2010 ESMAP partnered with the Climate and Development Knowledge Network (CDKN), a reputable alliance of international NGOs, firms, and think tanks working on low-carbon development, in order to expand support for AAA proposals from World Bank regional units focused on climate investments.

### **Extent to which ESMAP activities that achieve objectives are replicable**

A number of ESMAP activities in the evaluation portfolio have been replicated or have demonstrated the potential for replicability. At least 18 of the 50 desk review projects (38 percent) have been replicated or have the intention of replication built into design. Of these, 4 are still ongoing but show potential for replication, 2 were unknown/not enough information, and 15 (including the 4 ongoing with potential) have either been replicated or are a result of



replication of previous work. Notable projects and activities that embody the characteristics of consistently successful activities as noted above, and have traversed work plans, countries, or regions include:

- Exchanged between regions Established in 2009, the Africa Renewable Energy Access program has helped create a paradigm shift in rural electrification support across Africa, and has been instrumental in stimulate RE market development and improving policy formulation and strategy development. “Reliable and Affordable Solar Lighting in Northern Tanzania,” which transferred technical assistance across firms in the region that were interested in establishing off-grid lighting enterprises, for example, was modeled by Tanzania’s Rural Energy Agency after AFREA’s “Lighting Africa Development Marketplace.” Building on these successes and replicable models, cross-regional ties are now being established between ASTAE and AFREA.<sup>76</sup>
- A “Utilities Performance Benchmarking” project in Africa helped inform recent major electricity sector performance monitoring exercise in Latin America and the Caribbean supported by the 2008 “Benchmarking of the Electricity” project.
- Key lessons learned from Egypt’s “Structuring of PPP in Natural Gas” will inform design of a PPP program in natural gas distribution in a populated lower-income country with lower per capita household demand for energy, and include ways to attract private capital. The project will add to the Bank’s recent engagements in natural gas distribution activities in China, Indonesia, Turkey, and Vietnam.
- The ongoing “REMTI Knowledge Exchange (Geothermal)” could be developed for other countries in the East African Rift Valley (Eritrea, Sudan, Congo, Kenya, Burundi, Mozambique, Zambia), for countries in the Western Balkans, South America, and the Caribbean, if they also express their interest for such ESMAP assistance. A presentation was provided to LAC on lessons learned from other geothermal nations.
- Exchange within a region
  - The 2005-10 “Decentralized Energy Services” project, a global effort in 12 countries and the Africa region, enabled Cambodia’s model production facility would be replicated regionally in the national program in order to meet market demand and reduce transport costs so that efficient stoves remain affordable to the poor.
  - ESMAP’s ongoing TA for Jordan’s energy sector has laid out “the knowledge and road map for applications of smart grid technologies” that provides a case study for smart grid applications to other transmission companies in the MENA Region and others.
  - The ongoing restructuring of Moldova’s Chisinau district heating sector is potentially highly replicable in CIS states with aging district heating structures without cost recovery.
  - The 2010 “EE Cities Outreach and Dissemination” project convened city leaders in order to replicate models for the mainstreaming and scaling up of sustainable energy actions among partners in Asia.
- Exchange between South-North countries
  - The “Economics of Adaptation” case study papers have influenced both developed and developing country policy making by generated new methodologies for countries and sectors to incorporate climate change risks into decision making. The paper informed country-level resilience strategies in all four Pilot Program for Climate Resilience (PPCR) countries—Bolivia, Mozambique, Bangladesh, and Samoa—and the report has contributed to helping the World Bank China country office with a study to understand the risks that climate change may pose to China’s goal of achieving high-income status by 2030 and how to manage these risks.
  - The 2008-10 “Regulating Electricity Trading in the Southern Africa Development Community (SADC)” project, which was meant to document how national regulators in other developed and developing countries have dealt with the regulatory issues that arise from new generation projects that create large imports and exports, has the potential to sensitize regulators in the region about opportunities, pitfalls, and the regulatory space they face in an environment with substantial trade in electricity.

- Among programs/components, including the World Bank
  - In the Latin America region and other parts of the world, the World Bank has produced studies similar to a 2009 ESMAP Natural Gas Study for Peru.
  - “Public Procurement of Energy Efficiency” developed a model framework for procuring performance-based energy efficiency services, including energy service companies, under public sector (including Bank-financed) projects and was built on global experiences in using energy savings performance contracts (ESPCs) to promote EE in public facilities.
  - The “Operational Toolkit for Energy Efficient Lighting” was designed to glean lessons learned and good practices from other Bank and non-Bank projects to form elements of implementation of successful and best practices in the area of deployment of large-scale energy-efficient lighting technologies, primarily compact fluorescent lamps (CFLs), in order to scale up program replication.
  - The “Assessment of Energy Sector Credit Constraints” in the MENA Region, which also borrowed on experiences in East Asia, is particularly relevant in the context of the wider agenda pursued by the World Bank in relation to its strategic response to infrastructure crises, and the findings learned on these country cases are likely to have broader implications that can be usefully applied elsewhere in the region and in other regions.
  - The 2011 study, “Electricity Technology Options Assessment Guide (ETOAG),” helps enable users to conduct comparative analysis of RE and fossil fuels. It builds directly on another ESMAP study (completed in 2007), “Technical and Economic Assessment of Off-Grid, Mini-Grid and Grid Electrification Technologies.”

### ***Challenges to Consistency and Replicability***

ESMAP activities potentially face challenges to consistent achievement of activity objectives and replication of those activities for a number of reasons. World Bank interviewees and clients expressed that because of the short-term nature of ESMAP’s work, there is often no direct follow-on to the activities or projects set in motion. The longer-term sustained commitment to a given set of energy sector challenges, or replication, must come either from the client government or other in-country stakeholders such as the private sector, or it needs to come in the form of further lending or grants from the World Bank or other financiers. Therefore, careful consideration of their involvement is key to increasing the likelihood of sustaining activities beyond project end. Furthermore, the timing and readiness to uptake ESMAP activities and products appear to be key to consistent success for reaching intended objectives, but this does not appear to be a major challenge to most ESMAP activities that are completed “just in time.”

### ***3.2.6. Transition to programmatic funding***

<b><i>To what extent has the transition to core and programmatic funding facilitated flexibility and effectiveness in program planning and management?</i></b>
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On an operational level, the transition to core/programmatic funding improves the level of predictability of funds flowing to regional offices in theory. However, this evaluation has found insufficient evidence to assess whether there has been any significant change in the effectiveness of planning and management as a result of the shift to a MDTF. This may be a sign that the transition has gone very smoothly, but it is also a factor of the little time that has elapsed since instauration of the new mechanism, which prevents the stakeholders from seeing and appreciating the full repercussions of this transition.
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### **Extent to which ESMAP’s programmatic funding brought flexibility and effectiveness to the program**

In November 2009, ESMAP began the transition from parallel donor funding lines to a single MDTF. To put ESMAP’s decision in context, the World Bank Group has multiple energy and climate change trust funds for two main reasons: one is to target better and focus the use of funding for clients, and the other is to comply with donor requests to fulfill a particular agenda. As with many trust funds in the World Bank, ESMAP’s multiple trust funds allowed it to “tailor allocations to demands and to support much needed policy and regulatory work that provide the

backbone to both normal energy sector work and to any new initiatives in renewables and efficiency towards a lower carbon world.” CG interviewees recognized that donors are, in part, a cause of the proliferation of various trust funds under the energy umbrella of the World Bank Group, since each has its own, often particular, reasons for supporting in any given fund.

The rationale for a single trust fund is well justified; the reasons for multiple funds diminish if the multiplicity of funding lines creates undue administrative burdens, if they significantly reduce the predictability of finances, or if replenishment levels drop to a level of unsustainability. Furthermore, flexibility in being able to assist client countries has become even more critical in the current economic situation. The TAG 2009 report shared concern with ESMAP management over the relatively low replenishment of the two ESMAP MDTFs—the core and the Clean Energy Investment Fund. This concern would generally support the desire for single, versatile pool of finances that could be tailored to longer-term demands or thematic areas as needed.

For purposes of improving planning and management, there is very early anecdotal evidence from case study country World Bank team office interviewees that the greater flexibility can theoretically help provide some scope for multiyear allocation of funding. However, there was no strong indication from the regional coordinators or country offices or from the interviews with CG members, that there has been any significant operational difference, so far, with the transition to the MDTF. With this increased flexibility for the regional and country offices, however, some noted the likely additional requirement to demonstrate tangible results each year of a multiyear commitment in order to secure the following year’s allocation. This weighs against activities such as the CSP program that have a long and complex development phase. This means ESMAP will have to make a more concerted effort to support country and regional offices in fully implementing the new M&E system with an eye to the ways in which replenishment is justified. This point was also raised through the interviews with CG members, who highlighted that the move to an MDTF might have contributed to clearer and more streamlined work planning and a welcomed strengthened emphasis on results reporting by ESMAP.

### ***3.2.7. Linkages to World Bank operations***

#### ***How effective are ESMAP’s linkages to Bank operations, and to what extent are these linkages established at the country and local levels?***

Over the evaluation period, it appears that for the purposes of quality control ESMAP has already significantly increased its operational alignment with the World Bank, but there might be some room for improvement for the purposes of World Bank TTLs and country/regional staff. Although approved at the country level and disbursed through the regional offices, clients and stakeholders perceive ESMAP as DC-based and seamlessly operationally linked to the World Bank. On the whole, it appears that ESMAP has not systematically engaged various external actors. Variation depends on how the ESMAP products are developed and used in a country context, and the extent to which ESMAP’s contribution is directly supporting local, national or regional priorities.

[See also Section 3.5.3 for further details on the internal and external partnerships of ESMAP.]

#### **Degree to which ESMAP has effectively linked to World Bank operations**

According to the 2000 evaluation of ESMAP, the program was highly praised in the 1990s for its “remarkable” integration of program activities with World Bank operations. During the past decade, ESMAP has made conscious decisions about how to maintain independence and flexibility while also ensuring quality assurance and operational alignment in order to capitalize on its position as a trust fund housed in the World Bank Group. Over the 2007-11 portfolio, there is strong evidence of ESMAP’s increasing alignment with World Bank operations, including:

- Reporting and fiscal alignment: The 2007/08 annual report covered an 18-month period to enable ESMAP to shift its reporting period to align with the fiscal year periods of the World Bank Group. Also, most of ESMAP's annual budget in 2011 funds energy activities was implemented by the World Bank's six Regions, and country directors must approve of ESMAP-funded activities.
- Input toward the World Bank's overarching energy strategy: In 2010-11, the World Bank Group was in the process of preparing its energy strategy. ESMAP directly influenced the process by helping prepare background papers on energy subsidy reform, clean energy technology choices, private and public sector roles in the power sector, and energy access.
- Awareness raising and bringing topics into country strategies: In 2007, the TAG suggested that it was ESMAP's responsibility to raise attention to the relationships between energy and poverty, disseminate lessons learned, and encourage the use of best practices, both in the Bank and outside. Further, ESMAP continues to provide useful analytical contributions to these issues and has been able to integrate key findings into country-level policy dialogues and operational Bank activities.
- Numerous institutional partnerships within the World Bank: ESMAP has partnered with ASTAE, AFTEG (implementation of AFREA since 2009), the Energy Anchor unit, Global Partnership for Output-Based Aid (GPOBA), the Public Private Infrastructure Advisory Facility (PPIAF), Water Anchor, Water and Sanitation Program, Cities Alliance, World Bank Institute, Lighting Africa (World Bank/IFC), and the Scaling Up Renewable Energy in Low-Income Countries.<sup>77</sup> [For a more details on ESMAP partnerships, see section 3.5.3]
- World Bank partnerships for the purposes of implementing (pilot) programs:
  - SIDS Program: In 2010, a proposal was prepared jointly by the UNDP, the World Bank, and ESMAP, in close consultation with the Alliance of Small Island States (AOSIS), to support the Small Island Developing States (SIDS) in transitioning to low-carbon economies through development and deployment of renewable energy resources and promotion of greater energy efficiency.<sup>78</sup>
  - Low-carbon country studies<sup>79</sup>: In FY10, ESMAP (core funds) worked jointly with the World Bank (environment department) and World Bank Institute (CF-Assist Program) to leverage information generated from low-carbon case studies work over the past two to three years. New knowledge products and training were developed and experiences shared internally and externally (limited only by the public release of underlying country studies). There has since been a rapid increase in demand across all World Bank geographic regions for low-carbon development knowledge, lessons, and operational support.
  - EECI: Within the first year of its launch, the Energy Efficient Cities Initiative has successfully contributed to the design of two energy efficiency components of proposed World Bank urban development operations in China, and efforts are underway in the West Bank, Ukraine, Armenia, Mexico, and South Africa.<sup>80</sup>
  - REMTI: The Renewable Energy Market transformation component is designed to address preparatory issues with respect to scaling up deployment of grid-connected renewable energy that links to other World Bank funds to provide funding for demonstration and scale-up. In Egypt the ESMAP work led to the securing of funds from the World Bank's Clean Technology Fund.<sup>81</sup>

Case studies provided a more in-depth narrative of how ESMAP activities link to World Bank operations. In all six of the countries examined, ESMAP activities were very closely tied to World Bank operations. In at least two countries, not even the World Bank staff knew which projects were ESMAP-supported and which were World Bank. In all cases, no one but the direct beneficiaries or clients was aware of the distinction between ESMAP and the World Bank, since all interactions were through World Bank staff for Bank-implemented projects and use of World Bank policies and procedures such as reporting and procurement. With the exception of two negative comments from individuals in two different countries, the World Bank staff who manage ESMAP activities have been extremely well received, as have the products and services supported through ESMAP.

Some of the positive remarks from case country interviewees were that, at least in the case of Tanzania and Moldova, they recognize the influence that ESMAP has on World Bank funding, which in turn influences the actions of other

donors in the sector. This perceived multiplier effect incentivizes clients to work with ESMAP. The perception in Peru, Morocco, Moldova, and India was that ESMAP was very important because activities lead directly to World Bank programming, as part of a package that also affects long-term lending from the IFC. Furthermore, in the case of Tanzania, for example, interviewees felt that through its position in the World Bank, ESMAP has affected or influenced work that has successfully reached subsectors and regions with great need that had not been previously addressed by donors (World Bank or otherwise).

ESMAP also faces some remaining challenges in forming operational linkages with the World Bank, including visibility and maintaining strategic independence. In the Philippines, for example, although ESMAP was noted on program/project brochures, their name was absent from reports. For the 2009 policy note on district heat restructuring in Moldova, a World Bank document, ESMAP is only mentioned in a footnote and in the annex as a funder for the new model for tariff calculations. In this sense, the operational linkage was so tight that ESMAP's contribution was nearly invisible. Other remarks from in-country interviewees pertained to how the World Bank has far more influence on ESMAP than ESMAP has on the World Bank. One individual remarked that the World Bank staff think of ESMAP as a tool, or specifically, as a funding source, to achieve their objectives in the sector, and ESMAP work does not, in fact, hold any weight on the nature or size of support the World Bank provides to the energy sector. Another remark from a stakeholder in Peru was that the World Bank should “decentralize” to be closer to the work it supports. World Bank staff survey also seemed to confirm that, while alignment between ESMAP and World Bank lending had improved over the past several years, if its intent was to be more operationally seamless, it could stand to be improved further.

### **Extent to which links formed by ESMAP between stakeholders and the World Bank are at local levels**

The country case studies provided an opportunity to gather evidence on whether the links ESMAP forms between the World Bank and the client, or between other local stakeholders, are formed and still functioning at local levels. On the positive side, there is some indication that relationships established during the implementation of ESMAP-supported projects do remain functional after project closing. In Peru, for example, the Ministry of Energy remained partner to Peru's National Institution on Statistics and Information and was still actively engaged in dialogue. In Morocco, as well, a number of working contracts that had been established through ESMAP's “Renewable Energy Regulation” project were still functional. Likewise, the professional network established through the Lighting Africa Development Marketplace solar supplier partnerships with community savings and credit cooperative organizations (SACCOS) have remarkably reached and connected regions and energy markets previously unknown to the donor community, let alone the World Bank. Three projects under India's CSP program—under which there is a link with CSET in Jodhpur, Rajasthan—involved forming links between the World Bank and state-level utilities (although “local” is relative here, as some Indian states are more massive than many countries). In the Philippines, however, World Bank staff clearly had already established links with ESMAP clients before ESMAP engagement and the project did not have a large marginal effect on improving or reinforcing those relationships.

In all cases except AFREA and Peru (noted above), international consulting firms conducted the majority of ESMAP-supported work, and the World Bank consulted with the client and offered what interviewees characterized as very helpful advice. On the whole, the international consultants consulted local stakeholders and the World Bank, but had no obvious local partnerships. In addition, in Tanzania and Moldova at least, the links between the World Bank and ESMAP are not formed at local or even institutional levels, but rather the stage is set through sector donor coordination meetings, whereby the government lays out needs and the donor community determines which partner can support the respective priorities. In only two countries out of the six, however, was “close collaboration” used to describe the dynamic between implementing partners, including the client, World Bank staff, and the consultants hired on behalf of ESMAP. Also, in at least three cases, stakeholder interviewees noted that although ESMAP may have had opportunities to link with local think tanks or academia for research purposes on particular projects, it did not.

Other critiques offered were a lack of transparency to enable local engagement in the ESMAP-supported project/activity, and a lack of ownership over the products of ESMAP engagement. In Moldova, the relative

regulatory/policy options laid out in ESMAP studies were particularly politically charged, and the sequencing of events did not make clear to some stakeholders how the decision was made to choose one of the options on the table over all others. In Tanzania, the international tender for World Bank work was preferred over the typically narrow list of procurement options from bilateral support, whereas in the Philippines, one interviewee commented that World Bank staff had a preference for certain consultants and the client had little say in the matter. However, government officials in Tanzania and Moldova, at least, also felt the World Bank safeguards and procurement were often obstructive and redundant to country systems. In India, one interviewee noted mild friction working with ESMAP support when it was perceived as trying to change the corporate culture of one implementing partner.

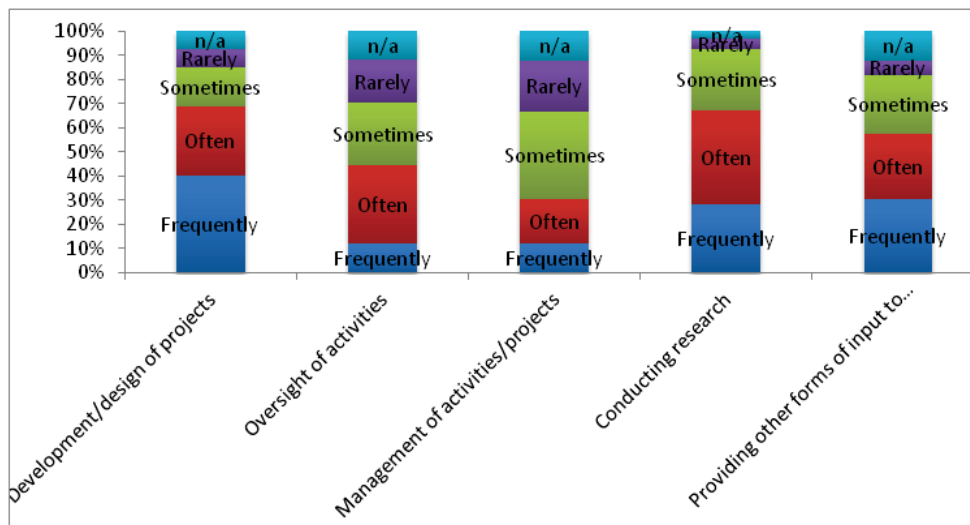
**World Bank Staff Perceptions of ESMAP Formation of Local Links**

The World Bank staff survey illustrates the perceptions of the frequency of engagement of local partners in developing or implementing ESMAP activities and products across the parameters in the table below. In the frequently and often category, a full 68 percent of respondents felt they engaged local partners in the design of ESMAP projects, 45 percent for oversight of activities, 30 percent for management of activities, 67 percent for conducting research, and 57 percent for providing other forms of input. One respondent noted that even when ESMAP activities may not directly engage local partners, they influenced other stakeholders such as the affected indigenous peoples of the Amazon Basin through programs such as the EAP. In India, the ESMAP funds were critical to creating an informed dialogue between regulators at the national and state level about importance of incentivizing and investing in the coal plant rehabilitation. Another respondent felt ESMAP support significantly strengthens the demonstration impact of IBRD/GEF funds.

**Table 12 - ESMAP Engagement of Local Partners – Perceptions of World Bank TTLs**

	Frequently	Often	Sometimes	Rarely	n/a	Total
Development/design of projects	27 (40%)	19 (28%)	11 (16%)	5 (7%)	5 (7%)	67
Oversight of activities	8 (12%)	22 (33%)	17 (25%)	12 (18%)	8 (12%)	67
Management of activities/projects	8 (12%)	12 (18%)	24 (36%)	14 (21%)	8 (12%)	66
Conducting research	19 (28%)	26 (39%)	17 (25%)	3 (4%)	2 (3%)	67
Providing other forms of input to activities/products	20 (30%)	18 (27%)	16 (24%)	4 (6%)	8 (12%)	66

**Figure 7 - ESMAP Engagement of Local Partners – Perceptions of World Bank TTLs**



Perceptions of World Bank TTLs on engagement with local partners generally match findings from the desk review and country case studies for design, oversight, management, and “other,” but because of a lack of documentation, a use of existing government data, for example; or because of a disconnect between perceptions and the actual engagement of clients, the perceptions of how often local partners are used for conducting research appear to be inflated in comparison to findings from the desk review and case study country interviews.

### ***Challenges to Systematic Linkages to World Bank Operations and Local Linkages***

The 2000 evaluation of ESMAP remarks, “A fundamental challenge to ESMAP is to maintain autonomy in innovation along with its close links to the World Bank.” ESMAP’s operational leveraging function stems from its position as a trust fund housed within the World Bank, which means it closely aligns with its operations and procedures. ESMAP is therefore faced with the challenge of formulating relationships with its implementing partners in the World Bank to ensure that its ESMAP-supported activities engage local partners and help develop relationships among local actors that will continue beyond the life of the ESMAP project. As far as external partnerships, because ESMAP manages operations from Washington, DC, while seeking an on-the-ground engagement and partnership building through the World Bank, its role in forming local partnerships is, by definition, limited. Forming links at local levels appears to depend heavily on country context and respective World Bank teams involved.

Internally, based on case study interviews, challenges remain in how ESMAP informs World Bank project managers of their activities and making more *systematic* or regular links between ESMAP activities and follow-on World Bank lending. ESMAP themes and objectives are not necessarily at the core of country-level dialogue, and ESMAP has to rely on developing linkages and operational leveraging through the World Bank regional offices. The question for ESMAP is when to focus on producing innovative analysis intended to induce the World Bank to address underfunded areas through the regional windows (global products, knowledge products), and when to support regional offices to undertake activities that feed into existing World Bank operation or intended to lead directly to follow-on lending.

By contrast, ASTAE, for example, designed to be embedded in the East Asia and Pacific and South Asia regional units, has three pillars of activities—renewable energy, energy efficiency, and access to energy—that directly tie into World Bank country-level activities. ASTAE’s M&E system has four impact indicators that are easy to measure in part because they differ significantly from ESMAP up-stream high-level objectives. Between 2007 and 2010, ASTAE supported 17 World Bank projects that focused on these three pillars of activities for a total of around US\$2.2 billion. By design, therefore, ASTAE a substantial financial leveraging ratio—every dollar of donor resource provided to ASTAE resulted in US\$298 in World Bank–related financing.<sup>82</sup> While this kind of institutional arrangement does create seamless links between operational and implementing entities, it does not provide the flexibility and independence ESMAP requires in influencing and informing other leveraging activities, such as policy and institutional change, and capacity building.

The institutional and management differences between ESMAP and World Bank partners, therefore, by design, may create minor barriers to seamless operational linkages that collectively slow processes or require implementing partners or project managers to compromise efficiency or relevance by straying from their accustomed systems and goals. Still, ESMAP remains in a position to judge where it reaches the point of diminishing returns on its core objectives by more fully aligning itself with World Bank partners and/or operations, respectively.

### ***3.2.8. Influence on lending and investment***

***How effective are ESMAP’s linkages to Bank operations, and to what extent are these linkages established at the country and local levels?***

Given its relative size in terms of both staff and budget, evidence review suggests that ESMAP has been very successful in influencing World Bank lending operations and, depending on context, has been relatively successful in stimulating private sector investment and moderately successful in influencing the donor community. The main factors of ESMAP’s ability to influence World Bank investment relate to existing relationships and reputation of the

World Bank in client countries, as well as existing demand and timing of delivery of ESMAP products. There does not appear to be a pattern associated with when ESMAP activities and products affect either private sector investment or other donors; rather, it seems to depend largely on the nature of the intervention and country context. [See also Section 2.3.1 for details on program efficiency and financial leveraging.]

### ESMAP influence on World Bank lending operations

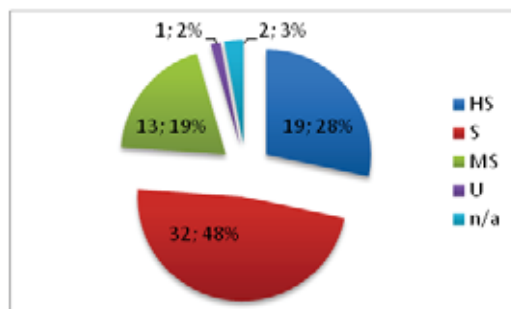
As ESMAP’s fourth key high-level objective (behind enhanced client capacity, better informed policies, and adoption of cutting-edge solutions), influence on the amount and type of World Bank lending is key to ESMAP’s functions as a World Bank Group MDTF. For a full discussion on this operational objective, see Section 3.3.1 on Efficiency.

The 2010 annual report estimated that 70 ESMAP activities influenced about US\$16 billion in World Bank Group World Bank lending. Of the 50 desk review projects from the evaluation period of 2007-11, at least 9 appear to have sought influence on World Bank lending operations, including the examples below. However, no detailed information, such as actual lending amounts, was available in the final assessment documentation (ACS, ICM, GRM) for most.

- Peru: A second rural electrification loan is under preparation and expected to be approved shortly. ESMAP assistance helped Peru meet needs for international TA for best practice on monitoring and has contributed to the government’s positive perception of the first RE project and the perception that the World Bank adds value. This has contributed to the government’s request for the second RE project.<sup>83</sup>
- Global: The “Decentralized Energy Services” project led to a number of investments from IFC and other World Bank lending operations in the field of energy services delivery by SMEs.
- Morocco: The energy sector reform, as recommended in the ESMAP study “Renewable Energy Regulation,” was part of the conditionality matrix from the first World Bank \$100M loan.
- Global: Looking to the future, “Trade Policies for Liquid Biofuels” is expected to play a role in the multi-million dollar energy flagship study in the East Asia and the Pacific region as the Bank studies and advises EAP governments on energy security, sustainability, and energy poverty.
- Brazil: The “CCH Low-Carbon Country Case Study” provided policy dialogue elements to target potential investments in low-carbon opportunities and for the preparation of a new US\$99 million loan in the energy sector aimed at improving its efficiency and environmental sustainability.
- MENA: Under the “Assessment of Energy Sector Credit Constraints,” the Bank provided technical assistance on the design of the private sector investment framework in the power sector for Egypt. A large (1,950 MW) power generation project (“Helwan South”) identified under the ESMAP-supported vulnerability assessment is now under advanced preparation by the World Bank. For Jordan, one major power project successfully raised debt financing with the support of export credit agency and the Islamic Development Bank in the middle of the global economic crisis. For future projects, World Bank Group’s supports for private project financing may be required.

World Bank TTL perceptions of ESMAP’s influence on the World Bank are summarized in the pie chart below. A total of 76 percent thought that ESMAP was satisfactory or highly satisfactory at influencing World Bank lending operations. About 19 percent rated ESMAP’s influence as moderately satisfactory, and one person (2 percent) felt it was unsatisfactory. Two respondents who noted “n/a” were unsure. Many respondents felt that ESMAP made “good contribution to the bank project design and implementation,” and that ESMAP influence on the World Bank has improved over time but could improve further. Two respondents noted that ESMAP was particularly influential on energy efficiency investment, both through the EECI and in creating dialogue in India between national and state regulators to incentivize EE, through which ESMAP demonstrated the impacts of IBRD/GEF funding. Other examples were: Lessons learned from ESMAP have been applied to the World Bank-funded Clean Air and Sustainable Environment Project; ESMAP-financed work on renewables in Vietnam has led to two renewables-related projects in the past 10 years; and the MENA CSP scale-up program led to a wind program in Egypt.



**Figure 8 - Effectiveness of ESMAP on Influencing World Bank – Staff Survey**

### ESMAP influence on private sector investment

As the 2010 annual report notes, the public sector is limited in scale to meeting investment requirements in the energy sector; therefore, private finance is necessary to reach full implementation of a country's energy strategy. ESMAP helps facilitate the growth of renewable energy markets and scaling up of appropriate technologies, and promotes the use of new mechanisms, including debt capital market instruments, to leverage market transformation. Like many of ESMAP's activities, the recent SIDS proposal, for example is designed to make it easier for private sector investment in clean energy, through improved information, policies, capacity, and so forth. The support program will seek to remove barriers to the expansion of RE and EE based on international best practice, and also demonstrate RE and EE initiatives for scale-up through climate finance or other sources of funding. Another example is the "Developing Financial Intermediation Mechanisms for Energy Efficiency Projects in Brazil, China, and India," the flagship report of which led to the preparation of energy efficiency loans through local financial intermediaries in China, and helped to establish a credit line to guarantee 80 percent of the credit risks in energy efficiency activities in Brazil.

Of the 50 desk review projects, at least 16 intended to influence the private sector in some way. Eight of these projects were too early on to assess whether the private sector had been influenced, and eight showed some indication of accomplishing their intended goals. Examples include:

- Africa: The "Renewable Energy Education Project" will build capacities for PV installation and maintenance, and is expected to indirectly and positively impact private sector investment.
- Mexico: The REAP "Renewable Energy Assistance Program" studies completed favor private sector investments in the RE sector in Mexico, including a new auction system in place, and better knowledge of RE resources.
- Tanzania: "Lighting Rural Tanzania" and "Reliable and Affordable Solar Lighting in Northern Tanzania" have had a very strong influence on the private sector, namely, the growth of small solar suppliers.
- Cameroon: The task's consultative processes, written outputs, and workshops for "Capacity Building Small Scale Energy" helped unblock barriers to participation of SMEs in energy projects, creating significant opportunities for SMEs in rural Cameroon.
- Global: The "Decentralized Energy Services" project results achieved include at least 30 SMEs benefited from bio-gasifier installations; 7 energy private sector investments projects with private participation; 203 new SMEs created in energy delivery services.

However, there are some inconsistencies and challenges in ESMAP's objectives and delivery of private sector influence. The 2010 REMTI brochure, for example, highlights the private sector as a key client of ESMAP, but does not provide examples of how or where investments have been influenced. Unlike follow-up with World Bank lending operations, it is more complicated for ESMAP to track whether interventions have achieved a leveraging effect on the private sector, which can occur several months or years after the project and can be degrees of separation from the operations of the World Bank, let alone ESMAP. There does not appear to be systematic tracking of follow-on investment from the private sector and therefore it remains piecemeal to assess.

## ESMAP influence on the donor community

Similar to its record in influencing the private sector, ESMAP's influence on the donor community is mixed and highly dependent on country context. In some cases, such as AFREA support for Rwanda and Kenya, the 2010 annual report notes that ESMAP plays a facilitation role of gathering donors around a particular program or agenda. In other cases, such as the Partnership with CKDN, the program aim to have three to four projects financed using CKDN in FY12. Finally, the Vietnam low-carbon study, for example, includes for donor co-ordination. These activities cover a variety of entry points for influencing or involving other donors active in the energy sector.

Of the 50 desk review projects, at least 15 had the intention of influencing, or actually did influence, the donor community. For at least two of these, it was too soon to know whether the objectives had been met.

Some examples from the sample are:

- Global: The project “Decentralized Energy Services” is funded by DfID for US\$7.54million over a period of three years to assist ESMAP in taking forward this program.
- Morocco: Sector reform resulting from “Renewable Energy Regulation” has attracted investments from private companies and donor organizations. The first tranche of the Ouarzazate solar project has attracted funds from the World Bank, AFD, and the African Development Bank, among others. Recent EU grant funding (€76M) is also building on the new energy context in the country.
- Serbia: The World Bank worked with the European Agency for Reconstruction (EAR) on “Renewable and Low-Carbon Energy” to develop the portfolio of renewable energy projects ready for implementation in 2008, to be supported by financing from the World Bank (and other institutions and donors). EAR funded feasibility studies and co-sponsored a workshop, expressing continuing support for downstream activities, such as financing for feasibility studies and capacity building for the MEM.
- Africa: A key to the work performed under the “Institutional Framework for Development & Capacity Building” was donor coordination. The European Investment Bank (EIB) and Kreditanstalt für Wiederaufbau (KfW), in particular, allocated €1.55 million for precontract activities through the EU-Africa Infrastructure Trust Fund.
- Africa: “Renewable Energy Education Project” (REEP) activities complement what the REEP/EDULINK program has already initiated in the area of training in Renewable Energy Technology (RET) assessment and implementation with assistance from the German State of North-Rhine Westphalia and funding from the EU's EDULink Program.

Some of the difficulty in assessing ESMAP's influence on the donor communities lies in the absence of regular tracking of such information. Also, many of the energy sector donors already have established relationships with client governments, so attribution to ESMAP for specific programs or agendas can be unclear or indirect.

### *Case Study Countries and ESMAP's Influence on the World Bank and External Actors*

The table below summarizes key outcomes from the country case studies (as described in earlier sections) and their relative level of influence on the size and nature of lending or investment following the ESMAP intervention(s). The large circles imply ESMAP had a more direct and strong degree of influence on the respective party relative to the outcome noted, while the smaller dot implies a more indirect and less extensive degree of influence. In most cases, influence is visible on the private sector through the regulatory or policy changes recommended by ESMAP analysis. As far as the donor community, the World Bank's relative size and influence in the country is a large factor in the degree of leveraging possible by ESMAP, as well as the relative influence of the donors community on energy sector reforms (for example, the private sector is often a larger influence in middle-income countries than low-income countries). Finally, influence on the World Bank is most apparent in cases where follow-on investment was observable at the time of the field visit. All ongoing lending operations based on World Bank Country Strategies, and the relative influence of ESMAP work on those strategies, are not listed. Even when influence on the World Bank is not apparent, it appears that ESMAP influence is more likely to be found in the general context of energy sector activities than on an individual outcome/project basis.

**Table 13 - Case Study Countries’ Influence on Actors**

Case Country	Influence Outcome	World Bank	Private Sector	Donor Community
Tanzania	National policy formulation on SMEs		○	
	Credit line opened for small-scale RE	•		
	Energy sector donor coordination			•
Philippines	Input on regulation/tariffs		•	•
	Energy sector donor coordination			•
Peru	Support to the National Rural Electrification Fund (FONER) for rural electrification	○		
	Policy framework for hydropower generation		○	
	Off-grid solar PV companies partner with SMEs		•	
	Local communities invest in productive uses of electricity		•	•
	Regulation/tariff-setting affecting RE investment			
Morocco	Lending (US\$1mill) on energy sector reforms	•		
	Lending on transport	•		
	Renewable energy sector reform and Ouarzazate solar		•	○
Moldova	District heat sector financial stabilization	○		•
	District heat sector (initial stages of) restructuring		•	•
	Energy sector donor coordination			•
India	Regulation for rehab of coal-fired generation		•	
	Concentrated solar power supplier MNRE guidelines		•	
	Maharashtra state Elec Trans. co capacity to manage PPPs		•	

**World Bank Staff Perceptions of ESMAP Influence on External Actors**

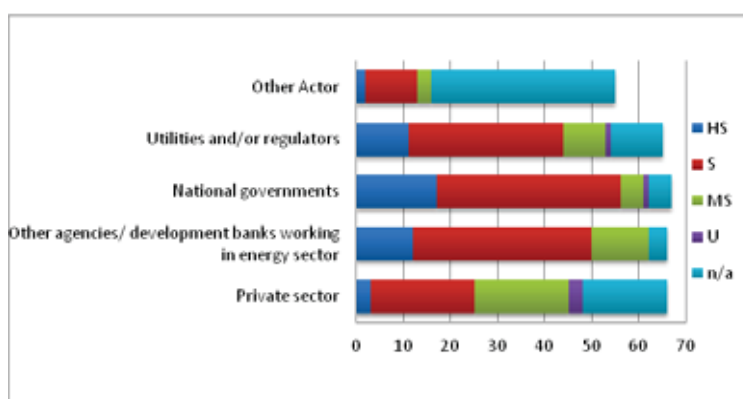
Staff perceptions of ESMAP’s influence on the private sector are mixed. The table and chart below illustrate that 33 percent thought that ESMAP was satisfactory at influencing the private sector, while 5 percent thought it was highly satisfactory (the same number who felt it was unsatisfactory) and 30 percent felt it was moderately satisfactory. A final 27 percent felt that ESMAP’s work was unknown or irrelevant to the private sector. Most agree that ESMAP’s contribution is usually through direct support of a country priority, for example, through policy and regulations, thereby remaining indirect in terms of its impact on the private sector. One respondent stated that “rarely” does ESMAP have an impact on the private sector, and two suggested that they do not know such information and only the private sector would know. Another comment was that the private sector requires a level of detail that is not provided by ESMAP-funded work (and shouldn’t, necessarily, as its clients are more policy makers and regulators) and therefore influence will typically be indirect, if at all. This seemed to align with another respondent who noted that ESMAP’s EE theme has a limited focus on involving the private sector and therefore most of the products do not target them. Finally, one surveyed staff felt that ESMAP studies are indeed used by the private sector.

World Bank staff perceptions of ESMAP’s influence on the donor community are similar to those they indicated in their response to ESMAP’s influence on the private sector, only less substantive, while also more positive. A full 76 percent felt that ESMAP was either Satisfactory or Highly satisfactory (58 percent Satisfactory, 18 percent Highly satisfactory) at influencing other agencies and development banks in the energy sector. Eighteen percent thought they were moderately satisfactory, and none thought they were unsatisfactory; though 6 percent were uncertain or thought it was irrelevant. Three respondents commented that they were uncertain and that only the agencies would know. There are also some positive examples, such as ESMAP’s funding to initiate clean technology in the brick sector in Bangladesh, which lead to a US\$50 million Asian Development Bank (ADB) project; and a note that many international finance institutions and other donors cite and use ESMAP work upstream. Others noted that ESMAP activities are complementary to other donor agency–supported activities (World Bank/IDA, ADB, AusAID, Norad, and bilaterals) and other donors would be pleased to have them to support their strategic goals. Finally, one respondent noted that ESMAP was a “strong liaison” between client countries and donors.

**Table 14 - ESMAP Influence on External Actors – Perceptions of World Bank Staff**

	HS	S	MS	U	n/a	Total
Private sector	3 (5%)	22 (33%)	20 (30%)	3 (5%)	18 (27%)	66
Other agencies/ development banks working in energy sector	12 (18%)	38 (58%)	12 (18%)	0 (0%)	4 (6%)	66
National governments	17 (25%)	39 (58%)	5 (7%)	1 (1%)	5 (7%)	67
Utilities and/or regulators	11 (17%)	33 (51%)	9 (14%)	1 (2%)	11 (17%)	65
Other actor (Please specify in Comments box)	2 (4%)	11 (20%)	3 (5%)	0 (0%)	39 (71%)	55

**Figure 9 - ESMAP Influence on External Actors – Perceptions of World Bank Staff (response count)**



Finally, among the other actors that World Bank staff respondents felt ESMAP influenced were:

- Think tanks and universities, which became aware of the indoor air pollution problem
- Civil society organizations (three respondents), especially those that are seeking more transparency in their own government’s energy policies
- Indigenous peoples of the Amazon Basin (through programs such as the EAP)
- World Bank staff, for familiarizing themselves with specific energy topics
- NGOs, academia (two respondents).

**Challenges to Influence on Lending and Investment**

The challenges to ESMAP influencing World Bank lending include: limited ability to control the existing relationships and leveraging that the World Bank has in country and in the region, and disconnects between World Bank staff/program managers and ESMAP programs and central planning. Challenges to influence on the private sector: Most projects are not really designed to address the private sector, and impacts may follow long after project closing and are not recorded/known. Challenges to influence on the donor community: limited control or say over existing donor dynamics in a given country or region other than as a trust fund housed in the World Bank.

**3.2.9. Lessons learned and recommendations on effectiveness**

**Main Lessons Learned on Effectiveness**

- Actors involved in the governance structures of a trust fund such as ESMAP need a collective agreement on how the trust fund’s various comparative advantages are balanced to deliver high-level outcomes to clients and in-country beneficiaries, and focus resource allocation accordingly. For instance, ESMAP must accomplish two balancing acts in coming years:
  - Continue to focus on financial leveraging and operational alignment with the World Bank, while

ensuring at the same time that it retains an experimental and innovation focus, and continue to “push the envelope” on marginal and emerging energy issues

- Serve the country client in a way that responds both to governments (key ministry or officials) and the broader in-country population with the greatest need relevant to energy.

***Recommendations on Effectiveness***

- ESMAP continues to need a comprehensive communications and knowledge management plan and dissemination protocol for papers, reports, and other activities. Implementation of such a plan will not only improve visibility but will also advance the reach of outputs and outcomes by engaging a wider audience.
- In order to account for and track progress along key ESMAP high-level objectives, management must either devote further resources to identifying a standard methodology for assessing the quality and potential of upstream activities and products, or increase the depth and frequency of impact assessments of follow-on results long after project closing, or both.

### 3.3. Efficiency

#### 3.3.1. Efficiency of ESMAP Activities

***To what extent are the impacts and benefits arising from ESMAP activities commensurate with the level of effort and resources expended?***

Value for money is seen as good for ESMAP activities. Although it is difficult to measure the specific impacts, and the actual contribution of ESMAP activities to those impacts, the level of effort is seen as appropriate and good value.

The overall program level of achievement is satisfactory based on the reporting for FY09 and FY10. However there were a number of milestones that have not been achieved, particularly relating to renewable energy and energy access projects, despite these areas having a high budget allocation. Levels of achievement in energy efficiency are excellent and are satisfactory in energy assessment and strategy programs EASP. [See Section 2 for a detailed discussion on effectiveness.]

ESMAP's project cycle timeline is satisfactory. This is despite the fact that the majority of ESMAP activities are delivered late. In most cases, reasons are not provided in documentation. Those delays noted are largely associated with implementation constraints at the country level that are beyond ESMAP's direct control. Some delays are also associated with the procurement of services, and in the review process. Nevertheless, the majority of TTLs are happy with the project proposal response time and fund disbursement.

The management of funds and the project cycle are also seen as efficient. The reforms ESMAP has gone through over the evaluation period have also allowed for more streamlined processes.

**Extent to which ESMAP results achieved (outcomes and impacts), and their leveraging effects on investments in the targeted fields, justify the investment**

The evaluative judgment on the extent to which ESMAP achieves its results, and its leveraging effects on investment, is based on an indication of the achievement of project outcomes and impacts, the overall investment and leveraged investment, the number of activities implemented against those planned, as well as the efficiency of the project cycle.

***Number of Planned vs. Actually Implemented Projects/Activities***

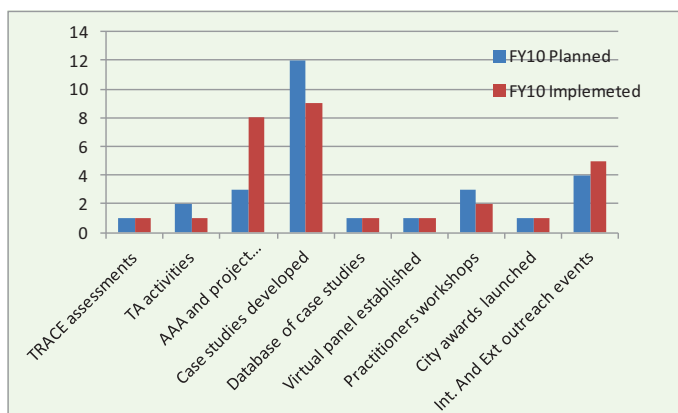
The 2010 annual report provides information on the planned and implemented activities and outputs for FY09 and FY10. Before this, and before implementation of the M&E framework, the information provided was insufficient to be able to analyze the number of projects or activities implemented against those planned.

The overall level of achievement during FY10 looks very good, with 102 percent of the planned activities being achieved; 2009 was less successful, with only 78 percent of the activities foreseen being completed. However the overall numbers do not give a clear picture of the level of achievement. There is a mixed success rate in completing the planned activities between programs and subprograms and between types of activities. The information provided does not allow for the outputs to be linked to specific projects, since a number of outputs could be associated with just one project.

The EASP program completed a greater number of activities in 2010 than planned mainly because of the Low-Carbon Growth Studies Program in which four additional outputs (internal workshops, learning events, and external forums) were delivered over those anticipated. In 2009, one less activity was completed.

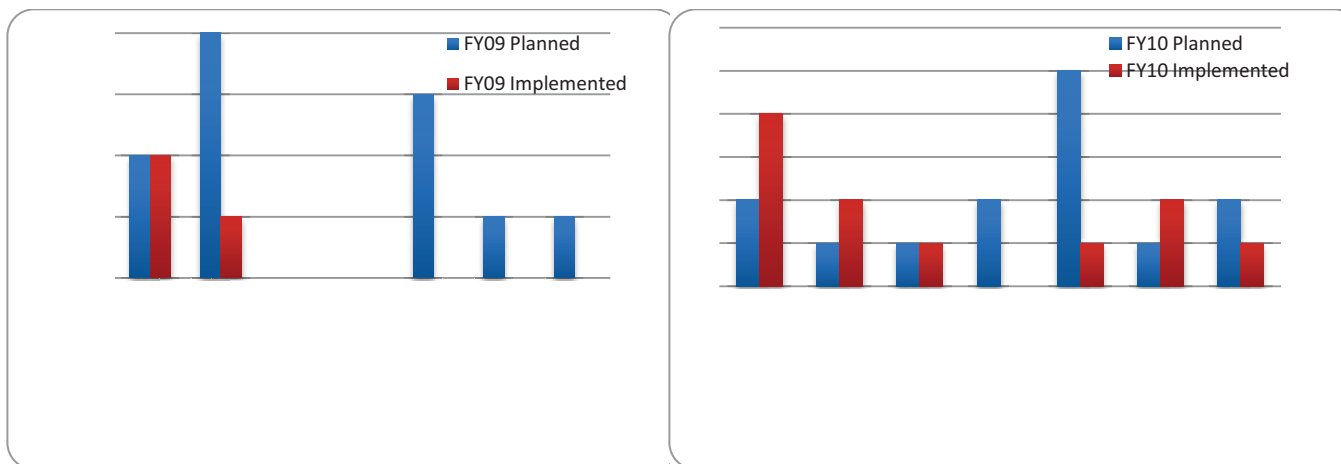
In the EECI there were some differences between the activities planned and those implemented as seen in the following figure showing the output indicators for this initiative. In both years, EECI completed more activities than planned. Fewer knowledge exchange products were developed and fewer programmatic EE interventions for urban sector development were designed. However, a greater number of AAA and project preparation support was provided to client countries to design and/or incorporate programmatic EE measures into World Bank urban sector lending operations.

**Figure 10 - Planned vs. Implemented Activities for EECI in FY10<sup>84</sup>**



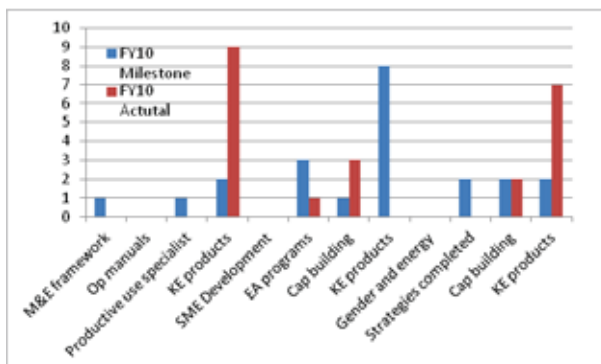
Based on the results reported in the 2010 annual report, the REMTI program was less efficient, with fewer activities being completed in both FY09 and FY10 than those planned, as shown in the following two figures. Although a greater number of country-specific renewable energy “market transformation strategies” were conducted, in total over the two years fewer country/regional RE roadmaps were developed and no policy notes were developed. In addition, the number of internal workshops and learning events to share experience within the World Bank Group was significantly less than planned.

**Figures 11 and 12 - Planned vs. Implemented Activities for REMTI in FY09 and FY10<sup>85</sup>**



Also based on the results reported in the 2010 annual report, the efficiency in energy access is shown to be low, with many of the planned milestones being missed, except relating to knowledge products for the Gender and Energy and the Rural Electrification Strategies, and in capacity building for the SME development. The KPs were developed despite failing to complete the core work on strategy development, energy access programs, and frameworks. The PEA-TAP M&E indicators are shown for FY10 in the following figure. The results for 2009 were lower; with the exception of some knowledge products, not one of the milestones was achieved.

Figure 13 - Planned vs. Implemented Activities for PEA-TP in FY10<sup>86</sup>



The level of achievement is difficult to gauge prior to FY09. During the evaluation period (between Jan 2007 and June 2008), there was a significant review of the project portfolio that resulted in closing a number of projects. This included those that were nonperforming activities and those completed projects that still had pending publications. This represented a change from past ESMAP practice of closing activities only following the completion of the publications process. As a result of this review ESMAP closed 154 activities (worth US\$25.9 million).<sup>87</sup> No details are provided for these projects, so it is unknown how many of their planned activities were completed.

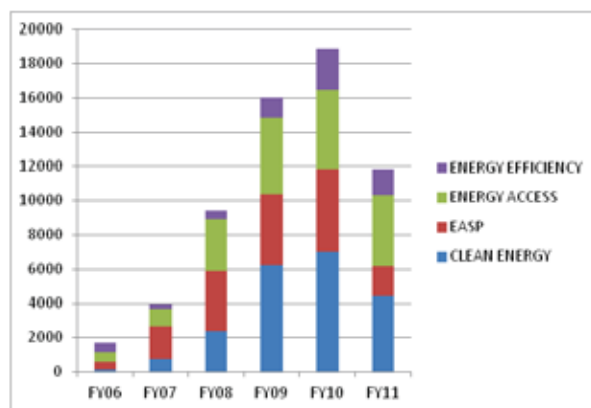
In addition to those projects closed during the “cleaning up” of the portfolio, the 2005-07 annual report notes that an additional 20 activities (worth US\$2.1 million) were “dropped” by June 2008. In the evaluation of the 2005-07 portfolio, of the desk sample of 48, 5 projects are listed as dropped projects. It is reported that these had been dropped early in the project planning cycle with very small expenditures and disbursements against them. In one case a regional task in Asia was dropped when the team realized that client demand was low and funding for the task would require a much larger investment that was not realistic. In six cases of projects dropped from the whole portfolio, the reason given by the regional task team was the lack of ownership by the country concerned.

In the current desk review sample of 50, two projects were dropped: one because of a coup in Guinea and one because of timing and the project being seen as premature. Ten projects show that the activities were undertaken as planned, but in many projects there is insufficient information to judge.

**Overall Investments (Funding, Time, Other Resources) and Ratio of Investment Leveraged in Subsectors of Interest**

Total ESMAP investment on the projects included in the evaluation period is shown in the following figure, divided among the four themes. These are the figures included in the evaluation data sheets, and they show a slight discrepancy with those reported in the annual reports or ToR for this work. It should be noted that the final figures for disbursements in FY2011 are not available.



**Figure 14 - ESMAP Disbursements between 2006 and 2011 by Theme**

The FY2006-11 portfolio of completed projects includes:

- The EASP portfolio includes 75 completed activities, with grant disbursement totaling US\$12.2 million.
- The energy access portfolio includes 46 activities, with grant disbursement totaling about US\$16.4 million.<sup>88</sup>
- The energy efficiency portfolio includes 19 activities, with disbursement totaling about US\$3.2 million.
- The clean energy portfolio includes 42 projects, with a disbursement of US\$5.4 million.

A review of ESMAP's leveraging and influencing effect on investment between 2006 and 2011 is limited by a lack of information on leverage before 2009. Since ESMAP's activities are upstream in many cases ESMAP's effect on investment is more the result of influencing and informing than direct "leverage." In this section, leverage is used to cover direct leverage as well as influence and informing. In addition to the lack of information, it is not always clear how much additional lending is directly attributable to ESMAP activities. There is no systematic recording of the quantifiable leverage/influencing impact per project and none of the annual reports provides full figures on lending, despite it being one of the four high-level outcomes of ESMAP. The annual reports provide details only on a select few successful projects.

The first methodical review of the leverage impact of ESMAP activities was provided by the ESMAP Portfolio Review for FY09-11. The review was undertaken as part of the implementation of the ESMAP M&E system to assess outcomes and results of its upstream work on World Bank Group lending operations, as well as on government policies, country capacities, and development community interventions. The conclusion for that period is that ESMAP activities have provided a significant leverage on investment. The portfolio review shows that between FY09 and FY11 a total of 70 ESMAP activities influenced about US\$16 billion in World Bank Group financing, including IDA credits provided in support of energy projects in client countries.<sup>89</sup> With total disbursements during that period at US\$46.3m (on all projects, ongoing and completed), this implies a leverage of greater than 1:272. These numbers also explain the prevalent perception amongst stakeholders interviewed that ESMAP has performed well in terms of leveraging or influencing effect.

The Portfolio Review was systematic in its approach and records successful examples of influencing lending as well as examples of activities with no noticeable impacts; however, the information on outcomes is not provided against expected outcomes for each of the projects. As noted in the evaluation methodology there are limitations, including limited availability of adequate baseline data, and the assessment focused only on tracking results and outcomes directly influenced by ESMAP activities. That said, it is also important to note that in many cases ESMAP is only one of many possible influences on lending, but it is difficult to attribute influence without a much more in-depth study of other work being carried out in the sector for each case. For example, the 2011 Portfolio Review cites an example of US\$10 million being mobilized in Moldova from IDA, but the field visit by the Evaluation Team showed no indication of any additional finance for the Energy II project being associated with the outcomes of the ESMAP work. The ESMAP team agree that the ESMAP work did not trigger additional financing, and this has been

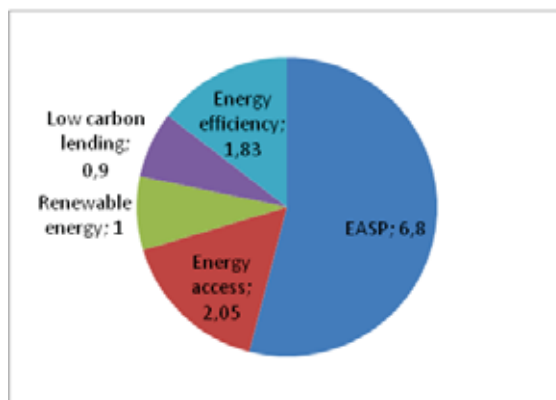
corrected in a more recent review, but they maintain that it did increase the developmental impact that the Energy II investments had.

Lending programs included in the portfolio analysis and field trips include: CSP Projects in Tunisia and Egypt; several operations in Turkey, including Programmatic Electricity Sector DPL and CTF; Mexico CTF and Low-Carbon DPL; Morocco Energy Sector DPL; Vietnam Transmission and Distribution; Senegal: gender and energy component; Lighting Rural Tanzania. Three further examples are outlined below:

- In energy access, two sector-wide approach (SWAp) investment and policy prospectuses produced for Rwanda and Kenya have been instrumental in mobilizing US\$ 228 million and US\$ 1.5 billion, respectively. The Rwanda Electricity Access Scale-Up and Sustainable Energy Development Project is being co-financed by an AFREA grant of US\$ 3.8 million (leverage of 1:60).
- In Turkey, ESMAP's engagements have helped catalyze an increase in World Bank lending for Turkey. The two ESAMP projects cost US\$830,000. World Bank energy lending to Turkey increased to US\$1.8 billion over the FY09-10 period compared with US\$269 million in the two years preceding that (leverage of 1:2169). ESMAP activities have played an important role in facilitating this scale-up by helping provide the analytical underpinnings and enabling environment for World Bank investment operations, as well as helping build capacity in government agencies. ESMAP's reports have been used as inputs to the ongoing policy dialogue supported by World Bank energy policy loans and for designing investment operations in the country.<sup>90</sup>
- In Morocco, ESMAP has influenced World Bank lending operations, with for example a US\$100M loan for energy sector reforms, energy supply security and diversification, renewable energy, sector competitiveness, and energy efficiency, and another loan was recently signed for the transport sector. It has also influenced the donor community indirectly, since the reforms to which ESMAP has contributed have opened new funding and investment possibilities. For example, the renewable energy sector reform has attracted investments from private companies and donor organizations. From the budgets presented in the projects' documentation, ESMAP's total investment over the period 2007-21 is less than US\$1 million. Given the results achieved in terms of the reforms conducted, policy support interventions, expertise provided, and lending provided, this total cost seems relatively modest.

In addition to those direct results in Morocco, interviews have confirmed that ESMAP activities have contributed to leverage (i) US\$100 million from IBRD in 2007 as general budget support to the government reform processes, (ii) US\$150 million from IBRD in 2008 in support to the electrical sector, (iii) and US\$200 million from IBRD (+US\$97 CTF) as investments in the Ouarzazate solar power plant under construction. The last project is also attracting funds from other donors and investors, the most important to date being AFD (US\$100 million) and AfDB (it is expected that the AfDB's Board will approve US\$250 million in co-financing for the Ouarzazate CSP plan).<sup>91</sup> Recent EU grant funding (€76M) is also building on the new energy context in the country.

The influenced lending amounts for FY09-11 are shown in the following figure, broken down by theme and detailed below. It is important to note that the thematic portfolio classification used by ESMAP assigns only one theme to each project, which means that this does not always reflect the multithematic nature of many activities supported by the program. During the evaluation period the theme classification changed (from the 2005-07 to the 2008-13 business plans) and the former projects have been retroactively classified. In the most recent classification, renewable energy and low carbon have been combined into clean energy.

**Figure 15 - Influence on Lending by Theme for Completed Projects between FY09 and FY11 (US\$ billions)**

The finance influenced per theme for FY09–FY11 is provided below:

- Activities under the **EASP** portfolio influenced about US\$6.8 billion in World Bank Group financing. This represents more than a fifth of World Bank total energy lending over that period. EASP activities have been especially effective in influencing World Bank lending for some major developing countries such as Turkey, Egypt, and Vietnam.
- In **energy access** many ESMAP FY09-FY11 activities have played a role in influencing World Bank Group projects totaling about US\$2.05 billion in financing. In particular, SME activities have informed the design of World Bank energy access projects in Peru, Nicaragua, Cambodia, Lao PDR, Burkina Faso, and Cameroon.
- ESMAP played its part in increasing the World Bank Group's **EE** lending from US\$1.19 billion in FY2008 to US\$1.77 billion in FY2010 although many of the ESMAP activities during this period are expected to have a greater impact on World Bank Group lending in the next few years. ESMAP's EE activities implemented by the Bank's regions have been effective in influencing lending to China, Moldova, Pakistan, Tunisia, and Vietnam.

Since its launch in October 2008, ESMAP's EECI has promoted lending for EE in the urban sector in a number of countries. Through technical support provided by EECI, ESMAP has directly helped design and develop EE components for the Bank's urban lending projects, leveraging the Bank's EE financing of US\$0.51 billion and co-financing of US\$0.90 billion from other sources.<sup>92</sup> Under one project (EE Cities Outreach and Dissemination), work included project appraisals for two EE urban projects in China, and further project identification and development efforts are underway in the West Bank, Ukraine, Armenia, and Macedonia. Total investments from projects total about US\$97 million.<sup>93</sup> Under its operational support component, EECI has provided technical support in the design, preparation, and supervision of urban EE components in the Bank's investment operations.

- ESMAP's **renewable energy** activities have played a role in influencing World Bank Group financing of about US\$1.0 billion on clean energy.
- ESMAP's analysis of **low-carbon development options** has helped to identify country-level, technically feasible measures to reduce overall GHG emissions that can be implemented in the short and medium term. Most of the studies indicate that near-term low-carbon action is technically feasible at low cost over the next 20-30 years without major changes in technologies. In particular India, Brazil, and Mexico are cited as examples.

**Box 7 - Value for Money in Peru**

In Peru, ESMAP activities have achieved a number of interesting results that are widely recognized. Assessing the efficiency of those activities is rather difficult given the many indirect impacts of ESMAP work on the electricity sector. However, given the relatively small budget of most ESMAP products and activities, value for money is seen as good. ESMAP work has strongly influenced the National Rural Electrification Fund (FONER) program, which benefited from a US\$50 million World Bank loan (leveraging effect). The new World Bank loan to FONER 2 and an IFC investment in Cheves hydro power plant are other visible monetary results of ESMAP's work, but others have certainly occurred and are likely to continue occur as this initiative further develops.

Before 2009, there is limited quantifiable information on the influencing or informing impact of ESMAP activities, since the annual reports do not report on it. The 2010 annual report provided examples only of leverage in Turkey. In 2010, TAG also outlined details of leverage in Turkey.

The 2008 TAG report stated that “the lack of available data and difficulties in monitoring the large number of client countries should not be underestimated when reviewing the leverage on investment programs (not only of the Bank but to the extent possible other financiers and the government).” TAG goes on to state that impacts cannot be observed clearly *as yet*, but the increases in Bank energy lending in the Middle and Near East, and in Central and Eastern European Regions appear to provide testimony to a leverage impact. In addition, TAG states that planned Bank investments in EAP also show signs of increased impacts of ESMAP regional windows on Bank investments.<sup>94</sup>

Similarly, the 2006 annual report does not contain any quantitative estimates of ESMAP's influencing effect, but contains a number of country-specific narrative examples:

- *Operational leveraging of EE investment through ESMAP support was most readily apparent in China, where a cluster of activities managed by the energy unit of the EAP region addressed several aspects of the critical EE agenda.*
- *The analytical and policy work conducted under the Energy Efficiency Policy in Morocco has contributed to the development of a draft energy-management law focused on energy conservation, EE, and EE institutions. It is being used as an input to a Development Policy Lending (DPL) loan for future World Bank investment, thereby demonstrating the operational leveraging function of ESMAP.*
- *ESMAP supported a 2006 survey of rural electricity use in Peru that contributed to developing a national rural electrification strategy. The ESMAP work helped leverage an investment project whose main objective was to finance subprojects supplying electricity services to about 160,000 isolated rural households, businesses, and public facilities, including schools and health clinics.<sup>95</sup>*

Of the projects reviewed as part of the six field visits, only two quantified any lending as a result of the ESMAP project—one in Morocco and one in Peru, respectively. In Tanzania there is evidence that the project “Integrating SMEs in Tanzania's Rural Energy Initiatives” has had some influence on World Bank lending, but no figures are provided, and in India although some ESMAP activities were closely linked with World Bank loans (P105191, P105194, and P111243), there is no evidence to suggest that they influenced (or were intended to influence) World Bank lending. The projects in the other two countries, Moldova and the Philippines, have not yet leveraged finance through the World Bank, although follow-on private sector investment is probable.

The majority of the desk review project documentation does not show a consistent, concrete influencing effect on investment. In only 10 percent of the desk reviews is lending information provided, and in some there is comment that a loan is under preparation (but not quantified), but in the majority of cases the information is not reported. Although there is evidence that many ESMAP projects had a direct effect in mobilizing financing from the Bank, several ESMAP interventions were not directly responsible, or intended to be directly responsible, for triggering lending operations. Nevertheless, ESMAP had an important role at the policy, regulatory, and strategic levels of the energy sector of client countries, thereby creating enabling conditions and demand for Bank financial support. In other cases, ESMAP activities are also developed in parallel, supporting the implementation of an existing loan. It is also common in Bank operations to include technical assistance components (analytical advisory activities or AAA

like the ones provided by ESMAP) associated with the loan to assist the recipient client country during its implementation.

In addition to the five projects that indicate some level of financial leveraging according to this evaluation's desk review and/or the field visit sample, were the following two projects:

- ***China Heat Pricing Study:*** At the request of the Chinese government and as an element of a multiyear GEF/World Bank- AAA China heat reform and building energy efficiency program under preparation, this project is designed to pilot and develop a national policy framework for heat pricing and billing with special attention to preserving access to basic quality heating services for the poor.<sup>96</sup> The budget for phase I and II was US\$540,000 and finance from GEF of US\$18 million, a leverage effect of 1:33.
- ***Cameroon SME Capacity Building:*** The World Bank has committed US\$40 million and the Chinese government committed to at least US\$5 million of co-financing of the REF under the ESDP and is in the process of finalizing a budget inscription to this extent in the 2010 budget under preparation.<sup>97</sup> This equates to a leverage effect of 1:420.

As a comparison to ESMAP, in the four years 2007–10, ASTAE supported 17 World Bank projects in Asia where the total lending was around US\$2.2 billion. This points to a substantial leveraging ratio for ASTAE funding of 1:298 in World Bank-related financing.<sup>98</sup> A direct comparison with ASTAE, however, cannot be made since there is a large difference in their respective institutional structure and program objectives. ASTAE was established explicitly to advance World Bank lending in Asia, whereas ESMAP is established, among other reasons, to leverage World Bank influence and lending and is hence housed in the World Bank, but this is not ESMAP's only intended purpose.

Based on the limited information available, ESMAP's investments and the degree of investment leveraged point to a good value.

#### **Box 8 - Leverage for Wider Climate Adaptation**

The EACC project was a US\$8 million project to which ESMAP's CEIF provided US\$744k for analytical and advisory work, knowledge management, and capacity building and support to professionals at country and regional levels. According to the Grant Funding Request document, no outcomes, components, or outputs are directly attributable to ESMAP. Indeed, there is no mention of energy in the Grant Request. Therefore, it is unclear exactly how the ESMAP money was utilized, but the whole project has successfully informed investment for wider climate change adaptation. Use of funds related to energy is not delineated. Energy elements are included only in terms of impact on infrastructure. The EACC project has helped to inform the investment program in Mozambique and Bangladesh, and is likely to inform those in Bolivia and Samoa in the near future.

The government of Bangladesh, with support from development partners, identified a program of investments in accordance with the recommendations of the EACC Bangladesh Country study for development under the Pilot Program for Climate Resilience (PPCR). This program has provided seed capital of US\$110 million in grants and concessional funds and will leverage another US\$515 million in resources from IDA and ADB to fund a significant proportion of the near-term adaptation priorities. Similarly, in Mozambique, the EACC study has informed the formulation of priorities for

#### ***Timeline for design and appraisal, through implementation and completion of projects/activities (project cycle)***

The majority of ESMAP activities are delivered with some delay, and in most cases reasons are not explicitly provided. Interviews and e-surveys conducted for this evaluation reveal that Bank stakeholders are happy with the project proposal response time and fund disbursement. Interviews suggest that delays are largely associated with implementation constraints at the country level that are beyond ESMAP's direct control. Some delays are also associated with the procurement of services, and in the review process.

The majority of the responses from the TTLs working with ESMAP indicate satisfaction with the timeliness of responses of ESMAP to project proposals: 72 percent of the online survey participants responded as being either Highly satisfied or Satisfied, as seen in the figure below. Some respondents mentioned how the "response time had

improved over time” and that the “process was straightforward.” The minority that was dissatisfied with the timeliness felt that the process took too long, and was concerned that delays resulted in a reduction in the time for the implementation of the project. One respondent stated “Timely response will make the study more effective in terms of influencing the policy making in such a fast-changing world.”

The desk review of projects shows that, of the 30 completed projects with clear milestones,<sup>99</sup> in 21 cases, or 70 percent of cases, the delivery of the outputs was late compared to that envisaged at the beginning of the project. Some of these projects were delayed by more than a year, for example, the Vietnam Energy Efficiency program, and the ongoing Rwanda Africa Renewable Energy Access trust fund has requested a 21-month extension.

The Capacity Building for SME project in Cameroon was timely when it was initiated, given the high relevance of its objective in the country’s energy sector and within the CAS framework. However, there was a relatively long delay in implementing the study and related activities. The application form for ESMAP funding showed start-up and completion as January 2005 and December 2007, respectively, but the task was completed in December 2008. Execution took longer than expected between 2005 and 2007 because of some coordination challenges between AER and the SME Ministry. These were resolved following the Minister of Energy’s request in 2007 to concentrate the task completion on the definition of the financial instrument for the SME-based REF. Task management was then piloted by AER in consultation with all sector stakeholders. Combined with a change to field-based supervision, this helped to accelerate task implementation progress.<sup>100</sup>

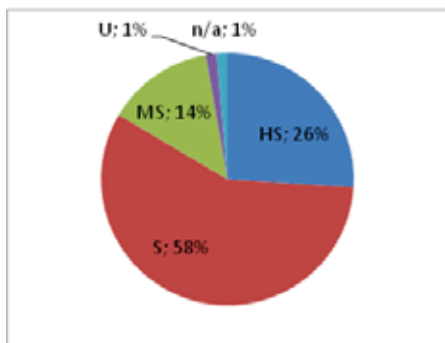
In most of the desk review cases, a revision to the timetable had been made during the project, and the final delivery was in line with, or closer to, the revised deadline. Three projects, or 10 percent, were delivered early. In some cases, time is made up and early delays are overcome. For example, the Natural Gas Study in Peru was implemented within a reasonable timeframe despite the long discussions inside the country on the main topic of the study.<sup>101</sup>

The speed of the project cycle is particularly important because in many cases ESMAP is aiming to provide timely advice. In Ecuador, the issue was highlighted in the PCN for the Energy Strategy work: “I worry that the November deadline for a policy note is not very realistic, even, perhaps, for a good description of the current problems and basic outline of options. April is also an ambitious target for completion of the full effort.”<sup>102</sup> and “the short timeframe is of concern—it would have been preferable to have started this ESW 3-4 months ago.” In this instance, the delivery was two months after the original milestone, but in line with the revised timetable. In the project review of the Impact of the Credit Crisis on Investments in the Power Sector, there were delays in the completion of the project because of a delay in the start date of the task implementation and a delay in missions to carry out the assessment. As a result, the reports were delivered to the client seven months later than anticipated (but below budget). Bearing in mind that the project concept reviewers had stated how important it was for the whole project to be completed within four-five months, this was extremely late.

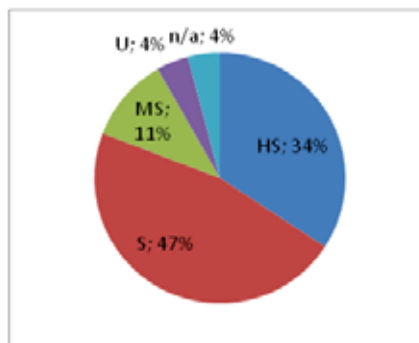
A number of interviewees and survey respondents noted that there was a delay between the finalization of reports and publication, and that the report review process is inefficient and time-consuming.

At the CG Knowledge Exchange Forum, on presenting ESMAP’s role in Turkey Electricity Market Reform, the presenter stated that ESMAP’s annual cycle can sometimes impact efficient implementation.<sup>103</sup> No further information is available on how this impact manifests.

**Figure 16- Timeliness of Responses to Project Proposals**



**Figure 17 - Speed of Disbursement of Funds**



For the disbursement of funds, the majority of the TTLs were satisfied (81 percent of responses, Highly satisfied or Satisfied) with the speed of the disbursement of funds. The minority that were dissatisfied were unhappy with the whole ESMAP process, and the lack of clarity and timing of the funding was just an additional issue.

**3.3.2. Cost-effective areas of ESMAP operations**

***What are the most cost-effective areas of ESMAP operations (by country, region, or thematic area of work, including partnerships)?***

It is not possible to provide an accurate assessment of the most cost-effective area of operations, as there is insufficient information available to measure cost-effectiveness. There is no systematic recording of outputs and impacts against expenditure at either the project or program level. However, from the information available for projects completed in FY09–FY11 the most cost-effective support for investment leverage seems to be for EASP activities, followed by energy efficiency.

The actual allocation of budget executed does not reflect that projected in the Business Plans for the relevant period, or in the work programs. There are data inconsistencies in reporting that make measurement of the level of execution of budget difficult. The key finding of the cost analysis is that there are substantial variations in the costs of activities under the same category. Budget allocation is high for energy access activities, yet this area of work is currently underperforming and has low leverage rates.

The basic responsibilities of the ESMAP Core Team are clear but the roles of those in the Global Practice Group(s), which were relevant to the evaluation period but have since been disbanded, were not clearly defined within the management structure. The percentage of budget for management and operations is reasonable and in line with, or better, than estimated in the Business Plan. For the majority of stakeholders involved with ESMAP, there is little awareness of the changes before and after the MDTF. Key informant interviews indicate, however, that the key changes here relate to the enhanced predictability of budget envelopes for planning purposes and the more structured and focused approach to work planning.

[For a further discussion on the institutional arrangements, See Section 3.4.]

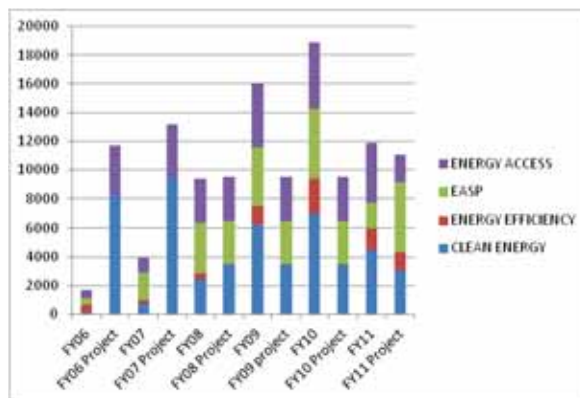
**Extent to which ESMAP operations are cost-effective relative to the outputs, and results achieved (outcomes and impacts), and their leveraging effects on investments in the targeted fields**

This judgment criterion is measured against the following indicators: the level of execution of program budget; the leverage effect on investment; the expenditure per unit of output; the percentage of budget for management and operations; and evidence of clear roles and responsibilities for operational and management structure.

***Level of execution of program budget***

Total disbursements for the ESMAP portfolio were outlined above. The following figure shows these disbursements against the business plan projections.

**Figure 18 - Budget Execution against Business Plan Projections**



The classification of themes changed from FY09. The figure above has allocated budget to Clean Energy, where the older classifications do not fit with the new themes. The following figure shows how the disbursements were broken down against themes in the annual report 2009 and in the new classification following that year.

**Figure 19 - Percentage of Budget Disbursed by Theme for FY09**

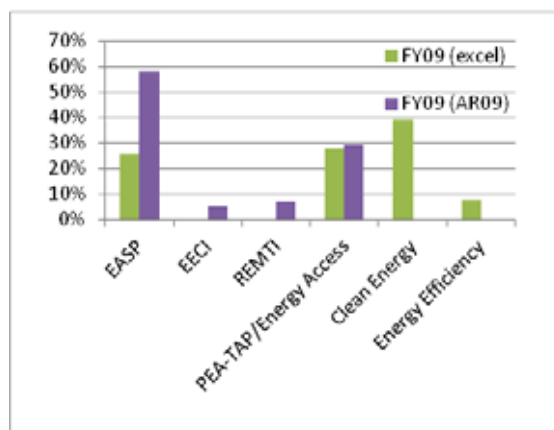


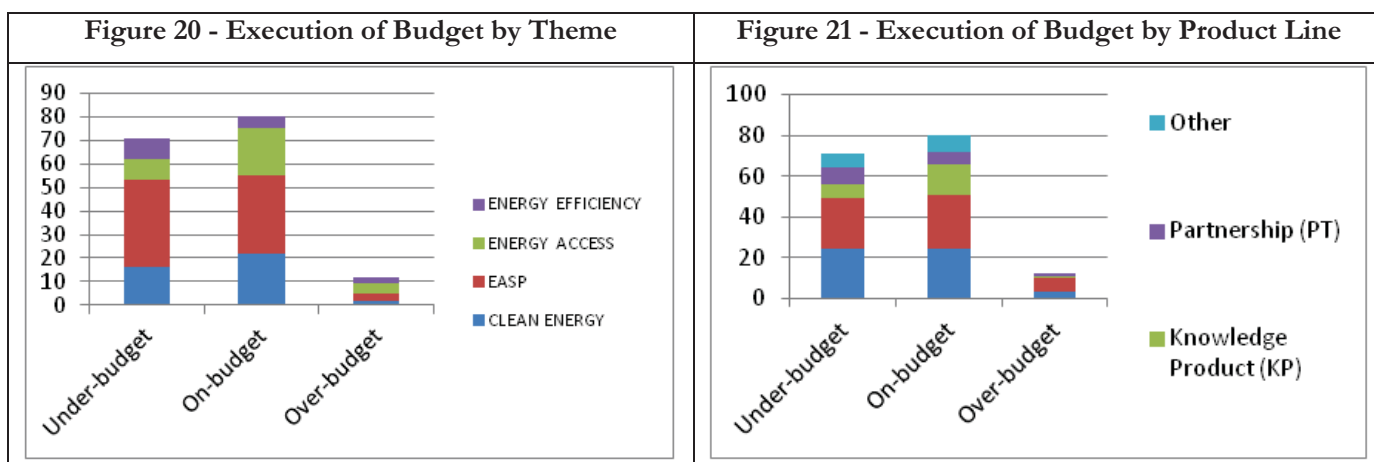
Figure 18 shows clear divergence in budget execution. At the beginning of the evaluation period the budget was not disbursed, but in recent years the budget for ESMAP has increased significantly over that projected in the 2008-13 Business Plans (US\$11 million/year including management, US\$9.5 million without). It is not informative to compare the aggregate budget figures against spending over the whole business period, per theme, since ESMAP’s thinking, themes, and budget allocation have moved on since the Business Plan was conceived. ESMAP develops annual work programs and budgets that are more up to date than the Business Plan. However, the Evaluation Team did not have access to these at the time of the analysis, which would provide greater detail on year-on-year projections and on the actual level of execution of the program budget. Going forward, the CG has endorsed the FY12 work program and budget (US\$20.5 million).

TAG also pointed out that the disbursements by program provided in the FY09 annual report show the disbursements have diverged significantly from the business plan projections. EASP had 58 percent of total disbursements in FY09 compared to a projection of about 25-30 percent. Figure 19 shows that when the budget was reallocated in following years against new classifications, the EASP proportion reduced to about 25 percent, more in line with the Business Plan projections. In the same year REMTI was allocated 7 percent, much below its projection of 24 percent, and new activities are only 1 percent of the total. Following 2009, REMTI was subsumed in the Clean Energy classification, so the changes are not clear. In FY09, EECI was also lower than planned, at 5 percent as opposed to 25 percent of the budget, and following that year it was incorporated in Energy Efficiency.



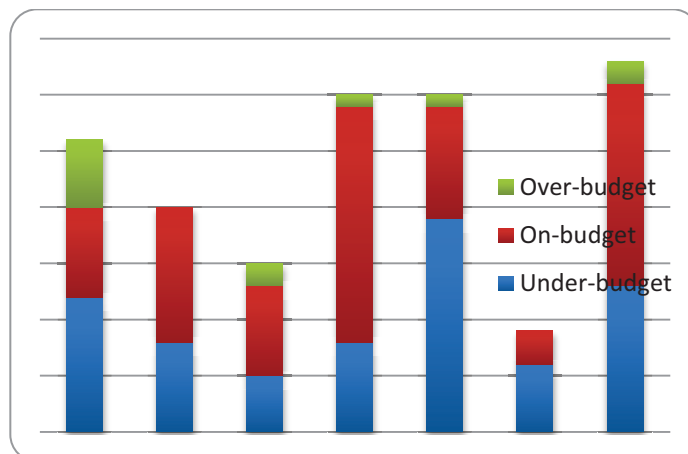
In 2011, the budget execution also differed from that set out in the work program from the preceding year. This is partly because the work plan and the budget disbursement do not allocate the Low-Carbon Growth Studies (against the same theme. The budget allocation for EASP includes the budget for LCGCS, while the evaluation data sheets include LCGCS under the clean energy theme. In energy access, the projection was US\$1.89 million, with spending to date at US\$4.13 million. However, this includes the budget for AFREA, which was not included in the work plan budget. Once this has been subtracted (at US\$3.04 million), the resulting amount disbursed is US\$1.08 million, or only 57 percent of that predicted. Allocation by program is partly a function of demand from the regions, but it is difficult to know how just one year in advance the spent amount can be so different from the projection.

At the project level, the desk review reveals inconsistencies in reporting for both ESMAP budget allocations and disbursement. In many cases, the budget requested in the PCN is not the same figure stated in the ACS, and the figure for budget disbursed in the ACS is not always the same figure as that in the evaluation datasheet. In some cases, the ACS has not been completed fully. An assessment of the execution of program budget for the completed projects in the desk review has been carried out based on the available information. The figures used include the proposed ESMAP contribution in the PCN/PSF, and the disbursement has been based on the ACS figure unless this has not been completed, in which case it has been based on the ESMAP evaluation data sheet. The following figures show (of 35 completed projects) those under budget, on budget, and over budget split among the four themes, by product line and by region. Those described as on-budget are with a spent amount of +/- 10 percent of the expected budget. Over-budget projects include those where the scope has expanded since the original concept; similarly, those under budget include projects where the remit has been reduced.



Documentation shows that 43.5 percent of projects reviewed were below budget, with the majority of those being technical assistance, and this cohort includes all the energy access projects. Most of the ECA projects were onbudget, and more ESW work was over budget than any other product line. It is difficult to draw conclusions from this small sample of projects.

Figure 22 - Execution of Budget by Region



The reasons for changes in project budgets are not systematically recorded. In some cases, the overall budget may not have been reduced, but only the ESMAP contribution. In one case the project was suspended because of a coup in Guinea; in another case, the project was dropped since it was considered too premature. Examples of other projects coming in below budget include:

- *Capacity Building for SMEs in Cameroon:* The task was delivered significantly below original budget estimates. The estimated cost was US\$235,000 while the actual cost was US\$107,720.<sup>104</sup> The reduced budget was due to a unilateral cut by ESMAP of resources. The long experience and in-depth knowledge of the consultants, who significantly pared down their learning curve, and GOC’s support may have also enhanced the cost-effectiveness of this task.<sup>105</sup>
- *Peru Rural Electrification* project: Assistance was provided in a timely fashion. While the funds were only partially utilized, the objective was met.<sup>106</sup>
- The GEF trust fund for the *Mali Household Energy and Universal Access* was closed in June 2009, and its rating remains moderately satisfactory as the fund wasn’t fully disbursed. Lessons learned of slow acceptance of small-scale solar home systems by the targeted rural population are integrated in the design of the new HEURA project’s energy service delivery component and future initiatives. Currently a mix of technologies, including mini-grid rural electrification schemes, is promoted by the HEURA project, aiming to offer various rural energy services according to rural customers’ preferences and needs.<sup>107</sup>

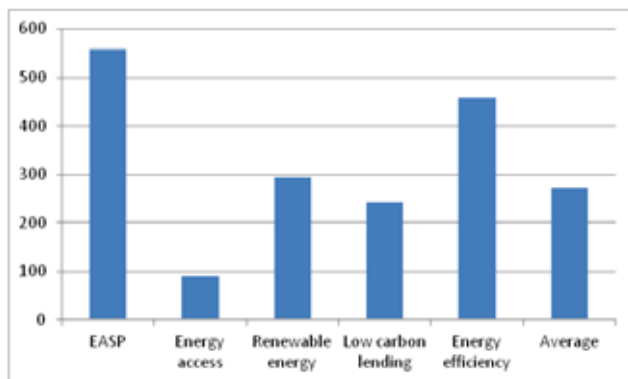
Examples of projects over budget include:

- *Regulating Electricity Trading in SADC:* The original estimated budget was US\$230,000, of which US\$150,000 would come from ESMAP and the remaining US\$80,000 from Bank sources. The actual funding according to the ACS was US\$642,500 of which US\$300,000 came from ESMAP, with US\$98,500 from Bank sources and US\$244,000 from SAFETE. (ACS) The PCN review process led to a considerable expansion of the original concept developed in the PCN, with a corresponding increase in the budget: “The team notes that accommodating the proposed improvements, in particular in terms of a broader consultation and dissemination process, will lead to an expanded scope of work, likely an increase in the budget required, and possibly a longer timeframe for completion and dissemination of the work. The team now anticipates selecting a firm to undertake this expanded scope of work, rather than an individual consultant in the original concept. Another consideration is that there may be a need to expand the World Bank team and/or add additional reviewers with specific knowledge of the revised set of regional examples to be studied.”<sup>108</sup>
- *Trade Policies for Liquid Biofuel:* The total final budget (all ESMAP) was US\$119,310 against a planned budget of US\$73,800 to cater for additional staff days.<sup>109</sup> The project was delivered in seven months rather than the planned 10 weeks.

***Leveraging Effect on Investment (region/country/theme)***

To the extent possible, the leverage ratios for the projects under evaluation are set out in Section 3.3.1. A comparison of the leverage ratios per theme (showing total disbursement during the period) is shown in the following figure.

**Figure 23 - Leverage Ratio per Theme for All FY09- FY11 Selected Projects (note: for total disbursement, not for completed projects)<sup>110</sup>**



This clearly shows that during this period the most cost-effective leverage is from EASP projects (at 1:557) followed by energy efficiency projects at a ratio of 1:294. This leverage impact is based on total disbursements (completed and ongoing) rather than on the completed projects only. Therefore, the leverage for each successful project would, in reality, be higher.

The energy access leverage ratio is shown to be considerably lower than the other themes. This is partly because the majority of the projects in the portfolio are ongoing yet their total disbursements are included in the calculation. However, reviewing a sample of those included in the review, it shows great variety between the energy access projects and many with a lower leverage factor; US\$1.5 billion of the US\$2 billion identified is in one project in Kenya (a leverage of more than 1:750), thus skewing the results. The Cambodia Decentralized Energy Services for IDA Countries provided leverage at a factor of just 1:6.7, while the Nicaragua Technical Assistance for Improved Small-scale Energy Supply had a leverage impact of 1:73.9.

On reviewing the regional basis of the leveraged finance for EASP activities, the majority of those identified are in the EAP, SA, MENA, and ECA regions. The majority of the EE leverage has been in China although other EAP countries and MENA also receive some. There is no clear conclusion for the RE or energy access activities. There is also insufficient information to provide any analysis at a country level.

***Expenditures per Unit of Output across Country/Region/Theme***

The Evaluation Team faced a number of challenges in assessing the expenditure per output as a result of limited information. It is difficult to make linkages between cost data and the outputs and outcomes. As already mentioned, neither outputs nor outcomes are reported for most projects. Over time, the ESMAP annual report has become more concise, but at the loss of some valuable breakdown data, making analysis yet more difficult. Previous annual reports provided breakdowns on expenditure per theme per region and numbers of projects per theme and region. In addition, it is difficult to compare products or activities, as there are a large number of variables associated with each activity or product. The complexity of the work differs even when working on the same topic but in different countries. Similarly, the quality of the end product will vary and the timeline, level of consultation, and country context all contribute to the variability in the costs related to the outputs, outcomes, and impacts.

The Evaluation Team has carried out an assessment of the costs for completed projects/activities. During the period 2006-11, 182 ESMAP activities were completed with a total budget of US\$37.2 million. This assessment can be found in Annex 6. ESMAP also carried out its own Cost Assessment Study of its work between 2005 and 2010; 161 ESMAP projects were reviewed, not all of which fall within this current evaluation period. The study was intended to be the first step toward establishing cost-effectiveness benchmarks for ESMAP products. The study concluded that going forward, data quality must be improved, as must the linkages between the cost data and the outputs and outcomes, which will, in turn, enable ESMAP to develop value for money indicators in terms of outcomes.

The conclusions of the work carried out on the 2007-2011 portfolio (Annex 6.9) coincides with that of ESMAP's own cost-effectiveness study in that they each illustrate challenges with a lack of consistency in application of product lines, and a lack of information on quality and/or complexity of products. The ESMAP study also mentions that there is a lack of availability of cost data for comparable institutions/units for benchmarking.

Without details of each of the projects it is difficult to identify trends; however, the 2005-10 analysis highlighted a number of trends that seem to reinforce this evaluation's assessment. The more expensive activities have the following features:

- Activities that cover a whole region or a number of countries
- Activities involving significant in-country consultations and dissemination
- Activities requiring substantial new data collection and analysis
- Activities covering a number topics or subsectors
- Activities involving implementation of "pilots."

Low-cost activities tend to be:

- Activities undertaken in a small country
- Activities based on desk based analysis of existing data and documentation
- Activities undertaken primarily with local consulting inputs and/or bank staff time
- Activities leveraging the efforts/resources of another related project.<sup>111</sup>

#### Box 9 - ESMAP Leverage in Tanzania

ESMAP estimate that about 60,000 people have benefited from the AFREA project, "Providing Affordable and Reliable Solar Systems in Northern Tanzania." Precise estimates for the number of direct beneficiaries reached by "Lighting Rural Tanzania" are not available, although an approximate estimate can be made based on interviews conducted during the mission. Each of the winning projects that target households appear to be reaching an average of 700-800 households, or about 2,400 individuals. The Ensol project that is providing solar systems to dispensaries has reached about 120,000 individuals. At a conservative estimate, the two lighting project together have therefore directly benefited at least 200,000 individuals. This number may be expected to grow as most of the supported activities will continue to reach new beneficiaries into the future.

In addition to these direct benefits, the projects have also led to: the creation of a trained cadre of remote technicians qualified to install and service solar systems; improved education opportunities for schoolchildren receiving solar lanterns and the adults who use the lighting to study at night; a raised level of awareness of solar power, helping to create a rapidly growing market.

Measured in terms of the level of investment by AFREA (US\$180,000 for "Providing Affordable and Reliable Solar Systems" and \$1 million for "Lighting Rural Tanzania"), these projects have therefore cost less than US\$6 per direct beneficiary. The perception of interviewees was that the projects represented an extremely efficient use of resources; both Ensol and ARTI were particularly positive, with an Ensol interviewee expressing the view that it was impossible to conceive of a more effective way of using the funds. ARTI also remarked that it was important that the LRTz grants were not so large as to make any single distributor financially dependent on donor support and it was essential for donors to continue to invest in social enterprise.

The Sri Lanka study tour supported under the project "Integrating SMEs in Tanzania's Rural Energy Initiatives" also appears to have yielded a very good ratio of results to resources spent. In the case of this project, it is more difficult to estimate the level of benefits that are attributable to the project. The process of devising an improved regulatory framework and standardized procedures for small-scale renewable projects was already in progress before the study tour took place. It would be therefore be misleading to attribute the current favorable environment for SPPs entirely to the study tour. However, the project undoubtedly contributed significantly to the creation of this favorable environment that, it is estimated, will lead to a total of 100-200MW of renewable capacity over the next 10 years. At a total cost to ESMAP of US\$144,000 this activity represents an expenditure of around US\$1 per kW of capacity catalyzed, which would also appear to represent an efficient use of resources.

**Percentage of Budget for Management and Operations (vs. research, KM, other activities)**

The percentage of budget for management and operations is reasonable and in line with, or better than, Business Plan estimates. The following figure shows the absolute management costs for ESMAP for the years 2006–10 as well as the management costs as a percentage of the total disbursements over that period.<sup>112</sup> Note that during these reporting periods there was a change in the reporting of disbursements and that from FY09 on, the ESMAP disbursement figures include CEIF and AFREA funds. Therefore, the general trend for an increase in management costs, in line with greater disbursement, actually results in a smaller management percentage being reported. In 2009, using the new reporting data, management costs accounted for 7.5 percent of total disbursement compared to 10 percent using the former reporting data. Also note that in 2009 there was a drop in management costs because of a number of unfilled posts within ESMAP.<sup>113</sup>

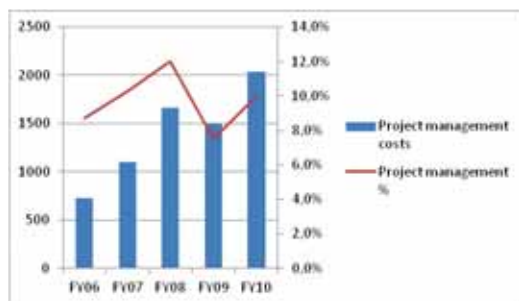
The 2007-09 Business Plan estimated management costs up to US\$1.3 million per year, while the 2008-13 ESMAP Business Plan estimated the cost of management at US\$1.5 million per year out of a US\$55 million budget over five years (US\$11 million/year), or 13.6 percent. The current level of management cost is higher than this, but since the disbursements are higher than envisaged, management as a percentage of the total cost is lower.

As a comparison, the ASTAE program spent 18.7 percent of its total disbursement of US\$1,726,905 on administration and reporting costs in 2010.<sup>114</sup>

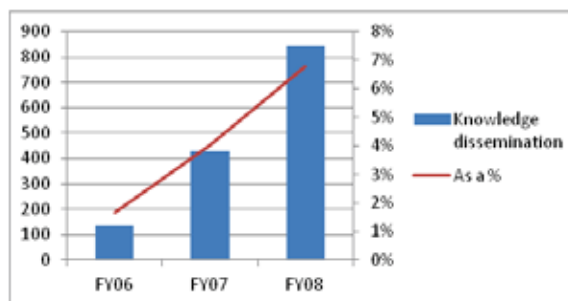
At a project level, the details of the budget breakdown are not normally provided in documentation. Of the 50 project desk reviews, only 3 detailed the spending for project management and administration. These showed the project management costs between 6.3 percent (for the GEF Sustainable Energy Development Project in Rwanda) to 18.1 percent (for the Nepal Support to Strategic Energy Sector Development).

The costs of knowledge dissemination/management were only reported separately in the annual reports up to 2009, and have been subsequently included within the “own-managed” category. During the three years in which it Knowledge Dissemination and management are reported, it increased significantly each year, as can be seen in the following figure.

**Figure 24 - ESMAP Management Costs between FY06 and FY10<sup>115</sup>**



**Figure 25 - Knowledge Dissemination Costs (Source: Annual Report 2009)**



**Evidence of Clear Roles and Responsibilities for Operational and Management Structure**

The ESMAP Business Plan 2008-13 outlines basic responsibilities for a Core Team with some key functional realignments with the aim to improve its results orientation. The ESMAP Program Manager supervises and administers resource management, portfolio M&E, publications, and communications and leads a World Bank Group-embedded matrix organization. The Core Team consisted of a Lead Energy Economist and two Thematic Coordinators (energy and poverty reduction; and energy and climate change), complemented by a group of external experts, the Global Practice Group (now disbanded). In addition, there are regional coordinators.

According to the TAG,<sup>116</sup> the two additional Thematic Coordinators will provide the “intellectual leadership on global thematic challenges, serving as focal points for the knowledge clearinghouse function and engagement with

multilateral instruments.” The Energy Poverty Thematic Coordinator will be responsible for the ongoing knowledge partnership between ESMAP and the World Bank’s Development Economics Department.

There was no clear outline of the responsibilities for individual roles within the GPG. The GPG is made up of energy efficiency and energy technology specialists, some of whom are seconded under the World Bank Staff Exchange Program. The 2009 TAG report provides further detail, stating that two GPGs were established: an energy efficiency cluster and an undefined group on renewable energy. The GPG(s) were disbanded during this evaluation’s portfolio period (2007-11), perhaps in part because of their lack of a clear strategic role or purpose.

In 2011, TAG mentions that the new ESMAP manager is trying to break down the “silo” mentality created by running separate components, and the tendency of staff to think and act within their specific operation only. It is still early to assess what changes have been made as a result of this new emphasis.

At a theme/program level, the roles and responsibilities could gain from being more explicitly stated, beyond those attributed to the Program Team Leader (PTL). For example, in the Clean Energy program there is a list of staff with their titles and projects they are involved in, yet their actual roles and responsibilities are not provided. The list of staff includes World Bank anchor staff as well as ESMAP staff.

### ***Perceptions of cost-effectiveness of program before and after the change to a MDTF***

The majority of ESMAP stakeholders interviewed as part of this evaluation were not able to provide any response on this indicator, and other in-country interviewees were not aware of any change to the trust fund set up. Because the current data make it difficult to assess cost-effectiveness, no comparison before and after the change to MDTF can be made. Key informant interviews, however, indicate that the key changes here relate to the enhanced predictability of budget envelopes for planning purposes and the more structured and focused approach to work planning. Notably, survey respondents and interviewees alike did *not* mention (and were possibly not aware of) other intended reasons for the shift to a MDTF, such as enabling ESMAP to be a truly global program, or having donor funds that are “untied” (not “earmarked” for) to specific programs or countries. Complementary to these perceptions, Section 2.6 contains a short discussion on the transition to programmatic funding.

### ***3.3.3. Lessons learned and recommendations on efficiency***

#### ***Main Lessons Learned on Efficiency***

- Detailed and informative assessments of value for money of different types of activities require detailed information on the costing and level of achievement of results for each category of activities.
- MDTFs are one of the modalities at the disposal of trust fund managers and their donors to help streamline coordination, resource management, and more focused work planning processes.

#### ***Recommendations on Efficiency***

- In order to collect and assess meaningful results on efficiency of ESMAP operations and management, ESMAP should improve project-level reporting on outputs, costs, and outcomes and link this improved reporting to expected and actual cost data.

### 3.4. Institutional arrangements and management

#### 3.4.1. Appropriateness and effectiveness of organizational setup

***How appropriate and effective are ESMAP's organizational structure and staffing profile in realizing a relevant, effective, and efficient business plan? What changes, if any, are needed to ESMAP's organizational structure and staffing profile to carry out its mandate?***

The assessment of ESMAP performance over the evaluation period was already covered under the effectiveness section of this report. As stated, the Evaluation Team concluded that ESMAP has achieved relatively strong success across the three main high-level objectives for its client countries: better informed policy making, enhanced client capacity, and adoption of cutting-edge solutions.

In light of the evolving work program, at the organizational level, the current management has made commendable efforts to ensure adequate management of the core ESMAP staff team and its relationships with other actors within the Bank.

The staff profile and hiring history suggest that as the program has grown and evolved over time, staff were hired into ESMAP based on the areas of focus of the work and have contributed to this good performance overall in achieving business plan objectives. Current management has brought in a welcomed emphasis on a more flexible approach to HR management. That is not to say that internal human resources fully meet all the needs of the Business Plan and demands from clients. To supplement the need for such expertise that is relevant to ESMAP's areas of focus, ESMAP management also has close working collaboration with the Energy Anchor unit and builds on its own rosters of experts, which it should continue to do to adapt to evolving needs.

The expertise of ESMAP staff and their skill sets are valued by its Bank clients. ESMAP staff feedback is generally seen as timely and efficient. The assessment points to the flexibility and rapidity of the ESMAP application process, when compared to other trust funds at the Bank, also an indication of staff and organizational management performance within ESMAP.

ESMAP is credited for having a global vision on the energy sector and is generally valued as a source of mature knowledge on international experience and best practices. It is also seen as a solid clearinghouse for research/analytical work in the energy sector by other outfits within the Bank working on energy policy issues.

The pledging system in place at ESMAP for donor contribution and the staggered and often unpredictable timing of the donor contributions from year to year command a very conservative approach to resource management in general, but also to staffing.

#### **Extent to which ESMAP's organizational structure and staffing are conducive to its Business Plan and mandate**

##### ***Degree of Fulfillment of Goals According to Business Plan (over evaluation period)***

The assessment of ESMAP performance over the evaluated period was already covered under the effectiveness section of this report. As stated, the Evaluation Team concluded that ESMAP has achieved relatively strong success across the three main high-level objectives for its client countries: better informed policy making, enhanced client capacity, and adoption of cutting edge solutions. On average, approximately two-thirds of projects tend to achieve their respective intended high-level objectives. Given the often short timeframes and high demand for products and services, ESMAP demonstrates its capability for rapidly generating targeted materials and processes to answer client needs. The trust fund also faces challenges to continue to meet these high-level objectives by producing high-quality, independent studies, tools, and assessments, while also engaging clients in targeted training and knowledge exchange.

In the more recent period, and in keeping with the new M&E framework, the 2010 annual report contains a table presenting the status of outputs and deliverables against expected milestones for both FY09 and FY10. The table highlights two areas where the achievement of milestones fell short most frequently: in both cases, this was in the area of developing knowledge exchange products.

The TAG report 2010 also points out that the disbursements by program provided in the FY09 annual report, figure 5.2, have diverged significantly from the Business Plan projections. “There is a need for clarification as to whether the divergences are an improvement over the plans or areas for concern or irrelevant. The Business Plan anticipated four programs, projected as roughly equal in size. (...) Given the data available, TAG is concerned that it cannot be stated with full confidence whether ESMAP is on or off track on the efforts and allocations towards the expected results in the BP.”

### ***Relationship among Organizational Structure, Staffing, and Fulfillment of Mandate***

With that assessment of performance in background, staff profile and hiring history suggest that as the program has grown and evolved over time, staff were by and large hired in ESMAP based on the areas of focus of the work and have contributed to this good performance overall. In 2005, ESMAP started the implementation of its then Business Plan with six people (three senior technical experts). It added another seven staff, and six departed during the period to 2007. It was TAG’s assessment in its 2008 report that the additional staff had improved ESMAP capacity in a number of areas.

The 2008-13 Business Plan mentioned that “The ESMAP Program Manager supervises and administers resource management, portfolio M&E, publications, and communications and also leads a World Bank Group-embedded matrix organization (...), comprised of the ESMAP Core Team, the Sector Anchor Units of the World Bank Group Sustainable Development Vice-Presidency (SDN Anchors), and the Regional Energy Units”. The ESMAP Core Team consisted of the Lead Energy Economist, and Thematic Coordinators, in addition to the (now disbanded), a set of external experts to provide strategic perspective and views, to inform and guide ESMAP business planning. During the 2008–13 Strategic Business Plan period, ESMAP will improve its results orientation via key functional realignments of the Core Team.<sup>117</sup>

By the end of 2008, ESMAP counted seven senior technical experts and three junior specialists. The TAG was also supportive of management plans to add up to five new thematic area experts. It noted in particular that the new specialist on household energy to join ESMAP end January [2008] was bringing specific expertise on biomass cooking, heating, and decentralized energy generation.<sup>118</sup> One Senior Energy specialist with EE expertise was hired in 2008 to manage the then-developing EE Initiative for ESMAP.

The tendency recently, under the new management, has been to emphasize a more flexible management of HR. More recently, in its 2011 report, the TAG noted that “The new manager (...) is trying to break down the ‘silo’ mentality created by running separate components and the tendency of staff to focus on the boxes of ESMAP and think and act within their specific operation only. The manager’s aspiration is to achieve much more interaction between the teams.(...) The manager wants to put more emphasis on objectives in order to establish teams within ESMAP that draw on personnel with different skills to achieve these objectives. For example, having one category called Clean Energy, which comprises climate change and REMTI. In the event that this objective is achieved only one Program Team Leader (PTL), a seasoned professional with Bank-wide recognition would be needed, not several.”<sup>119</sup> The CG management response to the 2011 TAG reports welcomed this assessment and noted the TAG supported the efforts of ESMAP management to avoid having its programs implemented as “mini ESMAPs” and to ensure that they continue to be open structures with maximum cross-collaboration.

The annual report 2010 boasts a team of 28 staff and 5 regional coordinators for ESMAP, while the website presents 26 staff as of 28 March 2011,<sup>120</sup> with energy specialists focused on the different programs and with specific thematic expertise in fields such as EE, transport, biomass, and geothermal.<sup>121</sup> There has also been increased interest in RE, climate change, and results-based financing and the low-carbon growth agenda in recent years. Interviews with ESMAP staff and management reveal that new staff or extended-term consultants added to the team also have skills in these areas to respond to this evolving demand. Dissemination of knowledge has also been a challenge for ESMAP as noted in the effectiveness section of ESM of this report. ESMAP now has a new Senior Information Officer to focus attention on such issues. He is committed, for instance, to improving further the current ESMAP website as one of the various tools to increase information sharing and its effectiveness.



### ***Resources Management***

That is not to say that internal human resources fully meet all the needs of the Business Plan and demand from clients. In some limited cases, surveyed professionals noted that in at least one subsector in the past, namely transportation, quality of expertise within ESMAP could have been strengthened. To supplement the need for such expertise that is relevant to ESMAP's areas of focus, the unit also has close working collaboration with the Energy Anchor Group (which counted a staff of 20 in 2011). A significant portion of analytical work in this group is financed by ESMAP, and ESMAP also counts on Anchor staff in its own-implemented work in order to provide technical expertise in areas where the ESMAP unit is still understaffed.<sup>122</sup>

Generally, this evolution in the level of human resources of ESMAP has been endorsed by the TAG, which sees the maintenance of a critical mass of staff as crucial in order for ESMAP to remain effective in its strategic areas. The TAG also points out that “ESMAP has a roster of personnel profiles that can be recruited to reinforce a number of its programs. TAG recommends recruiting such critical staff and also taking on board, via other open virtual panels, quick and dedicated expertise as needed.”<sup>123</sup>

At the organizational level, different tools are also in place and being used under the current management to ensure adequate management of the core ESMAP staff team in view of the evolving work program.

Staff meetings take place every two weeks. Interviews reveal that their focus is on information exchange on staff work in progress and roles and responsibilities. Issues covered in such meetings typically include human resources issues, management issues, staffing plans, and the review of specific donor concerns or demands. In addition to staff meetings, specific program meetings take place regularly to ensure information sharing and informal advice among professionals on particular technical issues under the work plans. Interviews did not reveal any specific bottlenecks or barriers in terms of accessibility to senior staff. Interviews with staff confirm that management essentially has an open-door policy.

Meetings with the regional coordinators to ensure appropriate linkages and relevance with World Bank operations and needs (now numbering five coordinators and one vacant regional coordination position) also take place quarterly, in addition to day-to-day interaction with the ESMAP team on different projects.

With respect to financial resources management and how it affects human resources management performance, this has been noted as a factor that requires constant monitoring by management. The pledging system in place at ESMAP for donor contributions, and the staggered and often unpredictable timing of the donor contributions from year to year, commands a very conservative approach to resource management and cash flow in general, but also to staffing, to keep flexibility. A more predictable contribution system by donors under a multiyear framework would go a long way in making human resource planning and development more in line with evolving and emerging needs. It would also help deal with other constraints in the allocation of human resources to particular tasks in ESMAP that are at present impeded by the special status of some of the staff at ESMAP in view of current World Bank human resources management rules.

### ***Client Satisfaction with ESMAP Staff***

Survey and interview feedback with Bank staff and TTLs, the clients with which ESMAP staff have the most direct interaction (ESMAP staff have very little direct relationship with client countries), suggests they are in general satisfied with staff availability.

The same interviews in Bank regions also reveal that in general Bank staff value the expertise of ESMAP staff and their skill sets and make sure to call on them to work on specific assignment in their respective regions. ESMAP staff feedback is generally seen as timely and efficient. With respect to resource management more generally by the unit in view of work programs, interviews as well as the e-survey point out to the flexibility and rapidity of the ESMAP application process, when compared to other trust funds at the Bank, also an indication in itself of staff and organizational management performance within ESMAP. ESMAP is also credited by some interviewees for having a global vision on the energy sector and is generally valued as a source of mature knowledge on international experience and best practices. It is also seen as a solid clearinghouse for research/analytical work in energy sector by

other outfits within the bank working on energy policy issues. The access to technical expertise that is directly relevant to client's needs, at no extra cost to the regional directions, is also seen as critical by the great majority of Bank staff interviewed, at a time of major resource constraint.

They survey results corroborate the outcomes of the interviews conducted with Bank staff, TTLs responded in great majority (83 percent) that the quality of the responses to their proposal was either Satisfactory or Highly satisfactory. On efficiency and timeliness, overall, similar performance is noted, with 81 percent considering the speed of disbursement Satisfactory or Highly satisfactory. Some comment also highlighted the proactive nature of ESMAP staff to TTLs' demand.

Perhaps one of the most telling indications of satisfaction with the expertise found in ESMAP over the period covered by this evaluation is the fact that ESMAP has acted as an incubator for various energy people now in other parts of the Bank. For instance, the current energy sector manager for ECA started at ESMAP.

### ***3.4.2. Effectiveness of management accountability***

#### ***How effectively has ESMAP management accountability been exercised, and how well is M&E built into programming and strategy to strengthen accountability?***

The TAG and the ESMAP management are seen as efficient and effective structures. It is recognized that the management structure, in particular, has undergone and continues to undergo significant changes to ensure strengthened effectiveness and efficiency. It is the view of the Evaluation Team that new operational manual adopted in 2011 will be instrumental to strengthening accountability, as will the ESMAP Quality Assurance Guidelines adopted in 2010.

In terms of institutional structure, the key accountability mechanisms are the TAG reviews and the CG meetings. Recently, ESMAP management has invested in the development of a new M&E system to provide enhanced accountability and reporting on result achievements. The importance of strengthening reporting for results as well as an independent evaluation function of ESMAP is noted.

With the adoption of the new M&E framework, all new projects now need to report on performance, providing a basis for enhanced accountability on portfolio performance. It is at this stage too early to say how instrumental to decision making the M&E system will become in the future for ESMAP management. The effectiveness section of this evaluation report highlights a number of challenges that the implementation of the M&E system is facing and that will need to be addressed to make it instrumental to enhanced accountability. There are nevertheless early indications that ESMAP is doing a better job at reporting against results.

### **Extent to which ESMAP has an appropriate management accountability system**

#### ***Key Mechanisms or Systems in Place for Holding ESMAP Management and TTLs Accountable for Their Roles and Responsibilities***

Interviews with CG members, but also with management, suggest that the CG, the TAG, and ESMAP management are seen as efficient and effective structures. It is recognized that the management structure in particular has undergone and continues to undergo significant changes to ensure strengthened effectiveness and efficiency.

Specifically, in terms of internal accountability tool, ESMAP's newly adopted 2011 Operational Manual presents quality assurance guidelines for Annual Block Grants (ABGs) that describe the eight stages for processing ESMAP activities. It provides a detailed description of each stage and the responsible persons for each task (TTL, PM, and so forth). It is the view of the Evaluation Team that if any task, in any of the eight stages, has not been completed, the accountable person can be easily identified.<sup>124</sup>

In terms of institutional setup, the key accountability mechanisms are the TAG reviews and the CG meetings. Recently, ESMAP management has invested in the development of a new M&E system, to provide enhanced accountability and reporting on result achievements. The subsystem architecture has been developed and the M&E system is now reporting on key indicators for all new projects. For new activities under the new M&E framework,

the financial management system and the M&E system are now linked to streamline management systems. Interviews with actors outside the ESMAP team suggest that few are yet aware of the existence of this system, but a number of CG members emphasized the importance of strengthening reporting for results as well as an independent evaluation function of ESMAP, such as the one currently being carried out. Some interviewees noted that over the past year, ESMAP has become better at reporting to the CG against results.

Second, ESMAP introduced ESMAP Quality Assurance Guidelines in 2010. Previously, once a concept note had been approved, ESMAP staff no longer participated in the regional management reviews of the activities. Since May 2010, an ESMAP officer is assigned as ESMAP reviewer, in addition to the region's peer reviewers, to follow the project to its end. The ESMAP reviewer participates in each Project Concept Meeting and in the Decision Meeting chaired by Country Director, when the draft final report is presented and considered.<sup>125</sup> To conclude, annual performance evaluation of staff can also act as a tool to enhance accountability.

The Evaluation Team did not come across any instances where accountability measures or system revealed any mismanagement. In addition to documentation review, field visits, and interviews, this issue was also covered as part of the TTL survey. Of the 72 respondent to this question, 68, or 94 percent, made it clear that they did not come across any mismanagement or system shortfalls in ESMAP affecting their roles and responsibilities. In the four cases that responded yes to this question, the feedback did not have to do with cases of mismanagement, but rather with the need to improve some aspects of the system, including: getting clearer justification when fund disbursements are delayed or when funding is withdrawn; the need to have streamlined processes for disbursement; and the need for clear management and implementation guidance from ESMAP to TTLs outside the World Bank.

### **Extent to which ESMAP's M&E system enables accountability as a part of regular programming and strategy**

Given the size of ESMAP projects, few actually undergo formal evaluation or monitoring process on a routine basis. This, in fact, was a source of information gap for the Evaluation Team as it was conducting the desk review, as very little information is routinely available on project performance. With the setup of the new M&E framework, all new projects now need to report on performance, providing a basis for enhanced accountability on portfolio performance. That being said, there is no mentions of needs or requirements in the M&E framework 2011.

It is at this stage too early to say how instrumental to decision making the M&E system will become in the future for ESMAP management. The effectiveness section of this evaluation reports highlight a number of challenges that the implementation of the M&E system is facing and that will need to be addressed to make it an effective accountability tool. The 2011 Operational Manual describes the M&E system in place. In particular, ESMAP reviewers and M&E team should “ periodically update activity progress in M&E database.”<sup>126</sup>

As stated by ESMAP in its 2011 M&E framework, “to contribute real value-added, ESMAP's M&E system must be well designed, well implemented, and well used.” The framework highlights the following in terms of objective for the implementation of an effective &E framework:

- A well-designed M&E system needs to be founded on solid qualitative and quantitative evidence. There needs to be a robust causality chain that can link that body of evidence with ESMAP's postulated outcomes, and attribute results to ESMAP's interventions.
- A well-implemented M&E system both creates and adds value by enhancing program results. It is able to generate relevant and timely data at least cost. For ESMAP stakeholders, a well-used M&E system leads to learning and behavioral change to better achieve program goals.<sup>127</sup>

Interviews with CG members have clearly highlighted how they welcome this development and what they hope will be a strengthened ability of the CG to report on its performance in achieving expected results in the future. Some noted in that respect that ESMAP appears to have been doing a better job more recently.

### 3.4.3. Operation of the CG as the governance body

#### ***How well does the CG operate as a primary governance body, and what are the recommendations for improving the effectiveness and efficiency of the existing structure?***

The latest CGs have been operating efficiently and effectively in view of their roles and responsibilities, with a focus on strategic guidance, though more space could be provided to ensure more donor dialogue and coordination on such strategic discussions.

In its minutes, CG provides recommendations, but they do not appear as clear decisions and their integration into programmatic design/strategic direction of ESMAP is not as detailed as it could be to allow a straightforward assessment of this dimension. In addition, minutes could benefit from a summary table of actions to be implemented and responsible persons/services/stakeholder, so that the accountability function can easily be followed over time.

The TAG and its annual reports to the CG are the main mechanisms available to the CG to hold ESMAP accountable to its mandate, and on which they have to rely heavily. The portfolio review, which is to be carried out annually as part of the M&E framework implementation, is seen as a first step in accounting for how ESMAP's activities have achieved results in terms of its goal and purpose. In terms of the information needs of the CG in order to enhance effectiveness of the governance structure, it was concluded at the 2011 CG meeting that:

- ESMAP will help organize conference calls between CG members and the TAG, and facilitate visits by TAG members to donor countries as opportunities arise.
- ESMAP management and staff will also communicate more regularly with the TAG, in addition to the TAG's visits to Washington, DC, twice a year.
- Regarding CG meeting documentation, ESMAP management confirmed that they would be posted at least four weeks before the CG meeting each year.

The Evaluation Team welcomes these recent developments, which it sees as beneficial to more effective and efficient management of the program.

The addition of observers, and the possible expansion of the CG to new donors, is welcomed as well by the Evaluation Team as a positive development.

More clarity on CG donor pledges and their timing to assist with resource predictability and their management over the course of the work program would be also be a crucial and welcome development.

### **Extent to which the CG is a suitable and effective governing body to fulfill ESMAP's mandate**

#### ***Frequency and Quality of Outputs of CG Meetings, Role in Strategic Planning, and Response from Management***

The latest CGs have been described as very business-like and efficient. Focus at the CG is described as adequate, with no micro-management, but focus on strategic guidance. Interview with CG members reveal that they generally perceive their role as one of strategic decision guidance to ESMAP, with a key role to play in discussing and approving Business Plan priorities and work plans, for instance. With the change in management, the CG is of course also moving away from its past legacy, which was sometimes confrontational between the TAG and ESMAP management (the TAG role is discussed at length later in this section).

A review of recent CG proceedings shows that the CG provides recommendations, but they do not appear as clear decisions and their integration into programmatic design/strategic direction of ESMAP is not as detailed as it could be to allow an assessment of this dimension.<sup>128</sup> For instance, CG management response to the 2011 TAG report highlights that ESMAP provides a management response to eight specific points underlined by the TAG, noting that few are new decisions, while most of them are confirmation of the strategic/programmatic direction already taken by ESMAP.<sup>129</sup> This presents a potential area for improvement in the operation of the CG. Indeed, interviews with CG members highlighted the need for the CG setup and agenda to do a better job at leaving space for more donor interaction to discuss strategic issues amongst themselves as well as with ESMAP management as a second step. In the view of some of the CG members, the CG as a strategic governance body could indeed benefit from more direct

interaction between donors to provide a forum for more substantive, frank, and open discussions on strategic directions for ESMAP.

In terms of structure and membership, the last CG included an open session to which observers including Brazil, India, Japan, the EC, and Korea were invited, as well as a closed session for the CG principals, Chair of the CG (Director of SDN, acting), and the ESMAP Program Manager. The addition of observers, and the possible expansion of the CG to new donors in this respect, is seen by CG interviewees as a positive development. If the CG were to grow, this would be beneficial to ESMAP in terms of the solidity of its resource base and scope, but would require new approaches to management, to ensure appropriate South-South and North-South exchanges within the governance structure.

The CG meets once annually. Its main output is of course the CG proceedings. A review of proceedings, and in particular the proceedings from the latest meeting, reveals minutes that are clear but that could benefit from a summary table of actions to be implemented and responsible persons/services/stakeholders, so that the accountability function can easily be followed over time. Further desk review also suggests that the knowledge exchange forum was informative on ESMAP and its focus and interventions and that such a platform should be maintained.<sup>130</sup>

With respect to the closed sessions, and in particular the pledging process often associated with it, management would appreciate more clarity on pledges and their timing to assist with resource predictability and their management over the course of the work program. At present, different donors have different and moving schedules. Some are on a two-year pledging timeframe, others three-year or four-year pledge timeframes, and none of these are of course binding. As already mentioned in a previous section, this requires an intensive monitoring and interaction from ESMAP management and a conservative approach to resource projection and management to ensure that core functions are always in check, should slippage in payment or pledge levels take place. This is especially crucial to clarify, as it is clear from the evaluation conducted and as reported elsewhere in this report, demand outstrips capacity, especially in a context of technical assistance resource constraints at the Bank.

#### ***Means and Processes for CG to Hold ESMAP Accountable to Its Mandate***

Desk review and interviews with CG members have confirmed that up to now, the main mechanism available to the CG to hold ESMAP accountable to its mandate is the TAG and its annual reports to the CG, on which they have to rely heavily to get an informed opinion on ESMAP performance beyond the ESMAP annual reports. Interviews have revealed that some CG members would greatly appreciate more frequent independent evaluations of the program, such as the present one, to supplement this source of information.

In addition, it was noted by the ESMAP Program Manager at the 2011 CG meeting that, as part of the strengthened M&E framework now being put in place for ESMAP, “the portfolio review, which will be carried out annually, is a first step in accounting for how ESMAP’s activities have achieved results in terms of its goal and purpose.”<sup>131</sup>

#### ***Number, Type, and Quality of Communication Systems and Decision-Making Processes among the Four Key Bodies (CG, TAG, Energy and Mining Sector Board, and ESMAP Unit)***

The main formal means of communication in place to allow interaction between the different elements of the governance structure of ESMAP are the following: the annual reports from ESMAP, the TAG report, and the ESMAP newsletter (this last one not being limited to the governance structure as such but nevertheless useful in the view of its members). The ESMAP Program Manager also now sits on the World Bank Energy Sector Board, allowing greater and more regular communication with Bank on energy issues, a welcome development in the recent period.

In addition to these formal means of communication, interviews have revealed that a fair amount of informal interaction and information exchange between ESMAP unit and CG members between sessions, either through face-to-face bilateral meetings or through exchanges over e-mail and phone as well as between the TAG and ESMAP unit twice a year during the TAG visits in DC. ESMAP management confirmed that it holds talks with

donors monthly on key current topics. Management has also been responsive to CG requests for more info between CG meetings.

The minutes of the 2011 CG closed session, highlighted with respect to the interaction between the CG and the TAG that *“it would be beneficial for TAG and CG members to have more regular communications between them and called for an informal mechanism to facilitate such communication.”* The minutes go on to *“propose that the TAG be encouraged to contact the CG members throughout the year, particularly in order to canvass various issues or areas of interest to the CG members prior to the TAG’s scheduled visits to ESMAP.”*<sup>132</sup>

It was concluded at the 2011 CG meeting that in order to address these needs for more information:

- ESMAP will help organize conference calls between CG members and the TAG, and facilitate visits by TAG members to donor countries as opportunities arise.
- ESMAP management and staff will also communicate more regularly with the TAG, in addition to the TAG’s visits to Washington, DC, twice a year.
- Regarding CG meeting documentation, ESMAP management confirmed that they would be posted at least four weeks before the CG meeting from next year.<sup>133</sup>

It was also agreed that the current CG workspace will be maintained as a common workspace where CG members are able to share their comments on the TOR with other CG members.<sup>134</sup>

The Evaluation Team welcomes these recent developments, which it sees as beneficial to more effective and efficient management of the program.

#### ***3.4.4. Effectiveness of the TAG***

##### ***How effective is the TAG as an advisory body to the CG and in providing strategic advice on ESMAP’s strategy, overall priorities, and their development into practical business plans?***

The TAG has been playing and continues to play a crucial and effective role in advising the CG in strategic discussions and decisions and fulfills an essential function in that respect. Over the evaluation period, TAG advice generally focused on strategic issues, prioritization, and development of Business Plans. It is clear that a number of TAG recommendations were taken onboard by the CG and acted upon by management over the period.

The relationship between TAG and ESMAP management was a difficult one, especially between 2006 and 2009. During that period, the TAG had been seen by some as “second guessing” management, and too operational in focus. This led to a reform of the TAG in 2010, which since then has been perceived as an improvement in the management of this function.

The present TAG is perceived as competent, with adequate expertise to provide the required assessment and advice needed by the CG. The skill set required for new members, as well as the terms of reference, are the same as those agreed upon at the 2010 CG meeting and are generally seen as balanced, and the selection process transparent.

##### **Extent to which the TAG is a functional advisor to the CG on strategy, overall priorities, and development of practical Business Plans**

As already mentioned, all interviews with CG members point to the crucial role they see the TAG playing in advising them in strategic discussions and decisions and see it fulfilling an essential function in that respect. It is also clear from the review of the evaluative evidence that the TAG, as mentioned, has been one of the key management accountability mechanisms available to ESMAP.

This is reflected in the various TAG reports and general focus on strategic issues, prioritization and development of business plans. It is clear that a number of TAG recommendations are taken onboard by the CG and acted upon by management. The 2007 TAG report provides for instance the following concrete recommendations:

- TAG recommended strong support for exploration of new ways to provide modern energy services to poor people through the SME sector using largely local private capital. It recommended that this subprogram be

given supportive oversight later that year and that progress reports be made available to the CG and the TAG as soon as they became available. This recommendation was then acted upon by the CG and ESMAP as the 2008 TAG report pointed out that “An SME expert was hired in January 2007 and was able to accelerate work on this component. Since that time the number of energy SME sub-projects has risen from four to thirteen in twelve countries and one regional program in Africa. The management and delivery of the program has been re-organized.”

- TAG recommended that capacity and competencies in gender be established within ESMAP and, if requested, the regional units, to support gender mainstreaming in ESMAP thematic areas and the operational energy units. The TAG believes that systematic feedback on gender when block grants or project concept notes are reviewed could be a low-cost way of improving gender impacts of energy activities and enhancing sustainability of operations and development effectiveness. Again, it is clear that this was at least partly taken up by management, as the 2008 TAG report pointed out that a new job was posted for an energy and gender specialist and that a horizon-scanning exercise on gender and energy was planned for first semester 2008. Specific recommendations to operationalize energy and gender issues in ESMAP work program were to be the objective of the expert meeting.
- Similarly, a recommendation from TAG in 2007 that ESMAP turn its attention to one-user surveys for its publications was enacted upon later in 2007 and reported on in the 2008 TAG Report.

The following year, a review of reporting to the CG in 2009 showed that the following strategic-level recommendations from the 2008 TAG report were also taken up and acted upon by ESMAP:

- Consideration by the CG of the possible advantages and disadvantages of moving the ESMAP cycle of reporting, planning, and Business Plans from a calendar (January to December) to a fiscal (July to June) year basis
- Attention to important gaps in the energy-poverty thematic area in the next business plan with a focus on how to integrate biomass and cooking energy into regional operations
- The creation and hiring of a second position under energy-poverty
- The implementation of methods to proactively anticipate the energy agenda (horizon scanning), and to find new ways to build the capacity and provide the support to policy makers in north and south with high-quality analytical and empirical activities.

The data collected suggest that the following recommendations from the 2008 TAG report, however, were not taken up:

- To mainstream renewables in the energy planning of client countries, ESMAP will need to expand with designated staff in RE. Likewise power generation portfolio planning grid systems planning and management, which account for the variability of supply from nondispatchable renewable energy sources, will need to be integrated into mainstream planning models.<sup>135</sup> Evidence from the 2009 TAG report suggests this advice was not taken up: “...at least for the first six months of FY 2009, the activity levels for Renewable Energy appeared to have dropped dramatically across ESMAP funded work.”<sup>136</sup>
- Similar assessments [to the client visits that they conducted as part of this review] form a regular part of the review process. No client visits took place during the 2009 TAG review, suggesting that this advice was not taken up.<sup>137</sup>
- Going forward with the new business plan, it would be useful to take a more systematic look at the leverage of ESMAP-supported interventions on investment programs, not only by the Bank but also other financiers including national governments.<sup>138</sup> Again, there is no evidence to suggest that this advice was acted on.

A similar assessment can be done for 2009 recommendations showing that a good portion of TAG recommendations are in fact typically taken on by the CG and ESMAP.

That being said, all sources point to a difficult relationship over the period evaluated between the TAG and ESMAP management especially between 2006 and 2009. During that period, the TAG had been seen by some as “second

guessing” management. This led to a reform of the TAG in 2010 which since then has been praised as an improvement in the management of this function. The 2010 TAG report for instance, is seen by many as a clear improvement over past reports.

More recently, the TAG report 2011 provided the following recommendations to the CG, clearly also showing maintaining a focus at the strategic level:

- It advised “that the CG donors that have pledged funding come forward with the committed funds as soon as possible so as not to jeopardize the continuity of the programs.”
- It strongly supported the recommendations made by the Danish Ministry of Foreign Affairs’ 2010 appraisal report “that for the new support to the ESMAP Strategic Business Plan 2008-2013, Danish funds are channeled to the Multi-Donor Trust Fund without any earmarking” and invites other donors to follow the same approach.”
- It welcomed “the proposal to implement AFREA II program as an ESMAP special initiative for Africa, with the program team leader located in the Africa Energy Unit, but the program being part of the ESMAP trust fund (i.e., more resources added to the ESMAP trust fund, rather than a separate trust fund).”
- It recommended “that discussions at the annual CG meeting concerning the relative focus on middle-income and IDA countries, respectively, are done with reference to the overall world situation and its priorities and where ESMAP sees it can provide maximum value added.”
- It recommended “that the CG makes a decision with respect to the evaluation of ESMAP and to consider its depth, the period (Business Plan 2008-2013), clients’ perspective and the external context including other international agencies and bilateral organizations working in the same field.”<sup>139</sup>

The following TAG advice was also listed in CG open proceedings for 2011:

- The TAG commended ESMAP for taking a cross-sectoral approach by including the urban and water sectors in its program, noting that the emerging global challenges required integrated solutions. The TAG also noted achievements in ESMAP’s efforts to implement the M&E system, adopt quality assurance guidelines, foster partnerships with other programs and agencies bring in new and potential donors, and create stronger teams and work programs in energy access and clean energy.
- TAG also noted that ESMAP is initiating interesting and novel external partnerships, and advised that ESMAP continue to develop such partnerships, particularly those of a cross-sectoral nature.
- As areas requiring more attention, the TAG highlighted the need for: (i) a clear communications strategy, particularly for ESMAP’s knowledge products; (ii) the simplification of program names and structure; and (iii) bringing client perspectives to the governance of the energy trust funded programs.<sup>140</sup>

The CG management response document to the 2011 TAG report highlighted that ESMAP provided a management response to eight specific points underlined by the TAG. It should, however, be mentioned that few of those were in fact new decisions, as most of them were confirmation of the strategic/programmatic direction already taken by ESMAP.

### ***Qualifications and Expertise Associated with the TAG***

The TAG is generally perceived by all stakeholders as competent, with adequate expertise to provide the required assessment and advice needed by the CG. This is confirmed by a review of the background of the different TAG members. In its 2011 proceedings, the CG mentions that “The selection process for a new TAG member will commence immediately in order to have him/her on board by the 2012 CG Meeting.” The skill set required for the new member, as well as the terms of reference, are the same as those agreed upon at the 2010 CG meeting and are generally seen as balanced and the selection process can be said to be transparent. The CG further highlighted that “the current service term of a TAG member would be two years, with a possible one-year extension. The CG also agreed that, in order to balance continuity with fresh views, the TAG’s tenure structure should move to a rotation-out every year of one member after the third year of service.”<sup>141</sup>



### ***3.4.5. Representativeness of governance structure and participation of client countries***

***To what extent do the governance and management structures permit and facilitate the effective participation and voice of client countries and other partners and stakeholders in major governance and management decisions? How are the interests of the different categories of stakeholders represented in the governance of the program?***

As there is no representation of client countries at the CG, it is fair to say that their interests are not directly represented at that level. Although projects that request ESMAP funding are developed in partnership with client countries and through consultative processes in most cases, recipient country representation on the CG, to ensure their voices are heard directly, especially in strategic discussions, would be a welcome development. This change would also be consistent with recent trends in representation in other governance structure for Bank-managed trust funds and for other multilateral funds.

In light of 2010 revisions to the role of the TAG—and its limited travel budget—will likely limit future potential for TAG member country visits and thus the potential to bring their views onboard, giving one more reason to ensure adequate representation at the CG level to increase accountability vis-à-vis client countries.

At the project and program levels, to varying degrees, ESMAP activities typically plan and budget for participation, consultation, dissemination, and workshop feedback in the regions from a variety of stakeholder groups.

#### **Extent to which ESMAP governance and management structures enable participation and voice of client countries, other partners, and stakeholders in major decisions**

As there is no representation of client countries at the CG, it is fair to say that their interests are not directly represented at that level. World Bank TTLs and ESMAP management would argue that as the projects that request ESMAP funding are developed in partnership with client countries and through consultative processes, they are fully representative of country and various region needs, as are the areas of ESMAP support. For instance, ESMAP now also holds regular meetings amongst its regional coordinators to ensure relevance and prioritization in view of the needs of both the Bank and the recipient countries. ESMAP regional coordinators must vouch for any new activity that involves their region, including global activities, which must be discussed with regional coordinators. Notwithstanding, interviews with CG members reveal that some would like to see recipient country representation on the CG, to ensure their voices are heard directly, especially in strategic discussions. This is a fair remark in the view of the Evaluation Team, given recent trends in representation in other governance structures for trust funds, including Bank-managed trust funds and other multilateral funds (such as the GEF and CIF, two active in the energy sector).

Indeed, strategic discussions and decisions taken by the CG have a huge potential bearing on clients' interests. For instance, in its 2011 CG open proceedings, "some CG members stressed the need for ESMAP to ensure that low-income countries are the main group of recipient of ESMAP support and to increase its activities that focus on promoting renewable energy. Others noted that ESMAP's operations in middle-income countries serve an important function not only in supporting these governments to be 'first movers' in renewable energy and energy efficiency practices, but equally important, in providing cross-learning opportunities for low-income countries. In this context, there is a need to mobilize additional resources to launch AFREA II and place more emphasis in low-income countries without cutting back on middle-income countries (however, several CG members stated that countries excluded from the OECD-DAC list of Official Development Assistance countries should no longer receive ESMAP support)."

At the level of the TAG, on the other hand, it typically holds consultations with recipient countries that feed into its annual reporting. In the past, for instance in 2008, the TAG conducted visits to four countries. However, revision done in 2010 to the role of the TAG, but also its travel budget, will likely limit in the future the potential to bring

such views onboard, giving one more reason to ensure adequate representation at the CG level to increase accountability vis-à-vis client countries.

As stated in its M&E framework, ESMAP evaluation criteria with regard to clients/stakeholders highlights that Beneficiary Performance is defined as “the extent to which the beneficiaries—including the government, the implementing agency(ies), civil society organizations, and other relevant stakeholders—ensured quality of preparation and implementation, and complied with agreements, toward the achievement of agreed ESMAP project- and program-level outcomes.”

This seems to be well reflected in the operations of ESMAP at both the program and project levels. ESMAP funds are typically used for studies and technical assistance on specific topics, as has been described at length in other sections of this report. While it might be argued that funds are not typically spent to involve countries in ESMAP management and decision making, ESMAP activities typically plan and budget for participation, consultation and dissemination, and workshop feedback in the regions to varying degrees, from a variety of stakeholder groups, for instance, through the development of the EE Cities program work, where consultation with cities on their needs have feedback into the business planning cycle for the period covered, therefore having a strategic impact on ESMAP.

At the project level, the same can be said with respect to beneficiary needs assessment. For instance, the Evaluation and Review 2005-07 mentions that “the Tajikistan and Uzbekistan activity built participation and consultation with stakeholders at inception. The China Energy and the Market Efficiency had best practice elements in both stakeholder consultation as well as dissemination practices. In the case of one Africa Regional project, although the system had no paper trail of the report, the TTL had provided information on the Proceedings of the ESMAP funded workshop being issued as a CD with the ESMAP logo.”

To conclude, it is the understanding that World Bank Group mechanisms or standards for stakeholder participation would all typically apply as relevant to ESMAP at the project level. In terms of grievance mechanism, the Evaluation Team is not aware of such a mechanism in place between ESMAP and client countries.

### ***3.4.6. Lessons learned and recommendations on institutional arrangement and management***

#### ***Main Lessons Learned on Institutional Arrangements and Management***

- In multilateral trust funds, bilateral donors tend to take a distant approach to monitoring the use that is made of their resources. In such cases, a credible TA function and a robust M&E system become crucial mechanisms and tools to provide a sound and third-party input to assist them in exercising their accountability and strategic management function as members of the Consultative Group. Adequate means must thus be put at the disposal of such mechanisms and tools to ensure that they can provide that sound and third-party input and contribute to the required checks and balances in the overall governance system of the trust fund.
- In order to provide for effective and efficient strategic management and development of a program, a good level of predictability in resource availability over a full business planning cycle is paramount. In the absence of predictability, management must rely on more conservative management practices at various levels that may well impede the growth, flexibility, and even the potential impact of a program, especially in an area where demand for advice and services is high and potential to leverage change is significant and must be timely.

#### ***Recommendations on Institutional Arrangements and Management***

- Building on the work that has already been done over the current Business Plan period to streamline and ensure a more coordinated approach to business and work planning, the CG meeting structure and agenda should be adjusted. It should accommodate the need for more donor interaction to discuss strategic issues among donors themselves as a first step during meetings, and to allow for a consolidated discussion of such issues with ESMAP management as a second step.

- ESMAP should expand the representation on its CG to emerging donors, but should also integrate recipient country representation. This would ensure that their views are directly carried into the strategic-level discussions and decisions on the future of the program and into an enhanced North-South dialogue framework. Furthermore, it urges ESMAP to consider the need to continue to integrate recipient country perspectives from different categories of stakeholders directly in TAG assessments and provide the TAG with the resources required to ensure this.
- The Evaluation Team echoes concerns already expressed by the TAG in 2011 and recommends that a more predictable pledging and contribution system by donors under a multiyear framework be instituted. It would go a long way in making human resources, business, and activity planning more in line with evolving and emerging needs in the energy sector.

## 3.5. Strategy for Program Sustainability

### 3.5.1. Proactive and effective management of growth

#### *To what extent has the program managed its growth in a proactive and effective manner?*

ESMAP's annual compounded growth rate between calendar year 2006 and financial 2010 was 22 percent, including disbursements to AFREA (since 2009), and 16 percent between CY2006 and FY 2009, without AFREA; provisional figures for the financial year suggest a further jump to 30 percent. These sudden increases present a number of challenges, such as maintaining effective internal communications, controlling rapidly increasing budgets, and ensuring that staff recruitment keeps pace with growth.

While ESMAP-CG-TAG communications went through a very difficult period during 2010, the position is now hugely improved. It remains to be seen whether management will take up some of the earlier TAG suggestions for improved information exchange, and what impact the implementation of the M&E framework will have on this dynamic going forward. TTL-ESMAP communications appear to be relatively strong, with approval rates in the 90 percent range for a range of three parameters, and one response (Communication of expectations and procedures) rating at 75 percent Satisfactory or Highly satisfactory. Communications through the regional coordinator as a primary contact appears to be the main reason for this relative lower rating.

Between the two business programs under this evaluation, budget allocation shifted from classification by thematic areas to program components, limiting direct comparison. However, there remains a wide divergence between the budget allocations in the 2008-13 Business Plan and the actual disbursements over the first three years of the plan, which was noted by TAG in 2010. The percentage spent on management and administration was at a very reasonable level of 10 percent in 2010.

While the total number of projects over the evaluation period doubled, according to annual reports, staffing growth went up by 33 percent, from 21 to 28, during 2006-10. However, this figure does not include collaboration with institutional partnerships and work completed through the World Bank Energy Anchor group. Overall, it would appear that until recently ESMAP staff were "stretched too thin," with (World Bank-encouraged) high turnover. However, if current plans come to fruition, this would represent an encouraging shift to a much more proactive management of staffing levels in anticipation of ESMAP's growth and evolution.

#### **Extent to which ESMAP has proactively managed its growth**

Between calendar year 2006 and financial year 2010, the annual disbursements of ESMAP doubled, from US\$10.25 million up to US\$20.6 million.<sup>142</sup> Over that 3.5-year period, this increase represents the equivalent of an annual compound growth rate of 22 percent. A large part of the recent increase has been due to the additional disbursements from 2009 onward to the AFREA program, but even without taking into account AFREA, the average annual increase in disbursements between CY2006 and FY2009 was about 16 percent. The provisional figures for FY2011 suggest that the rate of growth is accelerating further, with disbursements estimated to be \$26.8 million, a 30 percent increase over the previous year.<sup>143</sup>US

The current 2008-13 Business Plan was drawn up under a scenario where annual disbursements would average \$11 million. Even without the addition of AFREA, by the end of the first year of the new Business Plan, the program had already grown substantially beyond the size that the plan envisaged. With AFREA included, the program is now well over twice the size envisaged when the current Business Plan was drawn up. The current AFREA trust fund will close in 2013, but ESMAP is committed to creating a successor program (AFREA II) that will be integrated into the ESMAP MDTF. It is likely that AFREA II will be comparable in size to its predecessor, with current proposals for a program of US\$50-75 million over five years. However, a new trust fund has recently been launched in partnership with UNDP, under which Small Island Developing States will be supported in transitioning to low-carbon, climate-resilient development paths. It is expected that this will lead to about US\$7.5 million of ESMAP-managed activities over the next 18 months.<sup>144</sup> It therefore seems likely that the volume of activities managed by ESMAP will continue to grow in the near future.

As well as the huge increase in the flow of funds, the addition of AFREA has led to a significant increase in the number of countries that ESMAP management must deal with. As of 2011, AFREA was present in 13 countries, compared with 37 for ESMAP, although there is some overlap between these two sets of countries.<sup>145</sup> Given that ESMAP is currently active in only two AOSIS member countries, it seems likely that the new SIDS trust fund will add further to the number of countries where ESMAP has projects.

Growth rates this high require proactive and effective management, and present particular challenges, including:

- Maintaining effective internal communications and information sharing
- Keeping control over rapidly increasing budgets
- Ensuring that staff recruitment keeps pace with growth and anticipates future growth.

The following sections examine how effectively ESMAP's management structures have handled these challenges, and the extent to which they are equipped to cope with the greatly increased scale of the program moving forward.

### ***ESMAP–CG–TAG Communication***

Evidence from the available documentation suggests that, over the evaluation period, there has been recognition of the importance of an effective flow of information among ESMAP, the CG, and TAG. The issue has been regularly visited in TAG reports; for example, it was noted in the 2006, 2007, and 2008 TAG reports that, because the CG met only annually, it was difficult for them “...to work together to identify needs and develop common opinions,” and that “...TAG could contribute as a unifying factor by listening to donors, countries and Bank staff.”

Several TAG reports have included some recommendations on improving the flow of information between ESMAP and its donors, but the extent to which these were acted on was not always clear. The 2007 TAG report stated that “... more formal systems of communication have or are being set up between ESMAP and donors...so that there are some more opportunities for donors and ESMAP to exchange information.” These arose partly from the recommendations TAG made as a result of its consultations with donors during 2005-06. The main changes from the perspective of improved information exchange were:

- Circulation of the project summaries of regional block grant proposals to CG members, to solicit comments from the country offices of donors
- Efforts to ensure that publications are better tailored to meeting the needs of informing donors.

Another suggestion was to explore the possibility of staff secondments by donors to ESMAP, but this does not appear to have become a regular initiative. There appears to have been only one case of staff secondment by donors—a geothermal specialist seconded by Iceland.<sup>146</sup> Some improvements to the structure of the annual report were also made following TAG suggestions, including an annex in the 2006 annual report summarizing progress toward completing the Business Plan outputs. This summary information was absent from the annual reports of 2007-08 and 2009, but since this was a period of transition to the new Business Plan, such a summary would not have been particularly informative. In the 2010 annual report, this status summary returns, based around the outputs and indicators specified in the new M&E framework.

The 2008 TAG report observed that “substantial efforts” had been made by ESMAP to increase and improve the services and benefits it provides to donors, while the 2009 TAG report noted that the new results framework “...provides a clear picture of the role of the CG in defining the global thematic challenges...the roles of the CG and ESMAP in defining the comparative advantage of ESMAP...and the outcomes and mission that ESMAP is supposed to deliver.”

There appeared to have been a significant breakdown in the previously effective flow of information among ESMAP, TAG and the CG in 2010, which led to the ESMAP management being very critical of the TAG Report presented to the CG for that year, describing it as unbalanced and factually flawed<sup>147</sup>. As a result, the CG “...proposed that ESMAP management in the future be given the opportunity to react to any misleading facts and figures of the TAG report and a management response from ESMAP on the TAG report be distributed prior to the CG meeting.”<sup>148</sup>

In fact, in the revised version of the report, it was stated that “ESMAP agrees that there were no factual errors and hence there are no changes to any facts...”<sup>149</sup> However, the episode did suggest that there was no longer a clear, shared understanding of the role of TAG, so the introduction of new Terms of Reference for TAG in July 2010 was particularly timely. The new ToRs are more structured, with specific deliverables and a clearer statement of TAG’s role in facilitating the effective communication of information between ESMAP and the CG.<sup>150</sup>

The 2011 CG meeting discussed the issue of communication further, and established some guiding principles which, if adhered to, will ensure that the three-way flow of information among ESMAP, the CG, and TAG continues to strengthen. The meeting recommended that TAG be encouraged to contact the CG more frequently, particularly in the lead-up to TAG’s biannual visits to ESMAP. These more regular contacts will be facilitated by ESMAP, as will visits by TAG members to donor countries. ESMAP will also make more regular contact with TAG between the biannual visits, and will ensure that documentation for the CG meetings will be made available at least four weeks in advance.<sup>151</sup>

The period of rapid growth that ESMAP has recently undergone has coincided with the shift from the old thematically earmarked trust funds to the single multidonor programmatic trust fund. With less earmarking of funds that are at the same time increasing in volume, the effective flow of information between ESMAP and the donors becomes even more critical to ensuring that the objectives of donors are being met. The M&E framework currently being developed represents a positive development in this respect, as it is meant to provide the information needed for donors to “...assess the effectiveness of ESMAP’s programs and initiatives in achieving timely and sustainable outcome for clients,” allowing donors to assess the extent to which ESMAP activities are contributing to the achievement of their high-level objectives.

***ESMAP–TTL Communication***

As ESMAP grows, it will become increasingly important to ensure that it is able to communicate effectively with TTLs, to ensure that a shared understanding exists of:

- ESMAP’s objectives and its strategy for achieving those objectives
- The respective roles and expectations of TTLs and core ESMAP staff.

A short survey of TTLs was conducted as part of this evaluation, which included questions that aimed to determine the effectiveness of this communication. Respondents were asked to rate ESMAP in terms of its fulfillment of four organizational functions relating to communication:<sup>152</sup>

- Question 1. Making ESMAP’s themes and strategic priorities clear
- Question 2. Communication of expectations and procedures
- Question 3. Receptiveness to queries
- Question 4. Making relevant information available

The number of definite responses to these questions (excluding Not sure or Not applicable responses) ranged from 69 to 73. The overall level of satisfaction was very high, as illustrated in table 15 and figure 26 below. For three of the questions, the fractions of respondents answering Satisfactory or Highly satisfactory ranged from 90 to 92 percent.

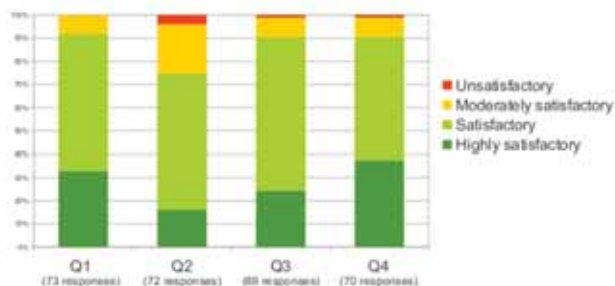
**Table 15 - TTL Responses to Questions Relating to ESMAP’s Internal Communication**

Number of responses	Highly satisfactory	Satisfactory	Moderately satisfactory	Unsatisfactory	Unsure or n/a
Q1 Making ESMAP’s themes and strategic priorities clear	24	43	6	0	0
Q2 Communication of expectations and procedures	12	42	15	3	1

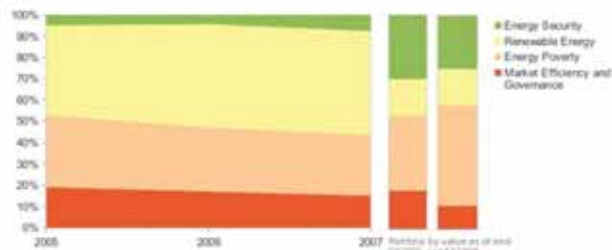
Q3 Receptiveness to queries	17	45	6	1	4
Q4 Making relevant information available	26	37	6	1	3

For Question 2, the response was less favorable, with only 75 percent answering Satisfactory or Highly satisfactory, although this by no means suggests that there is a significant problem to address. Specific comments in response to this question indicated that, to the extent that there was dissatisfaction, this was because communication of expectations and procedures was not sufficiently proactive and clear.<sup>153</sup> A number of the general comments made by respondents also indicated that clearer, more consistent and direct (rather than through the Regional Coordinator) guidance and information would be appreciated. However, it is important to emphasize that the overall level of satisfaction was overwhelmingly positive.

**Figure 26 - Level of TTL Satisfaction with ESMAP Internal Communications**



**Figure 27 - Budget Allocation by Thematic Area (2005-07) and Portfolio by Value (end-CY2006 and FY2008)**



The results of this part of the TTL survey suggest that there are currently very few problems with the flow of information between ESMAP and the TTLs. Moving forward, the situation is likely to improve still further with the recent distribution to ESMAP Staff and TTLs of an Operational Manual, as well as the introduction of the M&E framework. The Operational Manual presents a comprehensive set of procedures and guidelines to be followed in managing ESMAP activities, including what needs to be communicated (and when) between ESMAP and TTLs. The manual also clearly spells out the tasks and responsibilities of TTLs, regional ESMAP coordinators, reviewers, and ESMAP staff with regard to the M&E framework. The Operational Manual has not been in use sufficiently long to judge its success, but it is a clear indication of ESMAP proactively putting in place mechanisms to streamline and formalize the flow of information relating to project implementation and management.<sup>154</sup>

**Extent to which ESMAP has effectively managed its growth**

***Budget Management***

During a period of change and growth such as ESMAP has been undergoing, an important challenge is to ensure that rapidly increasing budgets are used efficiently and in a way that continues to reflect the intentions of the business plan and, in turn, the wishes of the donors. However, throughout the evaluation period, there appears to have been significant divergence between the thematic distribution of disbursements and the budget allocations outlined in the Business Plans.

The 2005-07 Business Plan described a budget allocation by thematic program where renewable energy would receive the greatest allocation (averaging 45 percent over the Business Plan period), with energy security receiving the smallest allocation of 6 percent on average. However, by the end of FY2008, the renewable energy theme accounted for only 17 percent of the portfolio by value, while the energy security theme accounted for 25 percent. The budget allocations as per the Business Plan and the breakdown by theme of the portfolio as of the end of FY2008 are shown in figure 27 above.

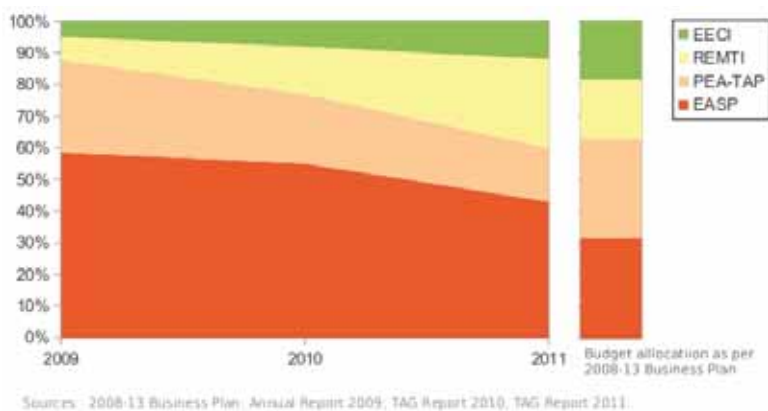
The difference between the thematic mix outlined in the Business Plan and the 2006 and 2008 portfolios was most marked in the themes of renewable energy and energy security. However, as observed in the 2006 annual report, this thematic classification of projects is not particularly satisfactory, as most projects address more than one theme. Hence projects classified under energy security may have a significant renewable energy content, while out of the vast majority of projects that involve some element of energy poverty, many do not have this as their main theme. It is probably therefore inappropriate to attach much significance to the divergence between the 2005-07 Business Plan and the portfolio that emerged at the end of that Business Plan period.

In preparation for the adoption of the current 2008-13 Business Plan, ESMAP moved proactively by undertaking a comprehensive clean-up of its existing portfolio. As a result, the number of active projects was reduced almost by half between January 2007 and June 2008, and about US\$2.1 million was taken back. As observed in the 2007-08 annual report, the cleaned portfolio constituted “...a new starting point that will serve as the baseline for the new business plan and will enable ESMAP to track future trends more effectively.”

A significant change in the presentation of financial information in the new 2008-13 Business Plan was that the old thematic classification of activities was no longer used. Instead, activities were classified according to the four program areas of EASP, PEA-TAP, REMTI, and EECI. This classification avoids the difficulty experienced with the previous thematic categorization of deciding how to allocate projects that addressed multiple themes. However, there remains a wide divergence between the budget allocations in the Business Plan and the actual disbursements over the first three years of the plan.

Figure 28 below summarizes these data in graphic form. The percentage breakdowns are calculated on the basis of the program areas only, excluding program administration. The breakdown shown in Chart 5.3 for the Business Plan assumes an equal allocation between REMTI and EECI, which were grouped together in the plan. The disbursements shown for 2010 take into account the corrected figures provided by ESMAP management for expenditure on PEA-TAP.

**Figure 28 - Budget Allocation by Program Area (FY2009-11) and According to 2008-13 Business Plan**



The increased allocation to REMTI / EECI in 2011 means that, averaged over the Business Plan period to date, the expenditure under these programs is converging rapidly with the planned allocation. Although the disbursements to PEA-TAP in 2009 were at approximately the same level as in the Business Plan, allocations to this program appear to have dwindled significantly during the following two years. This is presumably linked with the fact that ESMAP lacked an Energy Poverty Thematic Coordinator for an extended period during 2009-10. Meanwhile, although the allocation to EASP is considerably reduced in 2011, the very high disbursements in 2009-10 mean that this program has received considerably more support to date than the amount envisaged in the Business Plan.

The 2010 TAG report observed that disbursements were deviating widely from the Business Plan figures, concluding that it was “...difficult to see how the original Business Plan projections would be realized.” The ESMAP



management team response to this TAG report was critical of TAG for “...plac[ing] heavy emphasis on inputs, such as allocation of budgets, rather than the quality of outputs and whether these outputs will help ESMAP achieve its objectives.” But as observed elsewhere in the 2010 TAG report, “...the nature of allocation of efforts is a first step to determine whether the expected and resultant outputs will help ESMAP achieve its objectives.”

This therefore raises the question of whether the relative volumes of funds allocated to the different program areas have any bearing on the ability of ESMAP to achieve its objectives. If it does, then the wide difference between actual disbursements and Business Plan projections should be addressed. If it does not, then this begs the question of what is the purpose of analyzing and reporting disbursements according to program area. Section 2, on effectiveness, for a further discussion on results against intended objectives.

### ***Administrative Costs***

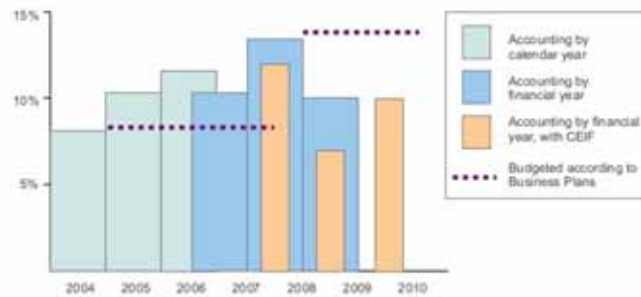
The fraction of total program expenditure that is accounted for by Program Management and Administration rose steadily between 2004 and 2008, reaching a peak of around 13 percent, but now appears to have fallen back to a stable level of around 10 percent. Data for 2004 to 2010 are presented in table 16 and figure 29 below. The figures reported in the annual reports for 2007-08 and 2009 did not include disbursements under the Clean Energy Investment Framework trust fund (which includes AFREA), making the total program expenditure appear misleadingly low. The reported fraction spent on administrative costs therefore appeared to be somewhat higher than its true figure. This was corrected in the 2010 annual report, where revised figures for 2008 and 2009 were also presented. These revised figures are shown in figure 29 as the orange bars.

According to the 2006 annual report, the steady increase in program management costs was due to an increase in the staff strength at ESMAP. In 2009, there was a sharp fall in the fraction of total program expenditure accounted for by program management and administration costs. The 2009 annual report explained that this was because there were several positions vacant during that period.

The 2008-13 Business Plan projected management and administration costs of US\$1.5 million annually, out of a total annual budget of US\$11 million, equivalent to 13.6 percent. The actual expenditure on management administration in 2010 was US\$2.04 million, substantially higher than the figure budgeted in the Business Plan; the total program expenditure was almost twice the projected level. As a result, the percentage spent on management and administration remains at a very reasonable level of 10 percent.

**Table 16 - Program Management and Administration Costs Relative to Total Funds Disbursed**

	<b>Total funds disbursed (US\$ millions)</b>	<b>Program management and administration (US\$ millions)</b>	<b>Percentage</b>
2004 (CY)	8.96	0.72	8.0%
2005 (CY)	8.60	0.89	10.3%
2006 (CY)	10.25	1.19	11.6%
2007	10.68	1.10	10.3%
2008	12.43 (13.86 including CEIF)	1.67	13.4% (12% including CEIF)
2009	14.93 (19.95 including CEIF)	1.50	10.0% (7% including CEIF)
2010	20.49 (including CEIF)	2.04	10% (including CEIF)

**Figure 29 - Program Management and Administration Costs as a Fraction of Total Expenditure**

### *Staffing*

Given the extent to which ESMAP has grown over the last five years, the staffing levels have changed relatively little. While the volume of ESMAP activity measured in terms of funds disbursed has doubled since the end of calendar year 2006, the number of staff listed in the annual reports (which includes both technical and nontechnical staff) has increased by just 33 percent, from 21 to 28.

However, a simple head count does not provide a complete picture. The description of staffing levels in the 2008 TAG report emphasized the extent to which ESMAP staff were shared with other cost centers, so the actual staffing level was lower than it appeared. By the 2009 TAG report, which elaborated on the reorganizing of staff structures outlined in the new 2008-13 Business Plan, the emphasis had shifted to the mechanisms through which ESMAP aimed to leverage external expertise. For example, the Lead Energy Economist will be supported by a “...team of World Bank specialists and consultants with expertise in cross-cutting, energy assessment and sector management issues (including gender, environment, and sector governance).” Although the details are not spelled out, the description of this team as a “SWAT” team suggests that it will be assembled on an ad hoc basis with a composition that will vary according to the immediate need.

The Lead Energy Economist will also be responsible for partnerships such as that with the Bank’s Public Private Infrastructure Advisory Facility (PPIAF). Similarly, the two Thematic Coordinators will assemble “virtual panels” of outside experts to assist with specific area of work as required. The Energy Poverty Thematic Coordinator will develop partnerships with the Bank’s Development Economics Department, while the Thematic Coordinator for Energy and Climate Change will build links with the World Bank Climate Partnership Facility.

ESMAP also works in close collaboration with the World Bank Energy Anchor Group, which has a staff of about 20. ESMAP supports a significant portion of the analytical work that the Anchor undertakes. For its own work, ESMAP has access to Anchor staff who can provide technical expertise in areas where ESMAP is understaffed, including in expertise centers within the Bank on energy efficiency and on renewables that can provide clusters of expertise as required on these subject areas.

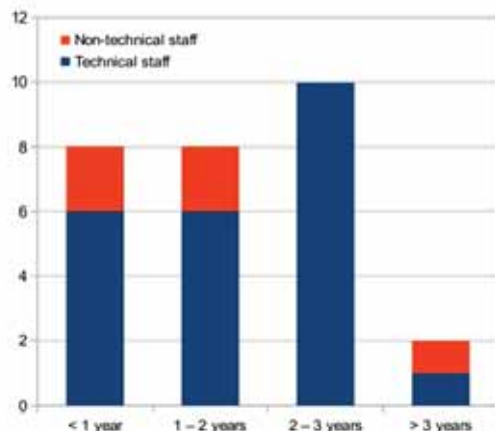
Through the use of partnerships with Bank experts, the potential level of effort available to ESMAP should therefore have increased at a faster rate than a simple staff count would suggest. In addition, because the staff structure is more flexible, with special teams being assembled as needed for specific tasks, the ability of ESMAP to respond to new challenges and long-term shifts in the demand for its services is enhanced. As observed in the 2011 TAG report, the new ESMAP manager wishes to avoid a “silo” mentality, instead promoting more interaction between teams. In particular, he wishes to “...put more emphasis on objectives, in order to establish teams within ESMAP that draw on personnel with different skills to achieve these objectives.”

Although the current staffing structure and use of partnerships appear to have the flexibility and responsiveness needed to meet ESMAP’s objectives, the actual levels of staffing nevertheless appear to have struggled to keep pace with requirements over recent years. The position of Thematic Coordinator for Energy and Poverty remained unfilled for a prolonged period, and it was the view of TAG in 2010 that the area of renewable energy remained

understaffed. In their opinion, ESMAP at that time remained “stretched too thin” in certain areas and felt that there was a general consensus that an additional three to four individuals were required to reach a “critical mass.” Feedback from ESMAP on an earlier draft of this report indicates that all current positions are now filled. The FY2012-13 Work Program and Budget outlines plans to address perceived staffing gaps moving forward, by replicating the successful EECI model to a new Clean Energy Team and a strengthened Energy Access Team. If these plans are realized, this will represent a clear shift to a much more proactive management of staffing levels, relative to the reactive and sometimes unresponsive approach that has been seen in the past.

Another issue raised in the 2010 TAG report was that of staff turnover, observing that “...Bank and trust fund rules appear to encourage high staff turnover of both Bank and outside staff in ESMAP.” Examination of ESMAP staff lists provided in annual reports confirms that, of the staff in place at the end of FY2010, the majority had been in place for less than two years. This finding was echoed through the interviews with ESMAP. This information is presented in graphic form in figure 30 below. For a further discussion on staffing relative to organizational structure, see the previous section 3.4, Institutional Arrangements and Management.

**Figure 30 - Length of Tenure of ESMAP Staff as of end-FY2010**



**3.5.2. Achieving and sustaining an optimum resource level**

*What is the optimum resource level for ESMAP, and what needs to be done to achieve and sustain this level?*

Because demand for ESMAP products and services has kept up with or exceeded its rate of growth, it would appear that the program has not yet reached its optimal resource level. Furthermore, the withdrawal of unspent funds allocated to regional units prior to the adoption of the 2008-13 Business Plan and the lack of full utilization of block grants do not appear to be valid indications that the regions have reached their capacity to absorb funds. As demand from client countries remains high, ESMAP will need to consider carefully how to establish a steady and diversified resource base that is not over-reliant on a limited number of large donors.

**Extent to which ESMAP has an optimum resource level**

In order to determine whether ESMAP can achieve and sustain an optimum resource level, it is first necessary to define what that optimum level is. Given that the demand for ESMAP’s services appears to have easily kept pace with its growth, this would suggest that the optimum level has not yet been reached. It can be argued that, as long as large parts of the world lack access to modern energy services and many countries’ energy sectors fail to meet the demands of their populations, and then there remains scope for ESMAP to act as a catalyst and grow further.

Clearly it is important for this growth to be manageable, and for ESMAP to continue to ensure that it has clearly defined objectives, the achievement of which is furthered by the activities it undertakes. In this context, the optimum

resource level is the maximum level that is consistent with ESMAP's ability to grow in a sustainable way, and with the regions' ability to use funds in a way that achieves the desired outcomes and impacts. One indication, therefore, that the optimum level of resourcing has been reached would be an inability of the regions to use their full allocation of regional block grants. In the 2009 TAG report, it was observed that the ECA and EAP Regions were not allocated the full block grant that had been approved, because some of their project proposals did not reach PCN stage. One possible explanation for this would be that the demand for ESMAP services in these regions is declining and that this is manifesting itself in an inability to identify sufficient activities in those regions that contribute toward achieving ESMAP's objectives. However, another explanation suggested by TAG was simply that the regions had not adapted to the new timeframes and processes for applying for block grants. This is consistent with the findings from the interviews with both Bank staff and ESMAP management that highlighted that demand for ESMAP support far exceed offer and that prioritization is always required by the regions in view of the limited funds.

The 2009 TAG report also discussed the extensive "claw back" of unspent funds that had resulted from the portfolio clean-up prior to the adoption of the 2008-13 Business Plan. It was suggested that one factor behind this was that the current system "...does not fit completely with [the regions' ] need for flexibility in having longer consultant contracts, time to establish ownership with governments, difficulties of working in conflict areas etc." One solution would be to introduce some multiyear allocations of funds where this could be justified by the types of factors described.<sup>155</sup> Another solution suggested in the TAG report is for ESMAP to "...work closely with the regions to find ways of ensuring deliverables within the one-year ESMAP block grant framework." In the context of the new M&E framework, this would imply the need for the careful design of indicators that are a realistic reflection of what can be achieved in the first year of an activity while still making clear the link with the high-level objectives. This is very much in line with views expressed by some CG members in interviews, who highlighted the need to make sure that ESMAP was not simply used as a source of regular technical assistance by the Bank, but rather as a mechanism to leverage change and innovation in the Bank portfolio and its strategy for the energy sector.

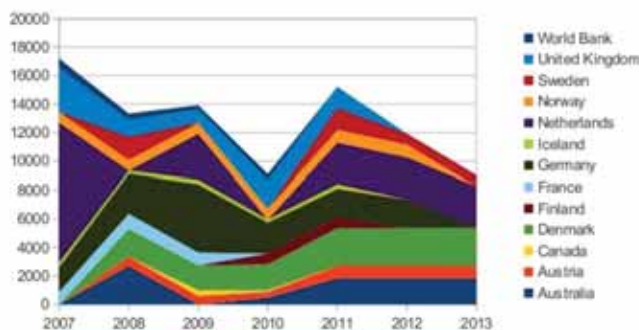
Hence neither the nonutilization of the full block grant allocation by ECA and EAP, nor the extent of retraction of unspent funds that took place during the portfolio clean-up, is necessarily an indication that the regions have reached their capacity to absorb funds. In fact, interviews with Bank staff conducted as part of this evaluation overwhelmingly pointed out to the need for more resources of the type provided by ESMAP. However, it is clear that the M&E framework will have an important role to play in identifying when that capacity is being stretched, which in turn would imply that ESMAP had reached its optimum size. Given that there is no evidence to suggest that this point has yet been reached, the maintenance of an optimum resource level entails achieving steady and manageable growth in the level of donor support, while also leveraging resources from other sources in a more catalytic manner.

### **Extent to which ESMAP can maintain the optimum resource level**

Figure 31 shows the history of donor contributions to ESMAP (not including the CEIF trust fund under which AFREA operates) from 2007. Data for 2006 are not included as this was available only for the calendar year. For 2011, the data presented in figure 31 are either for actual receipts where these had already been made, or for pledges based on information presented to the 2011 CG meeting.<sup>156</sup> For 2012 and 2013, the data presented are for pledges, with the assumption that the receipts from each donor will be evenly spread through the duration of the pledge.

The sharp dip in receipts for 2010 was because the existing trust funds that supported the previous Business Plan closed during that year. Figure 31 shows that, based on pledges already made at the time the presentation on the financial status of the trust fund was made, the receipts for FY2012 would be about US\$12 million. Additional pledges from Finland and the United Kingdom were expected, with the UK looking to increase its contribution to ESMAP for the four-year period from FY2012 to FY2015. However, set against the FY2010 work program and budget of US\$20.5 million, endorsed by the CG, there is a clear shortfall.

**Figure 31 - Receipts/Pledges from Donors FY2007-13**

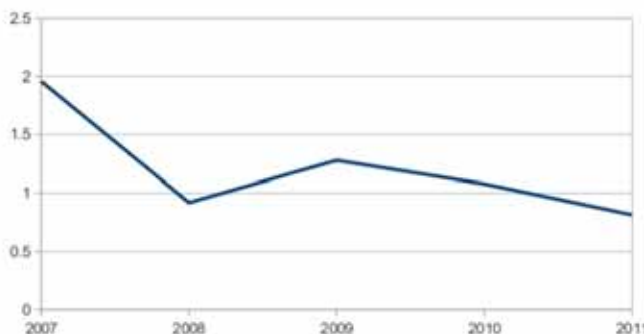


In its 2011 report, TAG “noted with concern” that funding sources for the mid-term were under stress, and urged ESMAP to approach potential new emerging-economy donors, mentioning the examples of India, China, and Saudi Arabia. ESMAP management responded by agreeing that they would indeed pursue potential new donors through a variety of means. A presentation made in October 2011 on ESMAP’s business plan for FY2012-13 indicated that discussions were already underway with India and Brazil as potential donors.

In the current global economic climate, it is not surprising that challenges are being experienced in securing sufficient donor funds to support the increasing demand for ESMAP’s work. However, there is no evidence to suggest that ESMAP could do any more than it is currently doing to bring in additional funds.

In addition to considering the volume of donor funds received by ESMAP, an important factor for program sustainability is the diversity of sources of those funds. Over-reliance on a small number of very large donors may lead to difficulties in drawing up long-term plans, as this would tend to increase uncertainty about future funding levels. Figure 32 below shows the “coefficient of variation” calculated over the set of donors that have supported ESMAP since FY2007.<sup>157</sup> This is a very crude indicator of the extent to which ESMAP is “putting all its eggs in one basket,” with a higher figure denoting greater reliance on fewer large donors. The figure indicates that ESMAP has been very successful in diversifying its funding sources, achieving a fairly even spread over 10 different donors in FY2011 (including the World Bank). This compares with FY2007, when only seven donors contributed, and the Netherlands accounted for well over half of all receipts.

**Figure 32 - Coefficient of Variation of ESMAP Donor Receipts**



**3.5.3. Effectiveness at building internal and external partnerships**

*How effective is ESMAP in building and developing internal and external partnerships to achieve its mission objectives?*

Since 2009, when ESMAP began to make a concerted effort to develop internal partnerships with the World Bank, for short- and long-term purposes, the number and extent to which ESMAP mission objectives are tied to World

Bank operations has increased significantly. Approximately half of the field visit country case study activities sampled have a direct link to the World Bank. The internal partnerships has provided ESMAP with a broader and deeper base of expertise for specific functions such as outreach and specialized subsectors such as SMEs. External partnerships have also increased significantly in number and extent of overlap with ESMAP work programs, especially institutional partnerships such as with CDKN and UNEP-Risoe. Long-term local (regional or in-country) partnerships—beyond consultations and stakeholder workshops—are still few, with no apparent intent to grow. While it is yet unclear which partnerships will last as designed, and whether the additional demands of coordination and collaboration will put a strain on ESMAP’s relatively small core size, these new working relationships appear so far to be mutually beneficial.

### **Extent to which ESMAP is effective in developing internal partnerships to achieve objectives**

Throughout ESMAP’s existence, its success has depended on its ability to work in partnership with others, both inside and outside the Bank. The importance of partnership in ESMAP’s work continues to be emphasized with, for example, the Foreword to the 2010 annual report describing a focus on “building longer-term strategic partnerships with countries and regions to achieve “win-win-win” energy solutions.” One of the main advantages of the switch to a five-year business planning cycle was cited in the 2009 annual report as “enabling ESMAP management to cultivate more meaningful, longer-term strategic partnerships.”

This section analyzes the available evidence to determine the extent to which ESMAP has been successful in building the partnerships to further the successful achievement of its objectives. The types of partnership that ESMAP might benefit from can be categorized as: (i) long-term, high-level strategic partnerships, and (ii) shorter-term partnerships that take the form of relationships of mutual dependence or benefit at the operational level. Both internal (to the World Bank) and external partnerships are examined in the following sections.

#### ***Internal World Bank partnerships***

Several of the TTLs that were interviewed as part of this evaluation expressed the view that one of ESMAP’s “unique selling points” is that it has very close ties with the World Bank without actually being part of it. Maintaining this position requires a careful balance to be struck; if too close a relationship is forged, the distinction between ESMAP and the Bank will be lost. The 2007 TAG report was concerned that: “...the think-tank function of ESMAP, to produce cutting edge, intellectually coherent work that is not necessarily ‘aligned’ with the Bank but offers a different, sometimes even critical voice, needs always to be guarded and preserved.” This was also emphasized by some CG members through the interviews conducted as part of this evaluation as a particular function requiring strengthened support. One of the TTLs interviewed described how the fact that ESMAP is an independently managed trust fund gave some comfort to the government client, as they did not feel that they were having the Bank view foisted on them.

#### ***Core ESMAP Partnerships***

ESMAP appears to have been active and reasonably successful in building internal partnerships for the furtherance of its objectives, as the following examples illustrate.

- Since 2009, ESMAP has partnered with the World Bank Institute in maximizing the global reach of the knowledge, experiences, and lessons learned arising out of its work. As well as delivering an e-learning course on public procurement, and a number of other training activities,<sup>158</sup> this partnership (along with the Bank’s “Climate Change for Development Professionals” program) was the basis of a global outreach effort to disseminate the results of the six country studies conducted under the Low-Carbon Growth program.<sup>159</sup>
- Through ESMAP’s Energy Efficient Cities Initiative, a partnership has been forged with the Bank’s Urban unit and, through that, with the Cities Alliance (whose management is located at the Bank). This has resulted in projects implemented by Urban including energy efficiency components, and ESMAP’s co-involvement in US\$ 0.5 billion in urban EE-lending. The partnership with Cities Alliance has led to two direct TA efforts on EE efforts in Quezon City (buildings) and Zarqa (urban transport).<sup>160</sup>

- As well as the collaboration with the Bank’s Urban unit under EECI, ESMAP has also established contacts with the Water Anchor and the Water Sanitation Program (WSP) to collaborate on a pioneering study of energy efficiency opportunities in water and sanitation utilities.<sup>161</sup>
- Since 2009, ESMAP has been working in close partnership with the World Bank / IFC in the Lighting Africa program.
- ESMAP has already engaged with the Global Partnership for Output-Based Aid (GPOBA) and the Public Private Infrastructure Advisory Facility in previous activities. From FY2012, these three programs propose to pool their resources together in joint ESMAP calls for proposals, with each program contributing US\$1 million. In this way, additional funding can be leveraged for public-private energy access projects.<sup>162</sup>
- According to the 2009 TAG Report, ESMAP planned to continue its work on SMEs by partnering with the World Bank-administered InfoDev program. The intention was “to leverage InfoDev’s global small business incubation network in support of small- and medium- sized enterprises that aspire to deliver modern energy services using renewable energy systems,” with ESMAP providing expertise on commercially viable deployment of renewable energy technologies. However, apart from the conducting of a joint InfoDev/ESMAP SME Assessment, reported in the 2010 annual report, there is no evidence to suggest that this partnership has yet yielded any major results.

### ***Project-Related Partnerships at the National and Regional Levels***

ESMAP and the Bank can often be of benefit to each other in achieving their respective project outcomes in national or regional projects. The most obvious example of this is where an ESMAP activity is designed to produce an output that is of direct and immediate use to an entity that is involved in, or has some influence over, a Bank project. However, the mutual benefits may also be less direct in situations, for example, where the outputs from an ESMAP activity result in a policy or regulatory change that facilitates the subsequent development of projects that are supported by the Bank.

In the six countries visited during this evaluation, a total of 25 country-specific ESMAP projects were examined. Two of these were recipient-executed AFREA projects, where no link with Bank activities was intended or expected. Of the remaining 23, there was an almost even split between those where there was a clear and immediate link with Bank operations and those where there was no direct link.

A direct link was observed in:

- All seven projects in Peru, where activities have been closely linked with the World Bank support to the government’s rural electrification program under the FONER initiative. ESMAP activities have provided information and guidance vital to the design and implementation of FONER in areas such as guidelines for rural electrification, hydroelectricity (potential, opportunities, threats), role of SMEs in electricity services delivery and productive uses), and natural gas prices and its role in electricity generation.
- Each of the two projects in Moldova, which provided guidance and recommendations to bring about financial stabilization and institutional strengthening in the district heating sector, in which the World Bank is closely involved.
- Three of the six projects in India, two of which tied in very closely with World Bank investments in rehabilitation of coal-fired power plant, and the third of which supported the institutional strengthening and restructuring of a state power transmission company with whom the World Bank is actively working.

In the remaining projects, there was no direct link to World Bank activities, although in most cases, the activities would help to create a more favorable environment for future World Bank projects.

These projects were:

- The single project in Tanzania that was not a recipient-executed AFREA activity, which helped to create a favorable regulatory and institutional environment for the implementation of small-scale renewable power generation project
- The single project in the Philippines to provide policy support to the government in addressing the barriers to renewable energy scale-up and implementing the Renewable Energy Act

- All six projects in Morocco, which covered: regulatory reform to promote grid-connected renewables, energy efficiency in the transport sector, reform of LPG pricing, liberalization of the liquid fuels market, capacity building for the new Energy Agency, and low-carbon energy supply strategies
- Three of the six projects in India, which were a Low-Carbon Growth study, a study to explore the options for exploiting India's vast untapped renewable energy potential and technical assistance to the Ministry for New and Renewable Energy on building the capacity for concentrated solar power.

Based on a sampling of ESMAP's other country-specific projects, there seemed to be approximately the same 50:50 split between activities that have a fairly direct link to World Bank activities and those that do not. This balance would seem to be reasonable, given that one of the important ways for ESMAP to achieve its objectives is to influence the World Bank's lending and thinking, but that this must be balanced against a need to maintain its position as a source and broker of high-quality knowledge and advice.

### ***Extent to Which ESMAP Is Effective in Developing External Partnerships to Achieve Objectives***

As was the case for internal partnerships, ESMAP's external partnerships cover a full spectrum from high-level strategic alliances down to the fostering of close working relationships with external bodies at the project level. The following sections examine more closely the extent to which ESMAP has built and worked through these types of external partnership.

#### ***Core ESMAP Partnerships***

The 2005-07 Business Plan set out a plan to strengthen ESMAP's partnerships with other global programs, and the 2008-13 Business Plan stated an intention to "explore avenues to establish full-fledged strategic partnerships with a broad range of external entities." Examples of the types of entities envisaged included the World Energy Council (WEC), the EU Energy Initiative's Partnership Dialogue Facility (EUEI-PDF), the Global Forum for Sustainable Energy (GFSE), and the International Renewable Energy Agency (IRENA).

The 2010 TAG report observed that ESMAP had stated an intention to "balance the internal partnerships with partnerships external to the Bank," mentioning examples of where attempts had been made. According to the TAG, such partnerships provide "...an ideal way of both enriching ESMAP staff with new ideas and concepts from outside the Bank, providing a balance to Bank centric perspectives, and also important in providing channels for dissemination of ESMAP knowledge products and as partners to build client capacity." However, the TAG also went on to observe that some of the partnerships "are not delivering the results hoped for," and suggested annual reporting on the progress of each partnership.<sup>163</sup>

The 2011 TAG report painted a somewhat different picture, observing that "ESMAP has established close and lasting collaboration with a number of external institutions. The following examples were provided:

- Collaboration with the Climate Development Knowledge Network,<sup>164</sup> which would involve CDKN and ESMAP parallel-financing activities submitted by the Bank's regions for low-carbon and climate-resilient strategies in the energy sector. ESMAP is also participating in a CDKN activity under the CLEAN partnership to share lessons learned from low-carbon growth country studies.
- A number of collaboration activities with UNEP-Risoe
- Participation in the United Nations Foundation's Global Alliance for Clean Cookstoves, a public-private initiative seeking to disseminate 100 million improved cooking stoves by 2020
- Participation in UN working groups in a number of different areas including defining standards for improved cookstoves, M&E, and information dissemination
- Participation on the advisory committee of the Clean Energy Network, for the evaluation of papers as a means of incorporating ESMAP's perspectives
- Cooperation with the activities of the DOE/USAID's Low Emissions Development Strategy (LEDS) project to share knowledge from ESMAP's activities with the LEDS project in five countries that include Bangladesh and Vietnam.

ESMAP has also partnered with (and co-funded) the Global Energy Assessment, "a major, multi-year initiative to define a new global energy agenda for a rapidly changing world." The initiative is coordinated by The Institute for



Applied Systems Analysis (IIASA), with ESMAP’s involvement being in the field of energy poverty. In the 2009 TAG report, it was observed that “ESMAP will need to contribute more actively beyond the financial resources, to better engage with the issues through its own knowledge and including the Bank’s own experts, to both challenge and to brainstorm on the global energy agenda.” Indications from the activities and outputs listed in the 2009 annual report suggest that this greater engagement was achieved.

These examples indicate that the ability of ESMAP to form and work within partnerships with external bodies is not in doubt. It is questionable whether all the partnerships mentioned in the 2011 TAG report meet their description of “close and lasting collaborations,” but they all appear to have achieved, or be achieving, their purpose.

### ***Mutually Beneficial Relationships at Project Level***

Of particular interest here are examples of activities where ESMAP and an external body were mutually dependent to some degree for the achievement of their respective project objectives. The available evidence suggests that this kind of working relationship with outside entities appears to be rare. In the six countries visited during the evaluation, there are no clear examples at the project level where ESMAP has worked in a close and mutually dependent relationship with an external body (other than the client of course or a consultant) to achieve the project objectives.

Evidence from a sample of the rest of ESMAP’s portfolio and from other documentation suggests that this type of local partnership with external agents is not widespread. For example, the GAPFund<sup>165</sup> operated in partnership with GVEP between 2005 and 2007 was, according to the 2007-08 annual report, the first time that ESMAP had “worked with nongovernmental organizations (NGOs) and the private sector to provide small grants for energy innovations with impact on poor.” However, there is no evidence to suggest that this led to the formation of partnerships with ESMAP at the local level. More recently, the Energy Efficient Cities Initiative appears to have good potential for the building of strong local partnerships, through the input it provides into the design of energy efficiency components for World Bank urban development projects.

Although very few examples of this type of interdependent partnership at the project level could be found, it is important to remember that every client that ESMAP works with at the country level constitutes an external partnership. In that sense, every country-specific ESMAP activity is effectively a partnership. The closeness of the working relationship with the client is of course often crucial to the success of the activity. One notable example was a project in India to bring about organizational transformation in a state power transmission company. The outstanding success of the activity appears to have been largely because the working relationship between ESMAP and the client was highly collaborative.<sup>166</sup>

Also in India, ESMAP developed a good working relationship with a wide range of external stakeholders in the early stages of the Low-Carbon Growth Study. More than 300 people from 12 government departments, 19 financial institutions, 30 corporations, and 35 NGOs (including academia) were consulted in an attempt to build a consensual foundation for the study.<sup>167</sup>

Working with local partners was the subject of one set of questions in the survey of TTLs that was conducted as part of this evaluation. Respondents were asked to assess the extent to which they worked through local partners in the following aspects of their activities:

- Development/Design
- Oversight
- Management
- Conducting research
- Other aspects

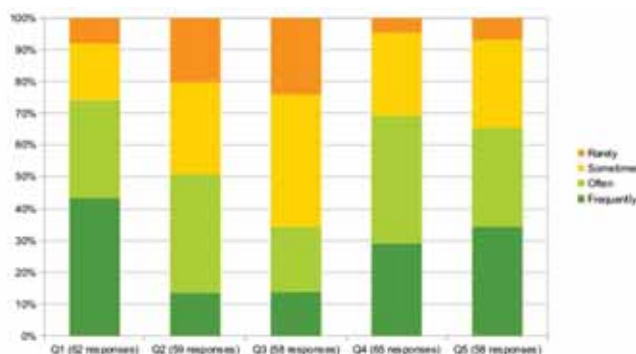
The results are presented in table 17 and figure 33 below. The most significant area where local partners are used in is the design/development of projects, where almost three-quarters of those who made a definite response indicated

that they used local partners often or frequently. Only about one-third of TTLs reported using local partners frequently or often for managing projects.

**Table 17 - TTL Responses to Questions Relating to Working through Local Partners**

To what extent do you rely on/work through local partners for the following inputs to ESMAP activities/products?					
Number of responses	Frequently	Often	Sometimes	Rarely	n/a
Q1 Development/design of projects	27	19	11	5	5
Q2 Oversight of activities	8	22	17	12	8
Q3 Management of activities/projects	8	12	24	14	8
Q4 Conducting research	19	26	17	3	2
Q5 Other forms of input	20	18	16	4	8

**Figure 33 - Extent to Which TTLs Work through Local Partners**



**3.5.4. Development impact**

***What is the most identifiable development impact of ESMAP, and how is it perceived by other constituents, organizations and partners beyond the client base?***

ESMAP’s overarching stated goal (Business Plan 2008-13) is to reduce poverty and promote environmentally sustainable development by enhancing client capacity on the design and execution of energy policies and programs. However, the desk review, interviews, and mission visits have indicated that the energy poverty objective is least likely to be directly impacted by ESMAP activities, and suggests instead that increased energy security is the most significant development impact of ESMAP’s activities. This is in large part a reflection of the fact that energy poverty impacts tend to be longer-term and less direct, while energy security is a very broad issue upon which practically all ESMAP activities can be expected to have at least some impact. Client country and stakeholder perceptions of ESMAP’s development impacts vary widely by country and region, in recognition, character, and degree of effectiveness. In countries like Tanzania and India, for example, development impacts are strongly perceived but broadly attributable to ESMAP, whereas in Morocco and Moldova, for example, more technical work on policy and regulatory input has a limited client base with a very clear link from outcomes to ESMAP studies and products, but because of their upstream nature, have little to no perceptible wider development impact.

**Extent to which ESMAP has an identifiable development impact**

***Development Impact According to ESMAP Intervention Logic***

According to the Results Framework outlined in the 2008-13 Business Plan, the strategic objectives of ESMAP are:

- Reducing energy sector vulnerability to global crises (energy security)
- Closing the energy access gap for the poor (energy poverty)

- Mitigating climate change impacts of energy production, supply and end use (clean energy).

However, the available project documentation does not, in most cases, contain a clear and succinct statement regarding which of these objectives the project is intended to address.

The Activity Completion Summary document that was available for most completed projects contains a table titled “Development Objectives/Results,” where the intended development objectives are indicated along with the extent to which they have been achieved. However, the development objectives listed do not correspond to the Strategic Business Plan Objectives, and furthermore, the list of development objectives used in the ACS appears to have changed around 2010,<sup>168</sup> with no obvious correspondence between the two sets of objectives. The Rating column for indicating the degree of achievement of the stated objectives is blank in many of the ACSs for completed projects. The ACSs are therefore not suitable sources for evidence regarding the expected and actual impacts of activities according to the ESMAP intervention logic.

This assessment of impacts is therefore based on the professional judgment of Evaluation Team members, after reading the available documentation for each project in the desk review sample. The subjectivity of this judgment varies; in some cases, project documents contained definite statements regarding intended development objectives, or actual impacts achieved, while in other cases, this must be inferred from the available information.

From the sample of 50 projects that were the subject of the desk review, almost half (24 activities) were judged by the Evaluation Team to have contributed to, or have the potential to contribute to, the energy security strategic objective. For the clean energy objective, the corresponding figure is 19 activities (38 percent), while for the energy poverty objective, only 14 of the activities (28 percent) were judged to have had, or show the potential for, an impact. Note that these figures add up to more than 100 percent because some projects may address more than one of the strategic objectives; for example, a project that leads to investment in grid-connected renewable power improves energy security as well as helping to mitigate climate change.

For the completed projects in the countries where the Evaluation Team conducted missions, it is somewhat easier to judge the extent to which impacts have contributed toward achieving the strategic objectives. In *India* the energy security objective was addressed most strongly, with four projects having, or showing the potential for, significant impacts. Three projects have the potential for impacts with respect to the clean energy objective, but none of the activities had the potential to impact on energy poverty, except very indirectly.

INDIA			
Project description	E.S	E.P.	C.E.
Study to provoke discussion on the potential for renewable energy development in India, and to make recommendations on implementable measures	●		●
Low-Carbon Growth study			●
Study and guidelines on best practice for operations and maintenance of coal-fired power plant	●		●
Study and recommendations on regulatory changes to promote the inclusion of energy efficiency considerations when rehabilitating old coal-fired power plant	●		●
Organizational transformation of a state electricity transmission company to give it the institutional capacity to manage large turnkey investment projects	●		
Technical assistance to the Ministry of New and Renewable Energy to help create a favorable environment for the development of concentrated solar power	●		●

Both of the ESMAP-supported activities in *Moldova* impacted most strongly on the energy security and energy poverty objectives, as the projects were aimed at reducing the likelihood of a collapse in the capital city’s district

heating system, on which a large fraction of the poorest inhabitants depend. The potential for a clean energy impact was less direct, as this would depend on the heat supply company following the recommendations of one of the studies by replacing old, inefficient equipment.

MOLDOVA			
Project description	E.S	E.P.	C.E.
Action plan for financial stabilization of the district heat sector in Chisinau	●	●	●
Institutional and financial strengthening of the Chisinau district heat sector	●	●	

The strongest focus of ESMAP’s activities in *Morocco* was on the energy security objective, where four out of the six projects have the potential to have significant impacts. Two activities can be expected to impact significantly on the clean energy objective, while one project has its main focus on alleviating energy poverty.

MOROCCO			
Project description	E.S	E.P.	C.E.
Identification of regulatory, legislative, and institutional reforms necessary to enable private sector–led investments in large-scale grid-connected renewables	●		●
Recommendations on measures to reduce the GHG emissions from the transport sector, and make transport infrastructure more climate-resilient			●
Study to define an alternative to direct price subsidy of LPG in order to better target the benefits while protecting vulnerable groups from future price increases	●	●	
Study to identify options for liberalization of the liquid fuels markets	●		
Assist the government in the preparation of a new energy conservation and renewable energy law, with the aim of reducing dependence on imported energy	●		
Study to develop options for a low-carbon energy future, to reduce the country's vulnerability to international energy price fluctuations	●		●

In *Peru*, the energy poverty objective was the strongest focus, with three projects having this as their main impact. Energy security was also an important objective, but the impacts of a project to assist with the development of a development strategy for the natural gas market were judged to have been weak. Although three projects involved renewable energy supply, the main focuses of two of these projects were energy access and energy security respectively. The clean energy objective is therefore judged to have been the least strongly addressed.

PERU			
Project description	E.S	E.P.	C.E.
Study to provide the Ministry of Energy and Mining with the information necessary to optimize the subsidy level in rural electrification initiatives		●	
Study to determine the optimum tariff level for small- and medium-scale hydropower projects		●	●
Study to explore the potential role of SMEs in off-grid energy service provision, especially with regard to PV and small/micro hydropower		●	●
Study and recommendations to strengthen the government’s capacity to promote investment in hydropower	●		●
Development of a methodology to assess the impacts of climate change on Peru's hydrology	●		

Study to provide information and options to the government for the development of a development strategy for the natural gas market	●		
Study to strengthen the government's capacity to assist small and micro rural enterprises in improving their productive use of electricity		●	

Only one project in the *Philippines* fell within the evaluation period. This project aimed to address the barriers to the scale-up of large- and medium-scale renewable energy and to promote the transition to a low-carbon power sector. The strategic objectives addressed are clean energy and energy security.

PHILIPPINES			
Project description	E.S	E.P.	C.E.
Policy support to the government to address barriers to large- and medium-scale renewable energy and the transition to a low-carbon power sector	●		●

Two out of the three projects in *Tanzania* that fell within the evaluation period were recipient-executed projects supported under the AFREA trust fund. Both of these projects focused on piloting business models for the provision of affordable solar-powered lighting to off-grid rural households and institutions, and hence primarily addressed the energy poverty objective. The third project in Tanzania aimed to promote investment by SMEs in small-scale renewable power projects, thereby addressing the clean energy and energy security objectives.

TANZANIA			
Project description	E.S	E.P.	C.E.
Guidelines for developers and recommendations for regulatory changes to promote investment by SMEs in small-scale renewable power projects	●		●
Grant to local entrepreneur to develop delivery models for solar home systems in partnership with local community-based organizations		●	●
Ten innovation grants awarded to pilot business models for the delivery of affordable and clean lighting services to rural Tanzania		●	●

Evidence both from the project documentation examined under the desk review and from the country missions suggests that increased energy security is the most significant development impact of ESMAP’s activities. This was corroborated through the results from the interviews with CG members. In some respects this is not surprising, as a great many of the activities that ESMAP supports can be expected to improve energy security, even if this is not the primary objective. Any well-designed renewable energy project will, because renewable energy sources are almost always local, result in improved energy security. Many efficiency projects will also improve energy security by reducing dependence on imported fuels. Activities that result in institutional or financial strengthening of utilities will generally contribute to better energy security by reducing the likelihood of power blackouts.

Conversely, the desk review, interviews, and mission visits have indicated that the energy poverty objective is least likely to be directly impacted by ESMAP activities. Again, this is not surprising given the upstream nature of the types of activity that ESMAP supports, where impacts on energy poverty are more likely to be indirect. Looked at in the long term, almost all ESMAP activities can be expected to impact upon energy poverty, so in some respects, it does not matter that energy poverty is not the primary focus of many activities. However, if ESMAP wishes to demonstrate that it contributes positively to this strategic objective, it is important that the new M&E framework be able to capture these long-term impacts.

## Extent to which ESMAP clients, constituents, and partners perceive ESMAP’s development impact

Given that impact assessments are not routinely carried out on ESMAP activities, it was not possible to judge how the development impact of the desk reviewed projects was perceived. Assessment of the perception of development impact is therefore based very strongly on the country missions.

In **India**, ESMAP’s role in generating the outcomes that are likely to lead to significant development impacts is well perceived by clients. In many cases, the observed results are attributed to the World Bank, since the clients are not generally aware of ESMAP as a distinct entity. With regard to the broader stakeholder community that might benefit from the longer-term impacts of projects, it is extremely unlikely that there is any perception of the role of the World Bank/ESMAP in bringing about these impacts. For example, an investor who takes advantage of a more favorable regulatory environment to invest in energy efficient rehabilitation of power generation plant is unlikely to know, or care, that ESMAP was responsible for the improved regulations.

The development impacts of ESMAP’s activities in **Moldova** are very unlikely to be perceived by anybody beyond the immediate client. The most immediate impact was averting the collapse of Chisinau’s district heating system, so only the failure to achieve this impact would be perceptible to the wider set of stakeholders. Similarly in **Morocco**, the main development impacts of the ESMAP projects will be improved energy security, so only if those impacts fail to occur will there be any perception on the part of stakeholders other than the clients.

In **Peru**, most of the ESMAP projects are concerned with facilitating greater rural electrification, so the development impacts are likely to be strongly perceived by the populations affected. However, the ESMAP activities giving rise to these impacts took place upstream so the perception of ESMAP’s role is again likely to be limited to the clients. In the **Philippines** the clients (the Energy Regulatory Commission and the Department of Energy) had a very positive perception of the role of ESMAP’s work in developing rules for the implementation of feed-in tariffs and a renewables portfolio standard. The ultimate impacts resulting from additional renewable-based generating capacity will be clearly perceptible to beneficiaries, but too far removed from ESMAP’s activities for any connection to be perceived.

The development impacts of the recipient-executed AFREA lighting projects in **Tanzania** were much more direct than is typical for more upstream ESMAP projects. As a result, the impacts are clearly perceived and well received by the beneficiaries.<sup>169</sup> However, because the funds for these projects are disbursed to local partners for implementation, ESMAP is several degrees of separation from bringing about these impacts. Because such a large fraction of Tanzania’s population does not have access to electricity, even the Bank-executed ESMAP project in Tanzania has the potential to generate relatively direct impacts that are clearly perceptible by stakeholders. The project helped to create streamlined procedures and a favorable regulatory environment for renewables-based small power producers, which has already led to a pipeline of projects. The clients (a ministry and a regulatory agency) both clearly perceived that “the World Bank” had played in helping to bring about these impacts, again being unaware of the distinction between ESMAP and the Bank.

### 3.5.5. Internal learning

#### *To what extent has the program learned internally from its experiences?*

Given its core functions of think tank and knowledge clearinghouse, internal learning theoretically plays a prominent role in ESMAP’s planning and organizational development. Despite intent as outlined in the 2005-07 Business Plan, however, at the start of the evaluation period (2007-11), ESMAP showed little motivation or structure around learning from its experiences. Such reforms took a secondary position to what was seen as more pressing administrative tasks, and there is little evidence that lessons from the previous business period were carried over into the new work plan. The situation more recently has improved significantly, and under the 2008-13 business period, the new annual block grants and planned new M&E system are expected to foster internal learning and review. Although conducted as part of ESMAP’s input into the World Bank energy strategy development, and therefore not

motivated primarily by a perceived need to promote internal learning, ESMAP has recently undergone a substantial horizon-scanning exercise. It is still too early to assess whether recent changes to encourage internal learning have yielded expected results.

### **Extent to which ESMAP has learned internally from its experiences**

The existence of strong mechanisms for promoting internal learning is well recognized as being essential to enable any organization to succeed and develop. For example, “innovation and learning” is one of the four “perspectives” that constitute the widely used Balanced Scorecard management tool.<sup>170</sup> As part of its strategy for program sustainability, it is important that ESMAP have the capability to learn internally from its experiences, particularly during periods of rapid growth.

Until relatively recently, there appeared to be little evidence of a clear framework or coherent set of mechanisms to facilitate internal learning in ESMAP. This is not to say that internal learning did not take place, but rather that it appears to have taken place in somewhat ad hoc, unplanned manner.

#### ***2005-07 Business Plan Period***

Development of the 2005-07 Business Plan drew significantly on the experiences and lessons learned from the previous Business Plan period. The plan itself included a brief description of these experiences and lessons, and outlined how they had informed formulation of the new plan.<sup>171</sup> Although there was evidence of a significant level of learning from experience in the formulation of the 2005-07 plan, there is relatively little discussion within the plan of mechanisms for facilitating or managing internal learning processes. It appears that internal learning was envisaged as something that takes place mainly at the end of each business plan cycle, rather than something that should be addressed continually.

here were extensive discussions in the 2005-07 Business Plan of ESMAP’s knowledge clearinghouse function, but this was conceived purely as an external, client-oriented function, rather than as a mechanism by which ESMAP could disseminate important lessons internally. However, the plan did acknowledge that the external contacts ESMAP developed through its knowledge clearinghouse activities would allow it to “...monitor informally the pulse of the energy sector worldwide.”

The section in the Business Plan describing monitoring and evaluation of Business Plan implementation similarly focused entirely on the extent to which ESMAP is meeting client needs (that is, “lagging indicators”). There was no discussion of the role of monitoring the so-called “leading indicators,” such as the effectiveness of their own internal learning processes for enabling them to implement the Business Plan successfully.

One significant mechanism for internal learning that was described in the 2005-07 Business Plan was the intention to form a virtual panel that would draw on “...a wide range of expertise from developing and industrialized countries, from academia, policy-making agencies, NGOs, the private sector, to consult and exchange views particularly with the TAG three times a year and produce notes on ‘scanning the horizon for emerging trends in energy and poverty’.” However, this virtual panel failed to become a reality for the duration of the business plan. The 2006 TAG report noted that:

“One major commitment in the ESMAP business plan that has not progressed in the last year concerns the establishment of a systematic consultation process to anticipate up-coming issues about which it would be prudent to start preparatory analytic work.”

In the following year, implementation of the virtual panel was no closer, with the 2007 TAG report noting that: “Understandably these [horizon scanning] activities have been put on the back burner while other more pressing tasks were carried out to improve the administration of the programme” and suggested that one of the ways ESMAP could be more proactive in anticipating the energy agenda would be by:

“Learning the lessons from other trust funded activities about whether (and how) they achieve their objectives more effectively than ESMAP (WSP, CGIAR).”

The 2008 TAG report again described how the horizon scanning had been “put on the back burner” and reiterated the previous year’s strong recommendation that ESMAP should “implement methods to proactively anticipate the energy agenda (horizon scanning).” To the extent that any horizon scanning took place at all, this seems to have been limited to a few isolated examples mentioned in the available documents where ESMAP has assimilated outside opinions on important energy sector trends.

Toward the end of the period of the 2005-07 Business Plan, TAG noted that:

“...processes now in place should allow ESMAP to make the knowledge generated by the regional block grants to become greater than the sum of the individual projects by both comparative analyses and more general lesson learning reviews.”<sup>172</sup>

Also, the Activity Completion Report series “...contain the results of ESMAP products and are geared toward the ESMAP and World Bank audience.”<sup>173</sup> But apart from these minor exceptions, there is no documentary evidence to suggest that significant formal structures or mechanisms to promote internal learning existed during the period of the 2005-07 Business Plan.

### ***Current Business Plan Period***

While the 2005-07 Business Plan was informed by an evaluation of the previous plan period, there is no evidence to suggest that transition from the 2005-07 plan to the current 2008-13 plan involved the same degree of retrospective analysis. There is no reference in the current plan to any evaluation of the previous plan (it was not until March 2010 that a portfolio review of the 2005-07 plan period was undertaken); in fact the previous business plan cycle is scarcely mentioned. The 2007-08 annual report, the last to be produced under the previous business plan, would have been expected to have a detailed analysis of lessons learned. However, as the 2009 TAG report observes:

“...while the Report presents the achievements, it does not raise questions, self-reflect or analyze where there may have been difficulties or lessons.”

“...there remains a broader issue of a need for ‘reviews of lessons learned’ from the activities of the previous BP, and on specific issues. There is no reporting of any problems or challenges faced either thematically or organizationally. These issues need to be taken up by ESMAP as it moves forward with its thematic knowledge work and reorganization and should be reported on in the future.”

However, it is clear that the current Business Plan did incorporate some lessons learned from the previous plan. The most obvious example is the decision to switch to a five-year planning cycle rather than the previous three-year cycle. In fact, this change had already been mooted in the lessons learned from the 2002-04 Business Plan, as the following extract from the Building on Experience and Lessons Learned section of the 2005-07 plan indicates:

“The three year time frame of the business plan, to bring in new activities and phase out others does not always tally with the cycle of the more complex activities and needs to be interpreted with some flexibility: at least five years of intensive work are at times needed to develop a solid body of work, and disseminate it effectively.”

Given this recognition, it is surprising that a switch to a five-year business plan cycle was not made at that time, rather than wait until the next cycle.

With regard to the actual contents of the current Business Plan, it is clear that the issue of internal learning has received much more attention than in the previous plan. Most significantly, the five-year Business Plan cycle will incorporate a “comprehensive evaluation process” during its final two years.<sup>174</sup>

Another important step toward improved internal learning is the formulation of results frameworks for each program and initiative, which will form the basis of a comprehensive M&E system. According to the Business Plan, the M&E system will require:

“...the full commitment and active participation of all staff and partners, combined with a willingness to acknowledge mistakes and learn from others. Given that many other global programs are currently



undergoing similar processes of developing and refining their M&E systems, ESMAP will use this window of opportunity to learn from others.”

Crucially, the M&E system is meant to close a feedback loop that will enable staff to share knowledge and lessons learned, resulting in a stronger basis for future decision making on strategies, program development, and the design on activities. A specific example of the early use of the M&E system to promote internal learning is that, for activities that result in the generation of knowledge products, indicators have been defined to monitor the number of *internal* learning events and workshops conducted to disseminate that knowledge.<sup>175</sup>

The 2008-13 Business Plan repeated the intention expressed in the previous plan to establish a “virtual panel” of experts drawn from academia, the donor community, the private sector, and NGOs, which would:

“...provide guidance [to the thematic coordinators] on new and emerging challenges for energy sector planning and operations; share current or emerging best practices; identify knowledge gaps, technical assistance, or capacity needs; and foster knowledge exchange with energy policy makers and practitioners in low-income developing countries.”

However, unlike during the previous Business Plan, the intention to create a virtual panel has become a reality. The first virtual panel on the Energy and Climate Change thematic area was formed during 2010, although in the view of TAG the discussion topics were too broad. They recommended a narrower thematic focus to ensure the virtual panel model achieves its purpose.<sup>176</sup> The horizon-scanning exercise that failed to materialize throughout the previous plan period has now taken place in the form of ESMAP’s input into the development of the World Bank energy strategy. This entailed the production of a number of background reports by ESMAP on key emerging issues in the energy sector. While this exercise will clearly assist ESMAP itself with internal learning and development, this was not its primary purpose. Therefore, despite these positive developments, it appears that ESMAP could still benefit from a strengthening of mechanisms for ensuring that any identified emerging issues are reflected in the development of new activities.

Recent changes that have been made to ESMAP’s structure and procedures also create an environment more conducive to internal learning. Cross-cutting initiatives such as REMTI and EECI should help to foster the internal sharing of knowledge and experience, and ESMAP management has expressed an intention to: “...maximize use of resources and staff skills through more cross-thematic working arrangements” and also to “...avoid that its programs are implemented as ‘mini ESMAPs’ and to ensure that they continue to be open structures with maximum cross-collaboration.”<sup>177</sup> Changes made to the procedures for the award of regional block grants since 2009 mean that provision is now made for the dissemination of results and lessons learned, whereas previously activities were often closed without an effort to understand the lessons learned.<sup>178</sup> The Knowledge Exchange Forums, which appear to have become established as an annual event, also provide a good learning opportunity for ESMAP staff.

### ***3.5.6. Risk identification and management***

#### ***How has the program identified and managed risks?***

The identification of risks at the program and project level has been relatively weak, but it is likely to improve with the development of the M&E framework. The peer review process is a clear and valuable mechanism for the identification of risks, yet the process does not always bring forward the most pertinent risks. Since there has been no systematic reporting of risk management at a program or project level it is difficult to ascertain how ESMAP has managed its risks.

#### **Extent to which ESMAP identifies key risks to fulfilling its mandate**

The identification of risks at the program level has been weak, but is improving with the development of the M&E framework. It is too early to assess what the impact of the new risk analysis and evaluation has been.

TAG does not identify risks, and neither of the two Business Plans had identified any risks to the fulfillment of their objectives. The 2008-13 Business Plan stated that the next critical steps in developing and putting into practice the new results framework, included “identifying and reviewing risks and assumptions to develop robust mitigating actions.” The draft results framework in that business plan did not identify any risks. The draft ESMAP program log-frame does not include any risk identification either.

Since the 2008-13 Business Plan formulation, as part of the development of the M&E framework, potential risks and mitigation measures, and risk ratings, have been outlined for each of the four program components at the output level. For example, risks identified in the achievement of REMTI objectives include: (i) lack of political will of client countries to engage in renewable energy initiatives or adopt clean energy technologies because of few incentives or shifts or priorities in the government’s energy sector agenda, and (ii) red tape, burdensome regulations, governance issues, and a changing regulatory framework for renewable energy in client countries preventing adoption and/or implementation of RE options or attracting potential investors. Mitigation measures for these risks are outlined as (i) in client countries from the beginning to ensure ownership and accountability, (ii) maintain substantive dialogue with regulatory authorities focused on addressing regulatory bottlenecks to renewable energy investments, and (iii) meet with regional TTLs to explain opportunities and benefits of adopting clean energy technologies.

At an operational level the identification of risk is not included in all processes. There is no mention of a risk management plan in the Operational Manual, but the different steps of the quality assurance guidelines provide a certain level of insurance as regards potential risks. Of the templates provided to staff only the project concept note includes a section for the identification of risks. The Own-Managed Activities Concept Note Template asks for risks and issues to be outlined, while the Project Concept Note for ESW/TA requests more details and a risk rating (low to high), mitigation measures, and if there is a need for specific guidance. The following templates do not include any section for the identification on risk: Proposal Summary Forms, internal reviews, and decision memorandum.

The M&E concept note proposes that there is an annual report on ESMAP’s M&E that would feed into the ESMAP annual report. The performance assessment of ESMAP outcomes at the program level would include evaluation criteria and scale of ratings including for risks to achieving outcomes. The note goes onto define this as is “the risk, at the time of evaluation, that ESMAP project- and program-level outcomes (or expected outcomes) will not be maintained or realized. Further, adequate evidence should be provided to substantiate the risk rating(s). Along these lines, the 2010 annual report included progress on program-level outputs, complementary to the annual review.

Based on the desk review sample, at project level the identification of risk is not systematic. Many of the projects in the desk review either predate the current concept note template, or did not use it. Only a portion of the 50 project reviews identified any risks to project implementation or to achieving its objectives. Where the template has been used, the risks have been identified. In a number of cases, risks have only been brought forward by the concept peer

#### **Box 10 - Limited Mitigation in Tanzania**

In the Tanzania portfolio, there were some anticipated risks to sustainability that ESMAP could have foreseen and supported directly or encouraged support for indirectly. Camco expressed that the training component was left unfinished and SIDA/MEM should have done more to make sure the district offices (which were responsible for choosing the clinics and communicating the projects) were made much more aware of solar technologies. The recipient clinic interviewees were not entirely certain of what to do with the savings earned from renting cell phone chargers, even though this was a key component to the business model. An earlier UNDP/GEF project that put solar on the map (in 2007) in the region was mentioned by Intraprofessional and Zara as having raised awareness and interest in solar energy to a level that subsequent donor projects/programs have not matched. Solar distributors were quick to point out how fast word travels about solar technology experiences, both positive and negative, and the dangers of misinformation.

reviewers. The peer review process is a clear and valuable mechanism for the identification of risks, yet they are not always identified (and the internal review template does now include a prompt for a review of the risks). For example, in India only two out of the six ESMAP activities (the CSP program and the MSETCL project) appear to have addressed possible risks at the time of project design and, in the case of the CSP program, risks were identified only at the suggestion of a member of the team who peer-reviewed the Concept Note. The field reviews also showed weak risk identification. In the Philippines, risks were not identified at the project concept stage, although one of the interviewees identified a clear risk related to the capacity in government to take forward recommendations and the skill drain from

the public sector due to a salary gap with the private sector.

In some cases, the documentation may identify risks but no, or an inadequate, mitigation measure is proposed.

Examples of some of these cases include:

- Risks and assumptions are stated for each of the four key *EECI* outcomes; however, no mitigation measures are proposed and there is no differentiation between risks and assumptions or which ones *EECI* has some say/control over.<sup>179</sup>
- In the case of the *India CSP program*, three categories of risk were identified following the suggestion of the peer reviewer of the Concept Note, yet none of the risk mitigation actions put forward was particularly convincing. The following extract is taken from the Decision Note following the virtual review of the Concept Note:

“There are three broad areas of risk. These are: (i) future country ownership of CSP may wane; this could occur for clear and compelling reasons such as CSP failing to live up to its technical promise, or for less transparent reasons such as a shift in political focus away from climate change. The study will help to address the first concern through prefeasibility studies which will assess the operational prospects for commercial-scale investments. Through its broader dialogue and investment support, the Bank can seek to maintain some level of Government focus on climate change. (ii) private sector interest may not materialize; the proposed knowledge building program and marketing activities include an explicit focus on private actors, who today have expressed keen interest to participate. (iii) international CSP activity may not grow as predicted, jeopardizing predicted price reductions and technology improvements; mitigation of this risk is outside the scope of this task. However, to the extent that India is able to fulfill its plans of 20,000 MW of solar by 2020, and assuming that an appreciable fraction is CSP, India may become a significant force in the international CSP market. The proposed program will among other things facilitate penetration of the technology in India”<sup>180</sup>

#### Box 11 - Dropped Project

East Africa Geothermal Assistance Program

The Geothermal Assistance Program identified a number of risks and mitigation measures in its project Concept Note. These included three risks associated with the client country’s interest:

1. Willingness of the country governments to cooperate with the missions and provide access to the existing technical data and information on their legal and regulatory and institutional policies
2. Availability of counterpart agencies to work with during implementation of the GAP
3. Obtaining the country’s support and buy-in to the overall concept

Mitigation measures included that African countries selected for the assistance are those that have expressed interest for the GAC and each country government will be appraised of the objectives and scope of the activities to be implemented under the GAC before mission departure, and government will be required to have clearly identified the counterpart agencies that would participate in the mission’s activities; their responsibilities will be defined and agreed to before the ESMAP mission team visit the country. However, unfortunately, the project had to be dropped since “following the preparation of the country diagnostic reports which were to serve as the basis for initiating ESMAP/Bank geothermal assistance, it was deemed that the proposed activities may be premature, in terms of being aligned with the countries’ overall medium-term energy sector strategy.” It is unclear if the mitigation measures were put in place, if the risks were correctly identified, or that the mitigation measures were not broad enough to encompass how the country’s support aligns with its energy sector strategies.

Although the project did not continue further, Bank country staff have, since the activity closed, made use of the country diagnostic reports, and geothermal power generation has now become one of the main topics within the East-Africa region.

In other cases, some mitigation measures are proposed. Examples include:

- In the *Cameroon SME project*, the Concept Note outlined the risks as (i) level of political commitment, (ii) financial, (iii) affordability level of rural population of energy services, and (iv) generic off-grid risks. Mitigation and measures for sustainability of results were also put forward.
- For the *Structuring of PPP in Natural Gas in Egypt*, the Concept Note considers “financial sustainability,” “institutional sustainability,” “potential replication,” and “major risks” to the proposed project, for example.

“The primary risk is that the Policy Note does not lead to an effective dialogue and implementation of an effective PPP program in natural gas distribution in Egypt. However, the continuing high economic cost of energy subsidies in Egypt and the significant upfront investment capital cost for gas distribution infrastructure are strong incentives for the Government to facilitate, at a minimum, a limited PPP program in gas distribution services. This helps mitigate the primary risk.”<sup>181</sup>

- Comments were received during the PCN review process for the *Djibouti Energy Sector Masterplan*: “The greatest risk to the success of the activity seems to be the stakeholders’ (un)willingness to accept coordinated planning and their lack of trust of each other. Thus it will be important that there is a clear prior endorsement from each of the stakeholders of the TORs and the process to be followed during the preparation of the Master Plan and its use as the actual planning tool for future investments. Given the importance of the Master Plan, it might be useful to create a small steering group composed of heads of the key ministries to ensure proper coordination at the policy making level, while the working level group would attend to technical and process matters and review the consultant’s outputs on a more regular basis.”
- For the *Central Asian Regional Energy Trade* project, the Concept Note identified risks and the peer review process also brought forward risks. The project faces the following risks: supply (generation) risks; market risks; counterparty risks (especially payment risks); completion risks; operational risks; price and tariff risks; political risks; legal risks; fiscal/macroeconomic risks; regulatory risks; environmental risks; and force majeure risks. International experience of independent power projects and cross-border energy corridor projects shows that measures to mitigate these risks can be and would be devised for this project. In addition the proposed project already faces high risks, especially regarding terrorism, war and civil disturbance, and the recent events in Afghanistan as well as Pakistan have served to increase these risks. Therefore risks assessment, allocation and mitigation would be a crucial part of the project further preparation and design. Solutions are likely to include a combination of social measures (supply electricity to populations along the transmission route and make them stakeholders); technical/operational measures (e.g., dedicated repair crews and security personnel); and financial measures (e.g., a special fund to be established to compensate for loss of revenue possibly bolstered by third-party guarantees). (PCN) [The PID shows that World Bank safeguards were triggered: Environmental assessment (YES), natural habitat (TBD), involuntary resettlement (YES), forests (TBD), and cultural property (YES).

#### Box 12 - Successful Risk Management

##### *India*

At the time the MSETCL project was conceived, the main risk (rated as moderate) was identified as being “resistance from the staff in implementation of the proposed changes.” A number of steps were taken to mitigate this risk, geared toward obtaining buy-in from management and employees, including the trade unions. First, the consultants were selected only after close discussion with the client, leading to consultants with previous experience in power transmission who could avoid alienating skeptical staff. Second, the consultants were asked to spend the entire first month of their appointment “absorbing” the organizational culture at the operational level, allowing them to develop a thorough understanding of the concerns of staff. Third, numerous meetings, workshops and field visits were conducted for disseminating and obtaining feedback on proposed changes. All these risk management measures resulted in better design and smoother implementation of the recommended process changes.

##### *Tanzania*

For the Tanzania Heat Pricing Study, the activity risk was perceived as low in GRM, and sustainability rated ‘likely.’ The project implementation reports include a section on challenges and adjustments: e.g., challenges included: the saccos did not want to join because they thought lighting was not necessary; members have a hard time accessing loans from the savings and credit cooperative societies (SACCOS)\_ have difficulty getting funds from the bank; the need to increase sales, project impact and knowledge. Another noted risk was corruption among the SACCOS, and an expected 10-15 percent cut. (Final Progress Report Aug 2010) Adjustments to deal with these identified risks/challenges included: dealing with individuals who needed the solar system, partial loans to those untrustworthy, talking with banks to give consideration to Saccos, and diversification of the target market (e.g., schools, via “Thrive?”) (Final Progress Report Aug 2010). The project successfully helped the Lighting Africa program identify areas where it can work to help catalyze and scale up off-grid lighting in the region and in Tanzania. This project has helped assist in the development of a sustainable off-grid lighting market in the region. (GRM Saccos in N Tz3).

In all the cases provided above it is not clear which of these risks were monitored/tracked and in what ways they were managed or mitigated. The box presented above shows how, although risks and mitigations measures were set out at the concept stage, the project can still fail.

There is no clear mechanism for clients to report or highlight risks although the M&E concept note states that the M&E system should be useful to stakeholders, but doesn't outline how or in what ways the clients might use it to report risks. Close partnerships with local implementers or assured confidentiality are possible mechanisms for the client to highlight risks to ESMAP.

### **Extent to which ESMAP manages key risks to fulfilling its mandate**

Since there has been weak risk identification and, as yet, no reporting of risk management at the program or project level, it is difficult to ascertain how ESMAP manages its risks. At the project level there is some evidence of risk management, but the evidence is only implied in the documentation or from interviews during the field visits. Some examples of risk management are provided above.

#### ***3.5.7. ESMAP adaptability and responsiveness to the changing global environment***

***To what extent has ESMAP demonstrated adaptability or responsiveness to the changing global environment, including external shocks?***

Over the evaluation period, ESMAP has convincingly adapted and been responsive to evolving global environmental trends. It has been successful in identifying priorities for new activities that address both slow- and fast-paced changes. In particular, ESMAP has responded well in addressing solutions required for adapting and mitigating climate change related to the energy sector. It has recognized the energy impacts of an increasingly urbanized world and proposed a program to address and has responded to shorter-term external shocks such as the credit crisis's impact on the energy sector. Responses have been appropriate, have been thorough, and address the key issues of concern.

The development of the clean energy theme has provided greater clarity to ESMAP's work relating to climate change by bringing together a number of strands addressing climate change.

ESMAP's adaptability and responsiveness are mainly in response to clients and the regions as well as through advice from CG and TAG.

One of the potential challenges facing ESMAP is to balance this ability to adapt to the evolving global environment with the important task of also keeping adequate focus at the same time on other long-term and slowly evolving but crucial issues in the energy sector such as energy access/poverty.

ESMAP's program has evolved, largely in response to changing global conditions and the changing needs of its clients from low-income, emerging, and transition economies. During the evaluation period there has been an increasing awareness of changes in the global environment and their impact on energy, such as climate change and urbanization, as well as specific events that impact the global development context over a shorter period of time, such as increasing oil prices and the financial crises. In each of these cases ESMAP has responded by developing new programs or business lines. It has developed these new programs in response to clients, with the increased use of regional windows, but also through discussions with its partnerships, and advice from TAG and CG.

The core objective of the 2005-07 Business Plan was to secure energy for poverty reduction. The plan was prepared when there was momentum for reaching the Millennium Development Goals, a growing trend in higher hydrocarbon prices, a shift in the distribution of world demand for energy, and a move toward a low-carbon global economy with the implementation of the Kyoto Protocol. At that time, this implied a significant shift in ESMAP's activities and in its operational framework.<sup>182</sup> The ESMAP Business Plan for 2005-07 also recognized the need for ESMAP to respond to changes going forward, and TAG<sup>183</sup> stated that concerns had been expressed about ESMAP's ability to "capture new agenda issues." The Business Plan concluded that "in order to address these concerns and

become more agile and forward looking, ESMAP is proposing a new mechanism for scanning the horizon.” It was suggested that ESMAP would “Form a virtual panel of about ten experts from a wide range of expertise from developing and industrialized countries, from academia, policy making agencies, NGOs, the private sector, to consult and exchange views particularly with the TAG three times a year and produce notes on ‘scanning the horizon for emerging trends in energy and poverty.’ In addition, ESMAP will use its contacts under its Knowledge Clearing-House activities to monitor informally the pulse of the energy sector worldwide.”

However, no virtual panel was formed during the Business Plan period, due to “more pressing tasks being carried out to improve the administration of the program.”<sup>184</sup> TAG also point out that because of an increase in funding and in demands on ESMAP it is even more important for ESMAP to revisit its mechanism for looking to the future. In both 2007 and 2008, TAG strongly recommended that ESMAP implement methods to proactively anticipate the energy agenda (horizon scanning), and to find new ways to build the capacity and provide the support to policy makers in north and south with high-quality analytical and empirical activities. In 2008, TAG repeated its recommendation from 2007 for additional high-quality and independent analytical work on specific issues: energy efficiency, household fuels, small-scale renewables, and biomass gasification among some of the urgent priorities.

Despite not taking the recommendation forward, there is evidence to show that ESMAP did show responsiveness. It anticipated the interest for modern biomass fuels, particularly liquid fuels, and commissioned two reports that provide a more balanced analysis of the evidence and key issues. It also hosted a Roundtable on Energy Security to discuss the issue of energy security from the perspective of developing countries as Bank preparation before the G8 meeting in St Petersburg. In addition, at the World Bank Energy Week, ESMAP had the opportunity to hear opinions from outside the Bank about emerging trends and issues.<sup>185</sup>

The 2008-13 Business Plan proposed the same concept of virtual panels, but expanded it:

*“Beginning October 2009, the Virtual Panel will convene for its first annual meeting to examine the interfaces and interactions between climate change, energy access, and energy security for low-income developing countries. This first panel of experts will generate new thinking and offer independent insight on already identified questions, such as:*

- *What are the impacts on energy supply and energy poverty for low-income developing countries?*
- *How big is the issue?*
- *What policies, financial instruments or other tools are required to manage potential risks?*
- *Are there additional actions to mitigate unforeseen consequences?*

*New panel participants will be invited each year to contribute their knowledge and leadership to key topics and emerging global issues identified following the yearly Consultative Group Meeting”<sup>186</sup>*

In 2009, TAG endorsed this step and its implementation and discussed the plans for the first virtual panel on climate change. TAG also recommended that ESMAP examine the possible role for virtual panels in energy efficiency. At the same time TAG strongly supported ESMAP efforts to forge new partnerships that would help ESMAP to keep abreast of emerging trends in energy. These include partnerships within a new focus on urban issues, on transport, and also on poverty. “Given that more than half of the global population already lives in cities, and growth in the urban population of developing countries is rapid, a territorial focus on urban areas is a sound choice. In the urban environment energy efficiency as planned by ESMAP offers high potential, and the issues allow good coverage of the three challenges – poverty, security and climate change. The virtual panels and partnerships are to be used proactively to identify opportunities that may be missed because of not looking sufficiently ‘outside the box.’ and ‘outside the Bank’.”<sup>187</sup>

The 2010 TAG report recommended annual reporting of the progress of the planned virtual panels. For the first time, the annual report 2010 reported on one virtual panel being established to inform the development of TRACE. However, according to TAG, in 2011 the energy and climate change thematic areas were the first to launch a virtual panel. However, to date it is unclear if the virtual panels have been developed for horizon scanning as envisaged, or for peer reviewing and generating new thinking for dissemination and knowledge sharing on topics such as climate change and energy access. TAG reports “the virtual panel on CC was the first such experience for ESMAP following the CG recommendation. The group was quite extensive and, in retrospect, practical experience from the meeting shows that the topic discussed was probably too broad. TAG therefore recommends this idea is to be

revitalized, but that the topics ought to be narrower and more thematically focused to make virtual panels operational.”<sup>188</sup>

Despite the lack of clarity of the virtual panels, there is recognition that ESMAP is effective at identifying priorities for new activities. In particular in 2009-10 a number of new business lines were introduced. The timeliness of the response and the appropriateness of the measures are considered good. In 2011, TAG reflected that “ESMAP has responded well to what can be perceived as changing goal posts by having first focused exclusively on energy access to the poor, then to getting energy in the most cost effective way, and then responding to the questions and holistic solutions demanded by adapting and mitigating climate change.”<sup>189</sup> This assessment was also confirmed by the feedback received from the interviews conducted by the Evaluation Team.

ESMAP’s support to the climate agenda and to the credit crisis is a very clear example of their response to both a changing environment and to shocks. A new theme that is also future orientated is results-based financing, which is likely to receive an increasing percentage of overseas aid budgets in the future. At a global, regional, and country levels, ESMAP’s response to external changes is also displayed by the manner in which it responds to client requests.

The following two sections provide examples of how ESMAP has adapted to changes to slow and fast paced external changes.

### **Extent to which ESMAP is adaptable and responsive to changes in the evolving global environment (slow-paced external changes)**

Examples of how ESMAP has managed long-term global shifts are detailed here. These include how ESMAP is dealing with climate change, increased urbanization, the issue of biofuels, and the changing economies of East Asia.

#### ***ESMAP’s Response to Climate Change***

There is an increasing recognition that responses to climate change require actions across multiple sectors—agriculture, energy, forests, industry, and transport—and that energy responses cannot be in isolation to other sectors. More recently there was an acknowledgement that the energy sector should not continue to focus only on mitigation, through GHG reduction and avoidance, but that adaptation is also required because of the risks climate change poses for energy services and resources. Climate change will directly affect energy resource endowment, infrastructure, and transportation, while indirectly affecting water and agriculture in multiple and complex ways within the energy sector.

ESMAP recognized this as evidenced in annual reports and TAG responses. In 2007, TAG clearly identified that there would be new demands on the energy trust funds to respond to climate change issues and “they will have an increasingly challenging role balancing the themes and focus in the coming years.”<sup>190</sup> The CG members also exchanged views on the general issues of energy, development, and climate change and their linkages to ESMAP’s future agenda. While the donor members generally agreed that climate change should figure in ESMAP’s agenda, particularly in the context of adaptation, some expressed concern that this may overshadow other priority issues such as the energy-access gap and poverty reduction. Emphasis was put on the importance of maintaining a clear focus on the energy access/poverty alleviation agenda while working in parallel on the energy-climate change agenda, as access to energy services will not be sustained if climate change issues are not addressed.<sup>191</sup>

In 2009, TAG requested guidance from the CG on the priority of energy and poverty versus climate change and on the balance that ESMAP should take between traditional areas of energy options, power and electricity, planning and regulatory issues versus the low-carbon strategies. Again in 2010, TAG requested that CG provide guidance on how ESMAP should respond to the growing demand for more low-carbon growth studies and other demands emerging after Copenhagen. All the discussions and evidence show that in the main ESMAP has responded through programs to address climate mitigation, rather than adaptation, although there are a number of projects that address adaptation.

Addressing climate change mitigation, the 2008-13 Business Plan set two of its programmatic priorities as the Low-Carbon Growth Country Studies Program: Mitigating Climate Change through Development (LCCS), and the

Renewable Energy Market Transformation Initiative (REMTI). Energy efficiency initiatives (EECI) clearly also contribute to low-carbon development. Other than these two programs the response to climate change did not follow a programmatic approach until recently when ESMAP developed its Clean Energy Program, which aims to bring together a number of the responses to climate change, including both mitigation (LCCS and REMTI) and adaptation. It has a separate allocation of grant from energy efficiency, energy access, energy strategies, and assessments. It has been designed to be cross-cutting and “to address global issues in energy production and consumption transformation, new emerging financing architecture for clean energy, and a scale-up in lending from the World Bank to low-carbon and clean energy.

The REMTI: Scaling Up Deployment of Grid Connected Renewable Energy Technologies for Power Supply Diversification was launched in 2009 in response to the global challenges of energy security along with energy access and climate change issues resulting in a need to a transition from a fossil fuel-based energy system to a diversified system including renewable energy. REMTI targets developing country governments and private sector stakeholders engaged in the adoption, adaptation, and deployment of identified RE technologies for grid-connected power generation, focusing on solar, geothermal, wind, and small hydroelectric power. REMTI aims to enhance institutional capacity of clients to develop, plan, and implement policies and strategies to scale up deployment of these technologies for grid-connected power and to transition to low-carbon paths.

Now also included within the Clean Energy Program, the LCCS program was also launched in 2009 in response to global challenges relating to climate change. LCGC SP is supporting efforts in six emerging economies—Brazil, China, India, Indonesia, Mexico, and South Africa. These countries are proactively seeking to identify opportunities and related financial, technical, and policy requirements to move toward a low-carbon growth path. The governments of these countries have initiated country-specific studies to assess their development goals and priorities, in conjunction with GHG mitigation opportunities, and examine the additional costs and benefits of lower carbon growth. The country studies looked at GHG mitigation opportunities, and examined the additional costs and benefits of lower carbon growth. Not all studies will necessarily focus on energy issues for instance Brazil is looking at land use and land-use change model. This has been recognized by TAG and CG that in the implementation of low-carbon development activities, TAG accepts that flexibility is required for resource effectiveness and that ESMAP's efforts need not focus exclusively on energy-related issues.<sup>192</sup>

ESMAP is assembling the lessons generated from these six country studies to develop knowledge products—modeling toolkits, best practices and “how-to” guidance, and interactive training and ESMAP will foster knowledge exchange and capacity building with its clients—low- and middle-income countries—to support their exploration of low-carbon growth opportunities.

Other initiatives have included an approach to assess vulnerability of and risks to energy systems to projected climate change, and identify adaptation options, including costs and benefits, and a Hands-On Energy Adaptation Toolkit. ESMAP funds were also committed to the World Bank's Economics of Adaptation to Climate Change study in 2008.

The Economics of Adaptation to Climate Change (EACC) study was a US\$8 million multiyear, multicountry study designed to help developing country decision makers to better design climate change adaptation strategies through an improved understanding and assessment of the risks posed by climate change, the adaptation measures that can be taken to reduce adverse impacts, and the costs and benefits of such measures. By identifying adaptation needs of developing countries and their costs, the study aimed to inform the international community's efforts to provide access to adequate support and to provide new and additional resources to help especially the most vulnerable developing countries meet the costs of adapting to climate change. Key issues addressed include impacts on agriculture, coastal areas, water resources, migration (mainly rural), health, environmental (ecosystems services, biodiversity), and infrastructure. Special attention was given to distributional and regional impacts, depending on data availability.<sup>193</sup>

ESMAP provided US\$744,000 from the MDTF for the Implementation of the Clean Energy Investment Framework, which was for analytical and advisory work, knowledge management, and capacity building and support



to professionals at country and regional levels.<sup>194</sup> The study was a partnership among the World Bank, leading the technical aspects of the study; the governments of the United Kingdom, the Netherlands, and Switzerland, funding the study; and the participating developing countries. The study has focused on seven case study countries: Ethiopia, Mozambique, Ghana, Bangladesh, Vietnam, Bolivia, and Samoa.

A website with all the reports has been developed for dissemination. Activity sector-level methodology reports were developed (infrastructure, water, coastal zones, agriculture, health, extreme weather events), with energy a subsector of the infrastructure work. These can be used as the basis of design for more climate-resilient investments. This will support defining the Bank's own strategies and approaches to climate change and what are the major (cost-effective) actions that the Bank should be promoting. Of crucial relevance is the integration between the CC agenda and the Bank's core development and poverty reduction agendas, with identification of complementarities and potential trade-offs.

ESMAP's response to climate change has been substantial and timely. Now part of the Clean Energy Program, it provides the upstream activities that complement and leverage several existing and developing multilateral initiatives, facilities, and funds within the World Bank Group and related international financial institutions, including the Clean Technology Fund, Global Environment Facility, Carbon Partnership Facility, and Scaling-Up Renewable Energy Program.

### ***Increased Urbanization***

The Energy Efficient Cities Initiative was initiated in October 2008 in response to energy challenges in cities in a fast urbanizing world. By 2030 it is estimated that: 4.9 billion people (60 percent of the world's population) will inhabit cities; cities will consume 73 percent of the world's energy; cities will emit 76 percent of the world's greenhouse gases; 81 percent of urban energy growth will come from developing countries; and urban built-up areas in developing countries will triple.<sup>195</sup>

According to TAG<sup>196</sup> the process to develop the EECI program was derived from two push factors. First, although the Bank is obligated to work in EE, working in industrial and supply-side projects is now considered mainstream and therefore not of interest to ESMAP, while at the same time the donors encouraged ESMAP to focus more on cross-sectoral issues. The initiative was designed following discussions with representatives from a dozen cities and several partner organizations that had been invited by ESMAP to discuss past and ongoing energy efficiency initiatives and draw lessons on scaling up energy efficiency improvements.

A comprehensive five-year program was developed to include upstream, operational, and evaluation support while disseminating tools, experiences, and results to city clients and other interested organizations. The program takes into account that energy efficiency improvements in the urban context should take a holistic approach of both supply- and demand-side measures, taking into account buildings, power/heating, public lighting, solid waste, transport, and water/wastewater. City leaders need help removing barriers and build capacity to acquire, adapt, and implement energy efficiency strategies and technologies. So EECI has two goals: (i) to help countries build institutional capacity at the city level to explore and deploy innovative energy efficient solutions for the delivery of basic urban services, and (ii) to help countries reduce the costs and environmental impacts of related energy use.<sup>197</sup>

At the same time there are a number of parallel efforts including a review of procurement practices for EE performance contracting, an analytical toolkit for EE in the transport sector, a review of best practices for EE building code programs, and review of EE options in municipal water utilities in Sub-Saharan Africa.

The response to the energy issues relating to urbanization has been extremely timely, and the activities undertaken, and still ongoing, are extremely relevant in the context. Influencing the municipalities is important since they are likely to drive the agenda and play an increasing role in the financing of energy efficiency measures in the future. Since the initiative takes a cross-sectoral view, the outputs are of greater use to the cities than if they focused just on energy. Having evaluated the barriers to the uptake of energy efficiency in cities the program has gone onto address these key issues.

### ***Bioenergy***

Bioenergy (solid biomass, biogas, and liquid biofuels) is playing an increasingly important role as an alternative and renewable source of energy. It was attracting growing interest worldwide, driven by concerns about energy security, food security, global and local environmental considerations, and a desire to support domestic agriculture. At the time some technologies were already commercial, while others, particularly some biofuels, were still far from commercially viable. There was a need for an objective view on the links between bioenergy, agriculture, and trade as information on the issues tended to be biased.

ESMAP commissioned a report, “Trade Policies for Liquid Biofuels,” focusing primarily on ethanol and biodiesel looking at a time horizon of the next 5 to 10 years.<sup>198</sup> The report outlines the important link between agriculture and biofuels, reviews past and present government policies for agriculture and for biofuels, and considers how these policies might affect the world biofuel market. The report highlights the links among the markets for oil, biofuels, feedstocks, and the byproducts of biofuel processing. It reviews existing studies examining the likely consequences of much larger biofuel production and trade liberalization on biofuels and their feedstocks. It concludes with policy considerations.<sup>199</sup>

### ***Changes in the Economies of the East Asia Region***

ESMAP has adapted its work to the changing socioeconomic situation of countries in the East Asia region. Previously work in the region focused on access to energy, but now many of the countries have clear energy access policies in place. At the same time, most countries in the region are challenged by rapid demand growth, growing environmental impacts, and insufficient financing to support continued sector expansion. Demand has adapted to projects supporting energy security and the efficient use of energy. ESMAP is supporting this demand with projects focusing more on sustainable use of energy, pricing, and renewable energy regulation. Since China is ahead of other countries, working there also keeps ESMAP abreast of new developments and opportunities.

Examples of projects include the Vietnam Energy Efficiency Program, which provided support to the government of Vietnam for its energy efficiency program and the monitoring of it. In 2006, the government of Vietnam approved the Vietnam National Targeted Program on Energy Saving and Energy Efficiency (VNEEP). In addition, as part of the energy efficiency program and government targets, the Law on Energy Efficiency and Conservation (the Law) was approved by Vietnam National Assembly in the middle of 2010. The law requires data collection and reporting from various sectors and designated enterprises. The core objective of this project was to support the development of the data collection and analysis, reporting, monitoring and evaluation framework for VNEEP.<sup>200</sup>

In China, the Heat Pricing Study addresses issues of energy efficiency within the urban environment. Space heating is a basic need for about 600 million Chinese people. Major efficiency gains have been achieved in many economic sectors during the recent past, but China has not yet achieved substantial results improving energy efficiency in the heating of urban residential and commercial buildings. The response was considered timely since it was an issue that left aside in favor of more technical solutions.

### **Extent to which ESMAP demonstrates adaptability and responsiveness to external shocks (fast-paced external change)**

Increasing oil prices and the collapse of the financial sector, and the subsequent recession and reduced growth, have impacted on most countries. From concern about rapid growth in energy demand, prices and their knock-on effects, countries face a new position where many energy investments slowed down or have been canceled. Varying priorities responding to the short-term crisis replaced energy on the agenda, with potential negative implications for long-term supply development. This is despite the fact that energy remains a key infrastructure component and a stimulus for economic growth.

Emerging trends include:

- More stringent energy project approval thresholds
- Withdrawal of commercial lenders from energy project loan syndications
- Lack of viable alternate financing mechanisms

- Unsustainable funding costs

In response to these changing priorities, ESMAP has developed appropriate programs and projects. In 2009 ESMAP launched The Country Energy Sector Vulnerability Assessments Program, an initiative to identify existing and emerging vulnerabilities for policymakers and energy practitioners. The program focuses on the effects of the financial crisis, volatile oil prices, and climate change on the energy sectors of developing and transition economies and aims to help countries build institutional capacity and know how to develop and implement policy reform measures and robust strategies to meet short-, medium-, and long-term challenges to their national energy systems.

The program is made up of three components:

1. **Power Sector Vulnerability Assessments**—helps countries assess the impact of the global financial crisis on priority investments in the power sector.

Since 2009, ESMAP has supported rapid diagnostic assessments of the short- to medium-term effects of the global financial crisis on key investments in the power sector in 19 developing countries aimed at providing informed strategic responses from the World Bank Group. Each country assessment defines how the crisis affects the power sector, identifies measures that could counter adverse effects, and proposes options for implementing those measures—including filling potential financing gaps.

From the desk review, work carried out in Mongolia (which included all infrastructure, not just energy) was very appropriate in degree and nature. Individual assessments were made in Egypt, Morocco, Jordan, and Tunisia based on the World Bank Group’s ongoing sector activities and drawing on internal knowledge. The work was appropriate in nature to the credit crisis shock; however, its usefulness was questioned by the peer reviewers at the draft stage.<sup>201</sup> These concerns were addressed in the final reports and therefore the work is seen as extremely useful.

2. **Oil Price Volatility Assessments**—help countries assess the effects of oil price increases and heightened price volatility, including their ability to absorb price shocks.

3. **Climate Vulnerability Assessments**—help countries assess their energy sector vulnerability in the face of climate change, including changing average temperatures and precipitation, increasing variability, and extremes.

At the project and country levels, the desk reviews and field visits confirm the responsiveness of ESMAP:

- ESMAP appears to be adaptable and responsive to evolving global environmental trends that have affected the energy sector in Tanzania, insofar as they are reflected at the level of national interests. For example, the 2006 energy crisis (where Tanzania faced load shedding and lost an estimated 2 percent GDP) is named as a reason for focusing on energy security through a more diversified grid supply, which is directly related to ESMAP’s “Integration of SMEs” project and subsequent regulation adoption. While the cost of energy production and energy supplies can be vulnerable to global market trends and regional trade policies, the energy needs in Tanzania are so great that any contribution to expanding production or access will need to be designed with these changes in mind, rather than in response to them.
- To the extent that responsiveness to external changes is displayed through the nature of the activities that ESMAP undertakes, this occurs as a result of the government of India’s own responsiveness. Two examples of where responsiveness to change was shown were: (i) the launch of the CSP program, which followed very quickly after the government announced the setting up of the National Solar Mission under the National Climate Change Action Plan, and (ii) the launch of the low-carbon growth study, which followed on from the Gleneagles Summit where greater attention began to be paid to helping the G+5 countries (including India) curb their greenhouse gas emissions.
- Nepal is in the grips of an energy crisis that is profound even by the standards of South Asia. The proposed activities are part of the Bank’s strategy for helping the government respond to this crisis and to scale up support to energy sector development in Nepal. On the investment side, the Bank has provided a strong initial response to the crisis, delivering emergency financing, re-engaging in medium-large hydropower, and

galvanizing cooperation between Nepal and India for cross-border transmission (an activity of enormous strategic implications for Nepal in particular). A greater understanding of the Indian power market and the available opportunities for Nepali hydropower is essential to consolidating support for the proposed significant integration of the two countries' power systems. The two outreach and training activities proposed (*Support to Strategic Energy Sector Development*) seek to foster this greater understanding among sector decision makers and specialists as well as the public at large.<sup>202</sup>

- In Djibouti the proposed Electricity Sector Least-Cost Master Plan seems to be a very timely activity in light of the increasing supply deficit, fragmented initiatives to address the deficit, and lack of planning coordination.<sup>203</sup> The decision review meeting discussed the value from increased integration of Djibouti's electricity grid with Ethiopia. The meeting agreed that while there is a need for the country to maintain some domestic electricity generation capacity, the immediate focus of the government should unambiguously shift to maximizing electricity imports from Ethiopia. In the short run, the Bank needs to continue acknowledging and encouraging cooperation toward regional integration. This is also consistent with ESMAP objectives of regional integration.

In light of its success in adapting to such evolving global environment and external shocks, one of the potential challenges facing ESMAP is to keep an adequate focus at the same time on other long-term and slowly evolving but nevertheless crucial issues in the energy sector such as energy access/poverty.

### ***3.5.8. Extending ESMAP's benefits***

***To what extent can ESMAP-initiated activities be broadened to a wider and larger beneficiary group, and be leveraged to bring about even more benefits than originally intended without higher cost implications?***

Two key areas are identified for broadening the beneficiary group. One is to increase and improve on the dissemination and knowledge-sharing activities of ESMAP at the country and regional levels, and the other is to improve knowledge sharing with the donor group. Improvements can be made by making more information publicly available, through translations into local languages, through South-South exchange, by extending the reach of dissemination workshops, and by promoting ESMAP's website. Knowledge sharing with the donors could include regular workshops and advice provision.

Since ESMAP's project portfolio is so diverse, the actual and intended number of beneficiaries for different activities varies greatly. For example, in some cases the work may be considered sensitive and it is not appropriate to share the product with others, yet the longer-term outcome (such as a new policy or additional lending) may spread to a much wider set of beneficiaries. Therefore there is no one solution that will work for all activities in extending the beneficiary group.

The Evaluation Team has judged this against two criteria: one on the extent to which ESMAP does or can spread to a wider set of beneficiaries generally, and at minimal or no additional cost.

#### **Extent to which ESMAP-initiated activities can spread to a wider set of beneficiaries**

At the program level there is limited reporting on the amount of resources devoted to developing links with local beneficiary groups. The amount of resources dedicated to knowledge dissemination was reported until 2008 but has not been reported since then. Some evidence of the development of links between activities and beneficiary groups is provided at the project level.

More generally, there was some disappointment in the knowledge sharing and dissemination of ESMAP during the early years of this evaluation period. The 2005-07 review pointed out that during that period there were gaps in dissemination of ESMAP tasks and programs. In some instances, dissemination plans were articulated in the Concept Note but at conclusion, the team ran out of funds and dissemination could not be carried out as planned. The review stated that planning and funding for dissemination of ESMAP tasks continued to present challenges and

was the weakest area in the portfolio. “In two cases where the ESMAP tasks were carried out in collaboration with DEC, the team refused to include a plan for dissemination as the DEC rule is to plan for dissemination only after the draft report is ready. In both these cases the dissemination carried out by the team was excellent. The teams used a multiplicity of methods to carry out dissemination of the ESMAP tasks. In the case of an Indoor Air Pollution project in Bangladesh, the Task team leader disseminated the analytical work in multiple ways (reports, posters, guidelines, presentations, CDs, web-ready briefs), and at multiple events, including the 12 dissemination events and presentations provided below. However, it was surprising to note that none of the materials were translated into Bengali.”

During the desk review, it was clear that in many cases information that is produced for a (open) workshop is not posted on the ESMAP website, and in many cases there was no acknowledgement of the ESMAP funding or name on reports. The information is already in the public domain, so it would be very useful for others to access.

During the desk review of the 2005-07 portfolio, of the 48 cases that were studied there were only four activities that translated ESMAP reports into local languages. At that time, discussions with TTLs indicated that translation into local languages is an area that ESMAP provided support on during the Business Plan cycle that was found to be very valuable. Translation has also been highlighted as an issue in some of the field visits and also in the current desk review. Translation would ensure wider dissemination in the country or region: although many of the key clients can speak English, not all the stakeholders will be as fluent.

The recommendation made by the review team for 2005-07 still holds true, especially in light of evaluation interviews with ESMAP and Bank staff, that “ESMAP should pay close attention to dissemination of ESMAP products and publications and allow for planning and funding of dissemination in project design, plan for translation of ESMAP reports in local languages and build funding and budget at early stages, and plan for dissemination activities of the report or product after completion with a broader audience in mind.”

At a project level there is no reporting of the amount of resources devoted to developing stronger links between ESMAP activities and local beneficiaries. However, there is some mixed reporting on developing links and the dissemination activities associated with ESMAP projects. In only one case is there clear reporting on how successful the implemented dissemination and knowledge-sharing activities have been. In a limited number of cases the means by which a greater number of beneficiaries could be reached is recommended. A sample of project examples is provided below.

- The *EECI* seems to have made significant efforts in its outreach and dissemination. During the period from Dec 2008 to Jan 2011 EECI participated in 13 global fora. In addition it has developed its own website, which includes analytical tools, technical assistance and lending project support, and a case studies database. There does not seem to be any monitoring of the website, so the extent of usage/access by potential stakeholders is unknown. EECI has a partnership with Cities Alliance and also fosters information sharing with external global institutions.<sup>204</sup> EECI also has presentations to outline the demand, purpose, activities, and objectives of the EECI as housed in ESMAP.
- The *Economic Benefits of Electricity Supply* stated that “if more planners and policy makers in developing countries are able to access and use this model, then it’s highly likely to reach a larger audience and possible beneficiaries,” although the impact would be immeasurable.
- For the *Djibouti Energy Sector Masterplan*, the reviewers at the decision review meeting made two clear recommendations that would<sup>205</sup> widen the set of beneficiaries: The full report and Executive Summary should be translated into French; and a formal dissemination to the government and donors could be organized in Djibouti. It was also decided that CSOs should be included in the dissemination, for informational purposes.<sup>206</sup> However, client interest and capacity are limited, which was highlighted as a risk through the PCN review process.
- A stakeholder workshop was held to outline the building EE study in June 2011 for the Lebanon *Support to Implementation of Electricity Sector* project. The longer-term implications for the participants are unknown.<sup>207</sup>

- At the review of the concept note for *The Renewable Energy Education* project, two clear recommendations were made regarding beneficiaries: (i) a clear training needs assessment of the different target groups was needed, and (ii) the target group be widened to keep the utilities at the center of the process.
- A number of presentations on the *Liquid Biofuel* report have been made, both at international fora as well within the Bank. The events covered have been in the United States, Latin America, and Asia and include renewable energy events, biofuels, agriculture and trade events. The response to the presentations or numbers reached is unknown.
- The findings of the *Economic Benefits of Electricity* supply study would be presented in a report available for circulation both within the Bank and potentially to interested outsiders. The report would include possible applications of the findings to improve both the quality of economic analysis and the policies of governments with respect to electrification programs. In addition, preliminary and final results would be posted on the relevant thematic websites, and presented to interested staff through one or more brown-bag lunches.<sup>208</sup> As a potential tool for governments, it seems odd not to carry out some positive knowledge sharing of the product with potential client governments. There needs to be a way for those who are interested to learn that there is a relevant report and website.
- The main findings from the *Structuring the PPP in Natural Gas* were presented to the PM and Cabinet. Further beneficiaries were not relevant in this case. The PM endorsed findings which formed basis of government strategy for extending gas distribution network in Egypt.<sup>209</sup>

#### **Box 13 - How to Reach More Beneficiaries at No Extra Cost in India**

The guidelines produced under the project “Best Practice in Energy Efficiency Improvement in Coal-Fired Generation” have been widely disseminated among utilities, power generators, and regulatory authorities. There is therefore no limit to the number of India’s power plant operators who could adopt the best practice guidelines at no additional cost. Under the project “Regulatory and Planning Requirements for Rehabilitation of Coal-Fired Generation,” the regulatory options presented to and endorsed by the Forum of Regulators will continue to be available to any investor wishing to take advantage of the improved regulatory environment for energy efficient R&M. The benefits of this ESMAP activity can therefore spread freely.

The organizational transformation brought about in MSETCL under the project P111243 would appear to have the potential for spreading at no additional cost. The transmission companies in both Haryana and Punjab are actively engaging with the MSETCL contact person (who has now left MSETCL) with a view to undertaking similar organizational transformations within their own companies. The types of challenge faced by power transmission companies across India are likely to be broadly similar. It therefore seems likely that, given a suitably motivated ‘champion’ for change within the organization and a receptive senior management, the types of changes brought about by the ESMAP project within MSETCL could be repeated elsewhere, without the same need for the close involvement of ESMAP and external consultants to facilitate

In Tanzania there are examples of successful impact on a wider set of beneficiaries (box 14) as well as some more limited success in scale-up. One of the stated objectives of the *Lighting Rural Tanzania* competition was to support projects with a potential for scale-up, so it is to be expected that the benefits of projects supported under this initiative would have the potential to spread at minimal additional cost. The extent to which this potential was displayed by the projects examined during the mission was varied.

The provision of solar systems to dispensaries appeared to have the least potential for benefits to spread at no additional cost. It is unlikely that the dispensaries that did not receive solar systems under the project would be able to acquire them using their own resources, and those dispensaries that were provided with systems did not generate a significant revenue stream as a result (the revenue from providing phone charging services appears to be insufficient to finance significant expansion of the solar systems). Providing the remaining dispensaries in the region with solar systems, and expanding the systems already installed to be able to provide a full range of energy services (particularly refrigeration), would therefore appear to require a further injection of funds.

Several interviewees further remarked that without a comprehensive national renewable energy policy, many activities end up as one-off endeavors dependent on further donor support. EWURA suggested that ESMAP could

potentially provide further TA on this front, and encourage the government to develop its renewable energy policy supporting micro hydro, solar, biomass, and other small energy producers, and Zara Solar and ARTI shared similar sentiments.

### **Extent to which ESMAP-initiated activities can reach a wider set of beneficiaries without additional costs**

During the evaluation there were only a few identified methods and strategies for leveraging ESMAP activities to reach a larger number of beneficiaries for the same, or minimal, inputs. All the methods relate to improved knowledge sharing and dissemination. Examples in India and in Tanzania were particularly promising for what could be achieved at no additional cost. In the Indian examples (box 13) the methods to expand the impact seem to be linked to previous well-targeted dissemination activities that allow for the products to continue to circulate to new organizations. This implies that if the knowledge-sharing activities are well planned and targeted, the number of beneficiaries continues to grow beyond the project.

Since many activities already include dissemination workshops and some knowledge sharing, there is scope to widen this further. For example, in the Philippines the private sector was very interested in the topics under discussion yet felt they had not been invited to the workshops. Those that had attended were invited “second-hand.” Greater effort needs to be dedicated to the invitation lists to ensure that all the appropriate stakeholders are there.

In many cases, ESMAP activities will have the potential to spread over a wider set of beneficiaries, as a result of the outcomes from its activities, for example, improved regulation for renewable energy or through leveraged finance. This would be the case in both the Philippines and Morocco, where the private sector will be beneficiaries. These sets of beneficiaries, and increasing their number, can be achieved by both increasing the outcomes and by combining outcomes in one country or region. ESMAP already does this admirably; where support is provided for policy or strategy there is often also some finance leverage, and the two together allow for increased number of end beneficiaries.

In Peru the activities conducted have contributed to improve government methods, regulations, and programs, which will continue to impact a large number of beneficiaries in the future. As an example, interviews revealed that ESMAP has contributed to reactivate off-grid PV program by proposing new methodological solutions. Currently, FONER finances up to 90 percent of PV investment to power companies, and with the tariffs subsidized by the FOSE Cross Subsidy Fund (a tax on urban electricity bills feeds subsidies to rural areas), the system is sustainable. The subsidy allows consumers (i) to pay only 7 Peruvian soles per month instead of 35, and (ii) to cover the costs of the service provider that is responsible for the maintenance of the system and the quality of the service (electricity access). This sustainable approach will be developed further within FONER2, benefiting a larger number of rural communities and increasing rural access to electricity in Peru.

There is recognition that what may now be accepted as common practice in one country is still cutting-edge in another. Therefore, there is enormous scope for sharing the experiences from those further forward with countries now becoming interested. The Tanzanian experience (box 14) identifies how South-South knowledge exchange can be extremely useful and can impact a greater number of beneficiaries. A previous recommendation from 2000 is still valid now; that more ESMAP reports should be made available online, and any sensitive information deleted. For example, in the Philippines a report was developed on international experiences relating to feed-in tariffs and renewable portfolio standards. The report also included a section on recommendations for the Philippine context. Even if the Philippine’s recommendations were considered sensitive, the bulk of the report would be immensely useful to other client countries looking at developing their own renewable energy incentive systems.

The responses from the online survey as well as from the interviews also reflect the need for better dissemination, implying that the benefits would reach a wider group of beneficiaries. More than one-third of the 32 comments received on the online survey, relating to how to improve the impact of ESMAP, reflected on improvements with regard to knowledge dissemination:

1. The need for knowledge dissemination seminars/ workshops at the country level, for which there was no funding.
2. Helping clients to augment their capacity to assess and monitor the progress of the projects in increasing access and efficiency of energy. Capacity building of clients is one area ESMAP may invest in in the future to enhance its impact.
3. ESMAP needs to follow up with countries for developing country capacities and policy dialogue.
4. The ESMAP is not very well known to members external to the Bank.
5. More knowledge events in client countries.
6. Need better mechanisms for sharing across donors, across countries/regions.
7. A more deliberate and proactive design for knowledge dissemination to client governments and other stakeholders.
8. Through operational leveraging of all knowledge products by establishing partnerships, its implementation, and seeking feedback from client countries.
9. By sharing more best practices and lessons learned in other countries.
10. ESMAP has developed a lot of tools and training materials, but the staff is overloaded, so we have not found a time when these experiences could be brought to Indonesia in a training session.
11. There could be more focus on the dissemination and “after report” consultation of typical ESMAP studies. Where this was an integral part of the ESMAP activity, results were greater.
12. On sharing lessons learned and best practices, there is a need to enhance the way to package them in a more user-friendly manner and come up with innovative approaches to communicate, disseminate, and outreach with regard to these tools (the website is not enough, but also not easy to navigate).
13. On South-South knowledge exchanges, these tools and other products need to be used in a more effective way. In this regard, ESMAP may need to strengthen the collaboration and coordination with the World Bank Institute (CB arm of the World Bank), which can help on these matters and leverage these efforts to reaching out to external clients.

#### **Box 14 - Reaching More Beneficiaries in Tanzania**

ESMAP could leverage for greater beneficiary impact at no additional cost to support further South-South exchange (along the lines of the Sri Lanka SME exchange). No matter how developed the country in Asia, the types of issues the country has faced are highly relevant to the Tanzanian context. Partnering with efforts to reduce deforestation, and launch early awareness and education campaigns on energy efficiency and renewable energy are two other suggestions for ESMAP to reach a wider set of beneficiaries in Tanzania.

The business model used by CAMCO in the Lighting Rural Tanzania project would seem to have the greatest potential for benefits to spread at minimal additional cost. The model involves creating revolving loan funds operated by local SACCOS, where the repayments made by households for the solar systems they have acquired create a fund that is used to purchase the next tranche of systems. The initial capitalization of these funds was made using AFREA funds, but if the repayment default rate is kept low, the revolving funds could continue to operate for many years. As a result, the number of end-users reached by the project should continue to increase with no additional donor input. Furthermore, the intention is that the demonstration effect of the project will induce other SACCOS that were not originally involved to initiate similar revolving funds using their own capital.

Another method identified for extending the benefits and beneficiaries of ESMAP’s activities was to increase the knowledge sharing with the donors. In a constrained financial environment where staff are being cut in donor agencies, the need for knowledge sharing is greater than ever. Because ESMAP has a wealth of experience, it is in a position to provide advice to donors and to act as a “knowledge bank” for its own activities. Indirectly, this would have a significant impact on activities carried out by the donors and therefore impact a much greater number of beneficiaries. This is an issue that did come out in interviews with CG members who pointed out the need to strengthen the role of ESMAP as a knowledge-sharing platform outside the Bank.



### ***3.5.9. Lessons learned and recommendations on program sustainability***

#### ***Main Lessons Learned on Program Sustainability***

- Processes of internal learning in organizations must be devoted adequate attention to be effective and contribute to sustainable institutional growth. This requires a proactive approach to the management of both the demand for, and the offer for, learning and knowledge management. This is crucial to organizational effectiveness and improvement, especially in the context of fast-growing institutions with a high staff turnover rate.
- When knowledge-sharing products are well planned and targeted within specific interventions, the number of beneficiaries from such knowledge generation and its application to concrete situations can continue to grow beyond the intervention at no or little extra cost to the original promoter, widening and sustaining the impacts of the knowledge and innovations created and/or supported.

#### ***Recommendations for Program Sustainability***

- ESMAP should strengthen its process of risk identification and management through its new M&E system.
- Two key areas are identified for broadening the beneficiary group. One is to increase and improve on the dissemination and knowledge-sharing activities of ESMAP at the country and regional levels, and the other is to improve knowledge sharing with the donor group. Improvements can be made by ESMAP in that respect through making more information publicly available, through translations into local languages, through South-South exchange, through extending the reach of dissemination workshops, and by promoting ESMAP's website. Knowledge sharing with the donors could include regular workshops and advice provision to provide more dynamism to the donor knowledge-sharing platform.

## 4. Lessons learned

The Evaluation Team has drawn the following main lessons learned from the analysis provided in this report, as they relate to the main evaluation criteria retained:

### *Relevance*

1. In order to avoid dilution of the relevance of ESMAP in view of the specific niche they were meant to fill, a balance must constantly be struck between responsiveness to development and sector challenges on the one hand, and realistic focus in view of financial and human resources available on the other hand.
2. Consistency in communicating objectives is very important to the coherence of ESMAP's main business lines in the eyes of its clients and main stakeholders, even if they do not need to or care to know precisely how these objectives are structured within the organization. Concurrently, clearly communicating within the organization on the link between objectives and how results at the activity level contribute to them is paramount to ensure accountability to program impacts and outcomes and focus in the use of limited resources.

### *Effectiveness*

3. Actors involved in the governance structures of ESMAP need a collective agreement on how ESMAP's various comparative advantages are balanced to deliver high-level outcomes to clients and in-country beneficiaries, and focus resource allocation accordingly. For instance, ESMAP must accomplish two balancing act in coming years:
  - a. Continue to focus on financial leveraging and operational alignment with the World Bank, while ensuring at the same time it retains an experimental and innovation focus, and continue to “push the envelope” on marginal and emerging energy issues
  - b. Serve the country client in a way that responds both to governments (key ministry or officials) and the broader in-country population with the greatest need relevant to energy.

### *Efficiency*

4. Detailed and informative assessments of value for money of different types of activities require detailed information on the costing and level of achievement of results for each category of activities.
5. The MDTF is one of the modalities at ESMAP's disposal to help streamline coordination, resource management, and more strategic work planning processes.

### *Institutional Arrangements and Management*

6. In multilateral trust funds, bilateral donors tend to take a distant approach to monitoring the use that is made of their resources. In such cases, a credible TA function and a robust M&E system become crucial mechanisms and tools to provide a sound and third-party input to assist them in exercising their accountability and strategic management function as member of the Consultative Group. Adequate means must thus be put at the disposal of such mechanisms and tools to ensure they can provide that sound and third-party input and contribute to the required checks and balances in the overall governance system of the trust fund.
7. In order to provide for effective and efficient strategic management and development of a program, a good level of predictability in resource availability over a full business planning cycle is paramount. In the absence of predictability, management must rely on more conservative management practices at various levels that may well impede the growth, flexibility, and even the potential impact of a program, especially in an area where demand for advice and services is high and potential to leverage change is significant and must be timely.

*Sustainability*

8. Processes of internal learning in organizations must be devoted adequate attention to be effective and contribute to sustainable institutional growth. This requires a proactive approach to the management of both the demand for, and the offer for, learning and knowledge management. This is crucial to organizational effectiveness and improvement, especially in the context of fast-growing institutions with a high staff turnover rate.
9. When knowledge-sharing products are well planned and targeted within specific interventions, the number of beneficiaries from such knowledge generation and its application to concrete situations can continue to grow beyond the intervention at no or little extra cost to the original promoter, widening and sustaining the impacts of the knowledge and innovations created and supported.

## 5. Recommendations

In light of its analysis provided in this report, the Evaluation Team recommends the following to improve performance of ESMAP vis-à-vis each of the evaluation dimensions covered:

### *Relevance*

1. While continuing to adapt to changing global and regional concerns (steady high oil prices, new opportunities offered by natural gas, gender issues), ESMAP should maintain a clear and well-delineated area of concentration in order to avoid an overextension of resources, including funding and expertise. ESMAP should reinforce its position in those areas with greatest gain relative to need and its comparative advantage, such as with global cross-sectoral work and well-targeted innovative tools and models.
2. In order to keep a stronger orientation on strategic-level focus, ESMAP program objectives should be more clearly and systematically referred to in project planning documents and outputs. Clarity and consistency are especially important to integrating new programs into the Business Plan, in particular through relevant wording in the names of the new programs and well-identified positioning within the program and result framework.
3. ESMAP should pursue and reinforce efforts to mainstream gender and social aspects into project planning and implementation, for example, by integrating social and gender issues in project templates (Project Concept Note, Project Summary Form), and implementing the follow-on recommendations from the workshop(s) under the Gender & Energy Development Strategies Program. M&E reporting should include gender disaggregated and social indicators at the project level, in order to monitor actual results.

### *Effectiveness*

4. ESMAP continues to need a comprehensive communications and knowledge management plan and dissemination protocol for papers, reports, and other activities. Implementation of such a plan will not only improve visibility but it will also advance the reach of outputs and outcomes by engaging a wider audience.
5. In order to account for and track progress along key ESMAP high-level objectives, management must either devote further resources to identifying a standard methodology for assessing the quality and potential of up-stream activities and products, or increase the depth and frequency of impact assessments of follow-on results long after project closing, or both.

### *Efficiency*

6. In order to collect and assess meaningful results on efficiency of ESMAP operations and management, ESMAP should improve project-level reporting on outputs, costs, and outcomes and link this improved reporting to expected and actual cost data.

### *Institutional Arrangements and Management*

7. Building on the work that has already been done over the current Business Plan period to streamline and ensure a more coordinated approach to business and work planning, the CG meeting structure and agenda should be adjusted. It should accommodate the need for more donor interaction to discuss strategic issues among donors themselves as a first step during meetings, and to allow for a consolidated discussion of such issues with ESMAP management as a second step.
8. ESMAP should expand the representation on its CG, not only to emerging donors, but also integrate recipient country representation. This would ensure that their views are directly carried into the strategic-level discussions and decisions on the future of the program and into an enhanced North-South dialogue framework.

Furthermore, it urges ESMAP to consider the need to continue to integrate recipient country perspectives from different categories of stakeholders directly in TAG assessments and provide the TAG with the resources required to ensure this.

9. The Evaluation Team echoes concerns already expressed by the TAG in 2011 and recommends that a more predictable pledging and contribution system by donors under a multiyear framework be instituted. It would go a long way in making human resources, business, and activity planning more in line with evolving and emerging needs in the energy sector.

#### *Sustainability*

10. ESMAP should strengthen its process of risk identification and management through its new M&E system.
11. Two key areas are identified for broadening the beneficiary group. One is to increase and improve on the dissemination and knowledge-sharing activities of ESMAP at country and regional level, and the other is to improve knowledge sharing with the donor group. Improvements can be made by ESMAP in that respect by making more information publicly available, translations into local languages, South-South exchange, extending the reach of dissemination workshops, and promoting ESMAP's website. Knowledge sharing with donors could include regular workshops and advice provision to provide more dynamism to the donor knowledge-sharing platform.

# Annex 1 - Evaluation Matrix

Table A1 – 1 Evaluation Matrix

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
<p>Q1a. To what extent are ESMAP's objectives and the design of the program consistent with current global/regional challenges and concerns in the energy sector and with the needs and priorities of its client countries and groups? <i>(Relevance, Sustainability)</i></p> <p><b>Level of analysis: input/design, secondary outcomes</b></p>	<p>J1ai. ESMAP addresses identified global/regional challenges in the energy sector</p>	<p><b>1. RELEVANCE</b></p> <ul style="list-style-type: none"> <li>Coherence matrix showing ESMAP objectives, its services and products, and identified global or regional concerns or challenges in the energy sector</li> <li>Evidence of adjustment of ESMAP activities during implementation because of new information on challenges or concerns</li> <li>Evidence of adjustments in ESMAP design of or strategy for thematic areas or type of products because of new information from clients on challenges or concerns</li> <li>Change in level of concern over energy sector challenges faced by (government) clients prior to and following ESMAP intervention(s)</li> <li>Evidence of client countries integrating ESMAP products or services into national decision making, policy or strategy</li> <li>Coherence matrix between national energy priorities and ESMAP priorities</li> <li>Perceptions of in-country and/or regional non-government groups, including energy sector practitioners, CSOs, NGOs, communities, local government, as to whether ESMAP responds to national priorities</li> </ul>	<p>Desk review</p> <p>Field visits</p> <p>Interviews</p> <p>Field visits</p> <p>Interviews</p> <p>Field visits</p> <p>Interviews</p> <p>Field visits</p> <p>Desk review</p> <p>Interviews</p> <p>Field visits</p> <p>Desk review</p> <p>Interviews</p> <p>Field visits</p> <p>Desk review</p> <p>Interviews</p> <p>Field visits</p>	<p>ESMAP program documents and regional strategy or analysis documents</p> <p>In selected countries/projects</p> <p>ESMAP-selected TTIs and relevant peers and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP-selected TTIs and relevant peers and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP clients and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, national energy policies</p> <p>ESMAP-selected staff and clients/stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, national energy policies</p> <p>ESMAP-selected TTIs and relevant peers and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP partners and other organizations, stakeholders</p> <p>In selected countries/projects</p>

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
<p>Q1b. How successfully has ESMAP identified and developed new business lines and program priorities? To what extent are the business lines and program priorities appropriate for achieving its objectives? (<i>Relevance, Sustainability, Performance</i>)</p> <p><b>Level of analysis: outcomes relative to outputs</b></p>	<p>J1bi. ESMAP identifies new business lines and program priorities</p> <p>J1bii. ESMAP develops new business lines and program priorities</p>	<ul style="list-style-type: none"> <li>Extent of non-government groups' (above) buy-in to national priorities as expressed in the CAS/PRSP</li> <li>Type of system or process in ESMAP for opening new work streams or starting new programs               <ul style="list-style-type: none"> <li>based on client needs or priorities</li> <li>based on other high-level objectives (low-carbon growth, influence World Bank lending)</li> </ul> </li> <li>Examples of how often fully articulated new ESMAP business models and programs move from a design stage into piloting or implementation</li> </ul>	<p>Interviews</p> <p>Field visits</p> <p>Interviews</p> <p>On-line survey</p> <p>Desk review</p> <p>Interviews</p> <p>Desk review</p> <p>Field visits</p> <p>Desk review</p> <p>Interviews</p> <p>Field visits</p> <p>Desk review</p> <p>Interviews</p>	<p>ESMAP partners and other organizations</p> <p>In selected countries/projects</p> <p>World Bank TTLs managing ESMAP projects, partners, clients, and other organizations</p> <p>World Bank TTLs managing ESMAP projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected TTLs and relevant peers and stakeholders</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>In selected countries/projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected TTLs and relevant peers and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP staff, partners, clients, peers. and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP relevant peers, partners, and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP selected TTLs and relevant peers and stakeholders</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p>
<p>Q1c. Does ESMAP have a comparative advantage in the energy sector, and if so, was it correctly defined and articulated? To what extent is ESMAP competing with other programs or entities that are providing similar goods and services? (<i>Relevance, Performance</i>)</p> <p><b>Level of analysis: inputs, secondary outcomes</b></p>	<p>J1ci. ESMAP activities demonstrate a comparative advantage in energy sector activities in the areas where they offer products or services</p>	<ul style="list-style-type: none"> <li>Degree of coherence between ESMAP new business models and programs and ESMAP's overall objectives</li> <li>Extent of use made by ESMAP of all possible relevant information in the development of new models and programs, highlighting possible risks and assumptions</li> <li>Other possible options for clients to meet their needs, in addition to ESMAP globally and in given country, in goods and services area covered by ESMAP</li> <li>Perceived level of performance of other similar programs in the country, if any</li> <li>Relative space occupied by ESMAP in its product and service lines in the country, as compared to other similar programs funded by others</li> </ul>	<p>Field visits</p> <p>Interviews</p> <p>Field visits</p> <p>Interviews</p> <p>Field visits</p> <p>Interviews</p> <p>Field visits</p> <p>Interviews</p> <p>Desk review</p>	<p>In selected countries/projects</p> <p>ESMAP staff, partners, clients, peers. and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP relevant peers, partners, and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP selected TTLs and relevant peers and stakeholders</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p>

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
	J1cii. ESMAP has a clear identity and niche	<ul style="list-style-type: none"> <li>Perceived relative advantages of working with ESMAP over other competitive options, according to clients and other stakeholders</li> </ul>	Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, annual reports, business plans
	J1di. ESMAP strategy documents state how objectives enhance comparative advantage	<ul style="list-style-type: none"> <li>Level of consistent strategic relationship between ESMAP objectives and its identified comparative advantage</li> </ul>	Interviews Field visits Field visits	ESMAP relevant peers, partners, and stakeholders In selected countries/projects In selected countries/projects
Q1d. Are the stated objectives of ESMAP consistent with this comparative advantage clearly defined in strategy documents? Are the program results measurable?	J1dii. ESMAP program results are measurable	<ul style="list-style-type: none"> <li>Number and type of performance measurement indicators for monitoring of implementation of strategy and intended results in planning documents</li> <li>Level of reporting on performance measurement indicators for monitoring of implementation of strategy and intended results stated in planning documents</li> </ul>	Desk review Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
[NB: Q1c needs to be answered prior to Q1d.] <i>(Relevance, Coherence)</i> <b>Level of analysis: inputs/design in relation to primary outcomes, secondary outcomes</b>	J1ei. ESMAP plans reflect program objectives at each level of project planning and implementation	<ul style="list-style-type: none"> <li>Extent to which program objectives are reflected in each stage of planning documents</li> <li>Extent to which ESMAP program objectives are reflected in planned activities and services</li> <li>Extent to which ESMAP program objectives are reflected in planned outputs/products</li> </ul>	Desk review Desk review Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
Q1e. In each area of the work plan, are the identified activities, outputs, and products appropriate to the objectives of the program? <i>(Relevance)</i> <b>Level of analysis: design/input in relation to secondary outcomes</b>	J1fi. ESMAP's work program identifies	<ul style="list-style-type: none"> <li>Proportion of planning documents for activities, programs, or projects that link gender and social issues to ESMAP activities in project documents</li> </ul>	Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
Q1f. To what extent has ESMAP incorporated and promoted gender				



Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
<p>and social issues under its work program? (<i>Relevance, Sustainability</i>)</p> <p><b>Level of analysis: input/design, outputs and outcomes</b></p>	<p>how its activities, outputs, and/or outcomes are relevant to gender and social issues</p> <p>J1fi. ESMAP's work program promotes the integration of gender and social issues into its activities/outputs and/or outcomes</p>	<ul style="list-style-type: none"> <li>Proportion of activities, programs, or products that integrate gender and social issues in practice/implementation (assuming some consistency/overlap with above)</li> <li>Perceived level of integration of gender and social issues into ESMAP work, according to clients and other stakeholders</li> <li>Change in level of interest or weight placed on social and gender issues by clients and other stakeholders before and after ESMAP interventions</li> </ul>	<p>Desk review</p> <p>Field visits</p> <p>Interviews</p> <p>Field visits</p> <p>Interviews</p> <p>Field visits</p>	<p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>In selected countries/projects</p> <p>ESMAP-selected TTLs and relevant peers and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP clients and stakeholders</p> <p>In selected countries/projects</p>
<b>2. EFFECTIVENESS</b>				
<p>Q2a. To what extent does ESMAP management have the flexibility to design and effectively execute the activities to achieve program goals? (<i>Effectiveness, Efficiency, Performance</i>)</p> <p><b>Level of analysis: activities and outputs relative to operations/management</b></p>	<p>J2ai. ESMAP management exhibits flexibility in reaching program objectives</p>	<ul style="list-style-type: none"> <li>Examples of changes made in approach or strategy by ESMAP management after learning new information</li> </ul>	<p>Interviews</p> <p>Desk review</p> <p>Field visits</p>	<p>ESMAP-selected TTLs and relevant peers and stakeholders</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>In selected countries/projects</p>
<p>Q2b. To what extent do products, outputs, and activities achieve the intended objectives? (This aspect to be assessed across all work plans.) (<i>Effectiveness, Impacts, sustainability</i>)</p> <p><b>Level of analysis: outcomes and impacts in relation to outputs</b></p>	<p>J2bi. ESMAP has achieved its objectives across all work programs</p>	<ul style="list-style-type: none"> <li>Degree of achievement of ESMAP high-level objectives in: <ul style="list-style-type: none"> <li>- energy access</li> <li>- energy poverty</li> <li>- energy security</li> </ul> </li> <li>Degree of achievement of ESMAP secondary</li> </ul>	<p>Field visits</p> <p>Interviews</p> <p>On-line survey</p> <p>Desk review</p> <p>Field visits</p> <p>Interviews</p>	<p>In selected countries/projects</p> <p>ESMAP-selected TTLs and relevant peers and stakeholders</p> <p>World Bank TTLs managing ESMAP projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>In selected countries/projects</p> <p>ESMAP-selected TTLs and relevant peers and stakeholders</p>

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
		<p>objectives:</p> <ul style="list-style-type: none"> <li>- influence over World Bank lending</li> <li>- influence over/enhanced government policies/strategies</li> <li>- improved client capacity</li> <li>- cutting edge solutions adopted by client</li> </ul>	<p>On-line survey</p> <p>Desk review</p>	<p>relevant peers and stakeholders</p> <p>World Bank TTTLs managing ESMAP projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p>
<p>Q2c. To what extent does the program have an effective monitoring, reporting and evaluation framework including measurable indicators, systematic and regular processes for collecting data, and feedback processes to facilitate decision making and learning? <i>(Effectiveness, Sustainability, Management and organizational structure)</i> <b>Level of analysis: all</b></p>	<p>J2ci. ESMAP has a functional M&amp;E system</p>	<ul style="list-style-type: none"> <li>• Degree of achievement of ESMAP in the role/function of: <ul style="list-style-type: none"> <li>- think tanks</li> <li>- knowledge clearinghouses</li> <li>- operational leveraging</li> </ul> </li> <li>• ESMAP evaluation framework including indicators: <ul style="list-style-type: none"> <li>- at the program level</li> <li>- at the project level</li> <li>- measurable (achievable, reportable, timely, specific)</li> </ul> </li> <li>• Existence of a program-level ESMAP M&amp;E system, including relevant processes and mechanisms for: <ul style="list-style-type: none"> <li>- monitoring</li> <li>- reporting</li> <li>- data collection &amp; management</li> <li>- feedback and learning</li> </ul> </li> <li>• Internal learning achieved from the use of the M&amp;E system by relevant individuals and ways they have learned</li> <li>• Actual use of the M&amp;E system to change or improve decision-making/ adaptive management</li> </ul>	<p>On-line survey</p> <p>Field visits</p> <p>Interviews</p> <p>Desk review</p> <p>Desk review</p> <p>Interviews</p> <p>Desk review</p> <p>Interviews</p> <p>Desk review</p> <p>Interviews</p>	<p>World Bank TTTLs managing ESMAP projects</p> <p>In selected countries/projects</p> <p>ESMAP-selected TTTLs and relevant peers and stakeholders</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected management and staff</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected managers and staff</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p>
<p>Q2d. How has the program fulfilled its</p>	<p>J2cii. ESMAP's M&amp;E system is used for feedback, adaptive management, and learning</p>		<p>Desk review</p> <p>Interviews</p> <p>Interviews</p>	<p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected staff, managers</p> <p>ESMAP-selected staff, managers</p> <p>ESMAP-selected staff, managers</p>
		<p>This summary evaluation question on effectiveness to be answered based on data collected and analyses above, and to incorporate information collected on the indicator below, including:</p>		

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
<p>strategic role? How can this role be made more effective in the future, and what are the related options and possibilities going forward? (<i>Effectiveness, Role, Relevance</i>)</p> <p><b>Level of analysis: secondary outcomes</b></p>	<ul style="list-style-type: none"> <li>Recommendations of future options to come out of evaluation process</li> <li>Perception of clients and partners on the extent to which ESMAP fulfills its intended strategic role</li> </ul>			
<p>Q2c. Which activities are most effective in contributing to stated objectives, what are the characteristics of these activities, and to what extent have they been replicated, or could they be replicated, in other work plans (i.e., in other regions or thematic areas)? (<i>Effectiveness, Sustainability</i>)</p> <p><b>Level of analysis: activities and outputs relative to primary and secondary outcomes</b></p>	<p>J2ei. ESMAP activities consistently contribute to stated objectives</p>	<ul style="list-style-type: none"> <li>Relative achievement/performance of various activities/outputs toward reaching outcomes</li> <li>Common characteristics among those activities/outputs that are most effective in achieving objectives</li> </ul>	<p>Field visits Interviews</p> <p>Desk review</p> <p>Field visits Interviews</p> <p>Desk review</p>	<p>In selected countries/projects ESMAP-selected TTLs and relevant peers and stakeholders who are aware of ESMAP activities/products ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs In selected countries/projects ESMAP-selected TTLs and relevant peers and stakeholders who are aware of ESMAP activities ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p>
	<p>J2eii. ESMAP activities that achieve objectives are replicable</p>	<ul style="list-style-type: none"> <li>Replication of activities with high levels of achievement toward objectives in other countries/interventions</li> <li>Actual levels of achievement of activities that were adapted/applied to other countries/interventions</li> <li>Perceptions of clients and other partners to the</li> </ul>	<p>Desk review Field visits Interviews</p> <p>Field visits Interviews</p> <p>Field visits Interviews</p> <p>Desk review</p> <p>Field visits</p>	<p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs ESMAP-selected TTLs and relevant peers and stakeholders In selected countries/projects ESMAP-selected TTLs and relevant peers and stakeholders ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs In selected countries/projects</p>

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
Q2f. To what extent has the transition to core and/or programmatic funding facilitated flexibility and effectiveness in program planning and management? <i>(Effectiveness, Management structure, Performance, Efficiency, Sustainability)</i> <b>Level of analysis: activities through primary outcomes</b> [NB: Unlikely that secondary outcomes could have been met since this change]	J2fi. ESMAP's programmatic funding has brought flexibility and effectiveness to the program	effectiveness of those activities that were replicated from previous interventions  <ul style="list-style-type: none"> <li>Examples of improvements made to ESMAP program planning or management flexibility or effectiveness under the new programmatic funding</li> </ul>	Interviews	ESMAP-relevant partners, and stakeholders
Q2g. How effective are ESMAP's linkages to the Bank operations, and to what extent are these linkages established at the country or local levels? <i>(Effectiveness, Role, Sustainability)</i> <b>Level of analysis: all</b>	J2gi. ESMAP activities systematically link to World Bank operations	<ul style="list-style-type: none"> <li>Internal perceptions of program planning or management flexibility or effectiveness of ESMAP since the change to programmatic funding</li> </ul>	Interviews	ESMAP program manager(s), resource management staff, CG members, TAG
			Field visits	In selected countries/projects
			Field visits	In selected countries/projects
			Interviews	ESMAP-selected TTLs and relevant peers and stakeholders
			On-line survey	World Bank TTLs managing ESMAP projects
			Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
			Interviews	ESMAP partners and stakeholders who are aware of ESMAP activities/products
			Field visits	In selected countries/projects
			Field visits	In selected countries/projects
			Interviews	ESMAP-selected TTLs and relevant peers and stakeholders
Q2h. To what extent has ESMAP, directly	J2hi. ESMAP has	<ul style="list-style-type: none"> <li>Relationships, partner, and other local linkages formed through ESMAP activities that are still functional</li> </ul>	Field visits	In selected countries/projects
			Field visits	In selected countries/projects
			Interviews	ESMAP-selected TTLs and relevant peers and stakeholders
			Field visits	In selected countries/projects
			Interviews	ESMAP-selected TTLs and relevant peers and stakeholders

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
<p>or indirectly, influenced World Bank lending operations and investments from the private sector and the donor community?</p> <p><i>(Effectiveness, Harmonization/Coordination)</i></p> <p><b>Level of analysis: all</b></p>	<p>influenced World Bank lending operations</p>	<p>new themes in the energy sector at the global level or in given country</p> <ul style="list-style-type: none"> <li>● Ratio of World Bank investment leveraged by ESMAP</li> <li>● Perception among other World Bank staff as to whether ESMAP has influenced their lending operations</li> </ul>	<p>Desk review</p> <p>Desk review</p> <p>Interviews</p> <p>On-line survey</p>	<p>relevant peers and stakeholders, CG members</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected TTIs, staff, partners</p> <p>World Bank TTIs managing ESMAP projects</p>
	<p>J2hii. ESMAP has influenced private sector investment</p>	<ul style="list-style-type: none"> <li>● Examples of ESMAP activities, products, or services as inputs leading to private sector investments in new themes in the energy sector at the global level or in given country</li> </ul>	<p>Interviews</p> <p>Field visits</p> <p>Desk review</p> <p>Desk review</p>	<p>ESMAP-selected TTIs and relevant peers and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p>
	<p>J2hiii. ESMAP has influenced the donor community</p>	<ul style="list-style-type: none"> <li>● Perception of the private sector as to whether ESMAP has influenced their activities and investments</li> <li>● Examples of ESMAP activities, products, or services as inputs to donor activity or interests in new themes in the energy sector at the global level or in a given country</li> <li>● Level of non-World Bank investment by other multilateral or bilateral organizations in new themes brought about by ESMAP</li> </ul>	<p>Interviews</p> <p>Field visits</p> <p>Desk review</p> <p>Desk review</p> <p>Interviews</p> <p>Field visits</p> <p>Desk review</p> <p>Desk review</p> <p>Interviews</p> <p>Field visits</p> <p>Desk review</p>	<p>Private-sector partners, peers, clients familiar with products/outputs produced in partnership with ESMAP</p> <p>In selected countries/projects</p> <p>ESMAP-selected TTIs and relevant peers and stakeholders</p> <p>In selected countries/projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected TTIs and relevant peers and stakeholders, donors</p>

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
		<ul style="list-style-type: none"> <li>Perception of ESMAP donors as to whether it has influenced their overall energy sector support beyond ESMAP and World Bank</li> <li>Perceptions of various (non-World Bank) MLO and bilateral in-country staff as to whether ESMAP has influenced their activities or objectives in that country</li> </ul>	Interviews  Interviews  Field visits	ESMAP CG donor members  ESMAP partners, peers, and staff of other donors in-country  In selected countries/projects
<b>3. EFFICIENCY</b>				
Q3a. To what extent are the impacts and benefits arising from ESMAP activities commensurate with the level of effort and resources expended? <i>(Efficiency, Relevance)</i>  <b>Level of analysis: outcomes and impacts relative to inputs/activities</b>	J3ai. ESMAP results achieved (outcomes and impacts), and their leveraging effects on investments in the targeted fields, justify the investment	<ul style="list-style-type: none"> <li>Program level of achievement (intended and unintended outcomes and impacts)</li> <li>Overall investments (funding, time, other resources) and ratio of investment leveraged in sub-sectors of interest</li> <li>Number of planned vs. implemented projects/activities</li> <li>Timeline for design, appraisal, through implementation and completion of projects/activities (project cycle)</li> </ul>	Desk review  Field visits  Desk review  Desk review  Interviews	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs  In selected countries/projects  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs  ESMAP-selected TTLs and relevant staff
Q3b. What are the most cost-effective areas of ESMAP operations (by country, region, or thematic area of work, including partnerships)? <i>(Effectiveness, Management and operations)</i>  <b>Level of analysis: inputs relative to outputs/outcomes</b>	J3bi. ESMAP operations are cost-effective relative to the outputs, and results achieved (outcomes and impacts), and their leveraging effects on investments in	<ul style="list-style-type: none"> <li>Evidence of clear roles and responsibilities for operational and management structure</li> <li>Perceptions as to cost-effectiveness of program prior to and following the change to a MDTF (ETFP)</li> <li>Level of execution of program budget</li> <li>Percentage of budget for management and operations (vs. research, KM, other activities)</li> </ul>	Desk review  On-line survey  Interviews  Interviews  Desk review	World Bank TTLs managing ESMAP projects  ESMAP-selected staff  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs  ESMAP program manager(s), resource management, CG members, TAG  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
	the targeted fields	<ul style="list-style-type: none"> <li>Leveraging effect on investment per:                             <ul style="list-style-type: none"> <li>- country</li> <li>- region</li> <li>- thematic area of work</li> </ul> </li> <li>Expenditures per unit of output across:                             <ul style="list-style-type: none"> <li>- country</li> <li>- region</li> <li>- thematic area of work (including partnerships)</li> </ul> </li> </ul>	Desk review  Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
<b>4. INSTITUTIONAL ARRANGEMENTS AND MANAGEMENT</b>				
Q4a. How appropriate and effective are ESMAP's organizational structure and staffing profile in realizing a relevant, effective, and efficient business plan? What changes, if any, are needed to ESMAP's organizational structure and staffing profile to carry out its mandate?  <i>(Performance, Management and operations)</i>	J4ai. ESMAP's organizational structure is conducive to its business plan and mandate	<ul style="list-style-type: none"> <li>Degree of fulfillment of goals according to business plan (over evaluation period)</li> </ul>	Interviews  Desk review  On-line survey  Field visits	ESMAP-selected management, including former ESMAP managers, TAG, current and former SEG directors, CG members, Global GPPs  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs  World Bank TTLs managing ESMAP projects  In selected countries/projects
Level of analysis: <i>inputs relative to outputs/outcomes</i>	J4aii. ESMAP's staff profile is conducive to its business plan and	<ul style="list-style-type: none"> <li>Relationship between organizational structure and fulfillment of business plan/mandate:                             <ul style="list-style-type: none"> <li>- formation or dissolution of teams or work plans in order to fulfill or drop specific business plan objectives</li> <li>- frequency and purpose of staff meetings</li> <li>- number of staff and time spent on administrative tasks</li> <li>- number of staff and time spent on knowledge or information/database management</li> <li>- evidence of bottlenecks or barriers to decision-making (e.g, accessibility of senior staff/managers, ease of resource management systems)</li> </ul> </li> <li>Evidence that HR/hiring is directly linked to program-level strategic objectives</li> </ul>	Interviews  Desk review	ESMAP-selected management, including former ESMAP program managers, TAG, current and former SEG directors, CG members, Global GPPs  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
			Interviews	ESMAP-selected management, including former ESMAP program managers, TAG, current and former SEG directors, CG members

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
	mandate	<ul style="list-style-type: none"> <li>Client satisfaction with ESMAP staff:               <ul style="list-style-type: none"> <li>- performance in reaching mutual goals/objectives</li> <li>- receptiveness/accessibility</li> <li>- abilities/capabilities/skills</li> <li>- expertise/applicable knowledge</li> <li>- efficiency and timeliness</li> <li>- other factors</li> </ul> </li> </ul>	Interviews	ESMAP partners and stakeholders, Global GPPs
Q4b. How effectively has ESMAP management accountability been exercised, and how well is M&E built into programming and strategy to strengthen accountability? <i>(Performance, Management and operations)</i>	J4bi. ESMAP has an appropriate management accountability system	<ul style="list-style-type: none"> <li>Number and type of mechanisms or systems in place for holding ESMAP management and TTLs accountable for their roles and responsibilities</li> </ul>	Interviews	ESMAP-selected management, TAG, current and former SEG directors, CG members
<b>Level of analysis: inputs relative to outputs/outcomes</b>		<ul style="list-style-type: none"> <li>Examples of incidents when accountability measures or systems revealed mismanagement</li> </ul>	Interviews	ESMAP-selected management, staff
		<ul style="list-style-type: none"> <li>Percentage of budget spent on M&amp;E systems</li> </ul>	On-line survey	World Bank TTLs managing ESMAP projects
	J4bii. ESMAP's M&E system enables accountability as a part of regular programming and strategy	<ul style="list-style-type: none"> <li>Evidence of use of M&amp;E/reporting information to               <ul style="list-style-type: none"> <li>- make management decisions/adaptive management</li> <li>- inform strategy</li> <li>- inform programming or planning</li> <li>- other</li> </ul> </li> <li>Frequency of reporting, updating, or use of M&amp;E systems for accountability purposes</li> </ul>	Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
			Interviews	ESMAP-selected management, including former ESMAP program managers, TAG, current and former SEG directors, CG members
			Interviews	ESMAP-selected management, including former ESMAP directors, TAG, SEG directors, and former CG chairs
	J4ci. The CG is a suitable and effective governing body to fulfill ESMAP's mandate	<ul style="list-style-type: none"> <li>Frequency and quality of outputs of CG meetings</li> </ul>	Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
Q4c. How well does the CG operate as a primary governance body, and what are the recommendations for improving the effectiveness and efficiency of the existing structure? <i>(Performance, Governance, Management and</i>		<ul style="list-style-type: none"> <li>Portion of CG decisions that are integrated into programmatic design/strategic direction of ESMAP</li> </ul>	Interviews	ESMAP-selected management, including former ESMAP program managers, TAG, current and former SEG directors, other CG members



Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
<p><i>operations)</i></p> <p><b>Level of analysis: inputs relative to outcomes</b></p>	<p>J4cii. ESMAP's core governance structure is effective and efficient</p>	<ul style="list-style-type: none"> <li>Responsiveness of ESMAP management and operations to the requests of the CG</li> <li>Perceived representation of client needs or interests in CG decisions and advising</li> <li>Means and processes for CG to hold ESMAP accountable to its mandate</li> <li>Linkages between CG advice or decisions and - managerial or operational efficiency - managerial or operational effectiveness</li> <li>Number, type, and quality of communication systems and decision-making processes between/among the 4 key bodies (CG, TAG, Energy and Mining Sector Board, and ESMAP Unit)</li> <li>Perceptions of or actual levels of relative effectiveness and/or efficiency of ESMAP's structure compared to other relevant energy sector trust funds/operational entities</li> </ul>	Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
			Interviews	ESMAP-selected management, including former ESMAP program managers, TAG, CG members, current and former SEG directors
			Interviews	ESMAP-selected management, including former ESMAP program managers, TAG, current and former SEG directors (CG chairs), other CG members, partners, clients
			Interviews	ESMAP-selected management, including former ESMAP program managers, TAG, SEG directors (current and former CG chairs), selected members of the CG
			Interviews	ESMAP-selected management, including former ESMAP directors, TAG, CG members
			Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
			Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
			Field visits	In selected countries/projects
			Interviews	ESMAP-selected management, including former ESMAP program managers, TAG, CG members, other Bank GPPs, peers, partners
			Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
<p>Q4d. How effective is the TAG's role in as an advisory body to the CG and in providing strategic advice on ESMAP's strategy, overall priorities and their development into practical business plans? <i>(Performance, Management and operations)</i></p> <p><b>Level of analysis: inputs relative to outputs/outcomes</b></p>	<p>J4di. The TAG is a functional advisor to the CG on strategy, overall priorities, and development of practical business plans</p>	<ul style="list-style-type: none"> <li>Frequency of TAG advice taken into CG decisions on (number of proposals vs. operationalization of proposals):                             <ul style="list-style-type: none"> <li>- strategy</li> <li>- priorities and/or</li> <li>- development of practical business plans</li> </ul> </li> <li>Qualifications and expertise of the TAG members relative to their advisory role</li> </ul>	<p>Interviews</p> <p>Desk review</p> <p>Interviews</p> <p>Desk review</p> <p>Interviews</p> <p>Desk review</p>	<p>meetings, other relevant docs</p> <p>ESMAP-selected management, including former ESMAP program managers, TAG, CG members</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected management, including former ESMAP program managers, CG members</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected management, ESMAP program managers, TAG, CG members</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>In selected countries/projects</p>
<p>Q4e. To what extent do the governance and management structures permit and facilitate the effective participation and voice of client countries and other partners and stakeholders in major governance and management decisions? How are the interests of the different categories of stakeholders represented in the governance of the program? <i>(Relevance, Management and operations, Sustainability)</i></p>	<p>J4ei. ESMAP governance and management structures enable participation and voice of client countries, other partners, and stakeholders in major decisions</p>	<ul style="list-style-type: none"> <li>Resources devoted to TAG relative to expected tasks and responsibilities</li> <li>Perceptions of extent to which ESMAP activities or projects incorporate local partners/country stakeholders in the:                             <ul style="list-style-type: none"> <li>- design/development of projects/activities that target or may affect them</li> <li>- governance decisions that may affect them</li> <li>- management decisions that may affect them</li> <li>- other aspects of ESMAP activities</li> </ul> </li> <li>Presence of a functional grievance/redress mechanism provided by ESMAP for clients or stakeholders</li> </ul>	<p>Field visits</p> <p>Interviews</p> <p>On-line Survey</p> <p>Desk review</p> <p>Desk review</p>	<p>ESMAP-selected management, including former ESMAP program managers, TAG, SEG directors, CG members, partners, clients, peers</p> <p>World Bank TTLs who manage ESMAP projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p>

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
<i>Level of analysis: inputs relative to outputs/outcomes</i>		<ul style="list-style-type: none"> <li>Percentage of budget spent on facilitating involvement of client countries, partners and/or other stakeholders into ESMAP decision making</li> <li>Degree and nature of interaction between CG and client countries</li> <li>Number and type of World Bank Group mechanisms or standards for stakeholder participation that apply to ESMAP</li> </ul>	<p>Desk review</p> <p>Interviews</p> <p>Desk review</p> <p>Interviews</p>	<p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected staff, CG, TAG, and partners and stakeholders</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected management and staff</p>
<b>5. STRATEGY FOR PROGRAM SUSTAINABILITY</b>				
Q5a. To what extent has the program managed its growth in a proactive and effective manner? <i>(Sustainability, Management and operations, Efficiency)</i>	J5ai. ESMAP proactively managed growth	<ul style="list-style-type: none"> <li>Information-sharing mechanisms in place to keep staff, TAG, CG up to date on internal changes related to growth and what it will mean for their respective roles/tasks/expectations</li> <li>Provisions made in budget or other resources prior to major organizational or management changes by ESMAP management</li> </ul>	<p>Interviews</p> <p>Desk review</p> <p>Interviews</p> <p>Desk review</p>	<p>World Bank TTLs managing ESMAP projects and staff, management</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP management, staff</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p>
<i>Level of analysis: inputs relative to outputs/outcomes</i>	J5aii. ESMAP effectively managed growth	<ul style="list-style-type: none"> <li>Percentage of budget expenditure and disbursement rates for each thematic area and activity type, respectively, relative to intended business plan</li> <li>Budget percentage of administrative overhead</li> <li>Number and level of ESMAP positions with openings longer than 3 months</li> <li>Retention rate of ESMAP staff over the evaluation period</li> </ul>	<p>Desk review</p> <p>Desk review</p> <p>Interviews</p> <p>Interviews</p>	<p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP management and staff</p> <p>ESMAP management and staff</p>
Q5b. What is the optimum resource level for ESMAP and what needs to be done to achieve and sustain this level?	J5bi. ESMAP maintain optimum resource level	This question will be answered in large part on the basis of the analysis, conclusions, and lessons learned provided from the questions relating to effectiveness, efficiency, and management.		

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<p>(Sustainability, Efficiency, Management and operations)</p> <p><b>Level of analysis: all</b></p>	<p>J5bii. ESMAP has an optimum resource level</p>	<ul style="list-style-type: none"> <li>Evidence of efforts to improve resource levels by increasing               <ul style="list-style-type: none"> <li>- number of donors</li> <li>- overall contributions /specific contribution size of existing donors</li> <li>- other leveraging/sources</li> </ul> </li> <li>Evidence of ESMAP (in)ability to respond to client requests due to insufficient resources</li> </ul>	<p>Interviews</p> <p>Desk review</p> <p>Interviews</p> <p>Desk review</p> <p>Field visits</p>	<p>ESMAP program managers, CG Chairs (SEG directors), other CG members.</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP selected TTLs, staff, partners, and stakeholders</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>In selected countries/projects</p>
<p>Q5c. How effective is ESMAP in building and developing internal and external partnerships to achieve its mission objectives?</p> <p>(Sustainability, Management and operations)</p> <p><b>Level of analysis: all</b></p>	<p>J5ci. ESMAP is effective in developing internal partnerships to achieve objectives</p>	<ul style="list-style-type: none"> <li>Resources (time, budget) spent on coordination with               <ul style="list-style-type: none"> <li>- World Bank staff/TTLs working on related projects</li> <li>- other ESMAP unit staff</li> <li>- other relevant staff/personnel in the World Bank Group</li> </ul> </li> <li>Degree to which and nature of how the World Bank relies on ESMAP to fulfill their country or local-level objectives</li> <li>Degree to which and nature of how ESMAP relies on the World Bank to fulfill its objectives</li> </ul>	<p>Desk review</p> <p>Interviews</p> <p>On-line survey</p> <p>Interviews</p> <p>Field visits</p> <p>Desk review</p> <p>Interviews</p> <p>Field visits</p> <p>Desk review</p>	<p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP-selected TTLs, staff</p> <p>World Bank TTLs managing ESMAP projects</p> <p>World Bank TTLs managing ESMAP projects and staff</p> <p>In selected countries/projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>World Bank TTLs managing ESMAP projects and staff, partners</p> <p>In selected countries/projects</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>World Bank TTLs managing ESMAP projects and staff, partners</p> <p>In selected countries/projects</p>
	<p>J5cii. ESMAP is effective in</p>	<ul style="list-style-type: none"> <li>Percentage of ESMAP staff that have been hired from the World Bank and/or returned to the World Bank</li> <li>Resources (time, budget) spent on coordination with               <ul style="list-style-type: none"> <li>- client country governments</li> <li>- potential clients</li> </ul> </li> </ul>	<p>Interviews</p> <p>Field visits</p> <p>On-line survey</p>	<p>World Bank TTLs managing ESMAP projects and staff, management</p> <p>ESMAP management, staff</p> <p>In selected countries/projects</p> <p>World Bank TTLs managing ESMAP projects and staff, management</p>

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
	developing external partnerships to achieve objectives	<ul style="list-style-type: none"> <li>- ESMAP partners</li> <li>- other stakeholders or recipients</li> <li>• Degree to which and nature of how external partners rely on ESMAP to fulfill their country or local-level objectives</li> <li>• Number and quality of local partnerships developed through ESMAP that have achieved high-level objectives</li> </ul>	Desk review  Interviews Field visits Desk review  Interviews Field visits Desk review	ESMAP projects  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs  ESMAP partners and stakeholders, regional staff In selected countries/projects  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs  ESMAP partners and stakeholders, regional staff In selected countries/projects  ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
Q5d. What is the most identifiable development impact of ESMAP and how is it perceived by other constituents, organizations, and partners beyond its client base?  <i>(Sustainability, Effectiveness, Management and operations)</i>	J5di. ESMAP has an identifiable development impact	<ul style="list-style-type: none"> <li>• Fulfillment of high-level objectives and impacts according to the program intervention logic</li> <li>• Evidence of contribution of ESMAP to country-identified development objectives</li> </ul>	Desk review  Field visits Desk review  Field visits	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs  In selected countries/projects  ESMAP evaluations and reviews, TAG reports, CG meetings, and national policies and/or development reports In selected countries/projects
<b>Level of analysis: all</b>  Q5e. To what extent has the program learned internally from its experiences?	J5di. ESMAP clients, constituents, and partners recognize ESMAP's development impact  J5ei. ESMAP has learned internally from its experiences	<ul style="list-style-type: none"> <li>• Perceptions of clients, partners, and other stakeholders as to tangible development results stemming from ESMAP activities/involvement in the energy sector of their country/region and, their ranking</li> <li>• ESMAP internal communication and feedback loops generating information useable in decision making</li> </ul>	Desk review  Interviews Field visits Desk review  Interviews Field visits	ESMAP evaluations and reviews, TAG reports, CG meetings, and national development reports ESMAP clients, partners, and stakeholders In selected countries/projects  ESMAP evaluations and reviews, TAG reports, CG meetings, and national development reports World Bank TTLs managing

Evaluation Questions <i>(Sustainability, Management and operations)</i>	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
<b>Level of analysis: all</b>			Field visits	ESMAP projects and staff, management
Q5f. How has the program identified and managed risks? <i>(Sustainability, Management and operations, Efficiency, Effectiveness)</i>	J5f. ESMAP identifies key risks to its fulfilling mandate	<ul style="list-style-type: none"> <li>Examples of incidences whereby ESMAP:               <ul style="list-style-type: none"> <li>- took advantage of a positive model/solution and expanded on it</li> <li>- avoided worsening a situation/ set of activities, based on new understanding/information</li> </ul> </li> <li>ESMAP staff are provided learning opportunities among themselves/with other World Bank units</li> <li>Evidence of a risk management plan at the program level</li> <li>Mechanisms and means for TAG, ESMAP staff, and/or World Bank TTLs managing ESMAP projects to identify and bring forward risks</li> <li>Clients have means and mechanisms to report risks to ESMAP staff/TTLs</li> </ul>	Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, and national development reports
<b>Level of analysis: all</b>	J5fii. ESMAP manages key risks to its fulfilling mandate	<ul style="list-style-type: none"> <li>Mechanisms and means for TAG, ESMAP staff, and/or World Bank TTLs managing ESMAP projects to mitigate identified risks</li> <li>Level of risk-taking and risk management supported by the CG</li> </ul>	Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, and national development reports
			Interviews	ESMAP clients, partners and stakeholders
			Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, and national development reports
			Interviews	World Bank TTLs managing ESMAP projects and staff, TAG, CG
			Field visits	In selected countries/projects
			Interviews	World Bank TTLs managing ESMAP projects and staff, TAG, CG
			Desk review	ESMAP evaluations and reviews, TAG reports, CG meetings, and national development reports

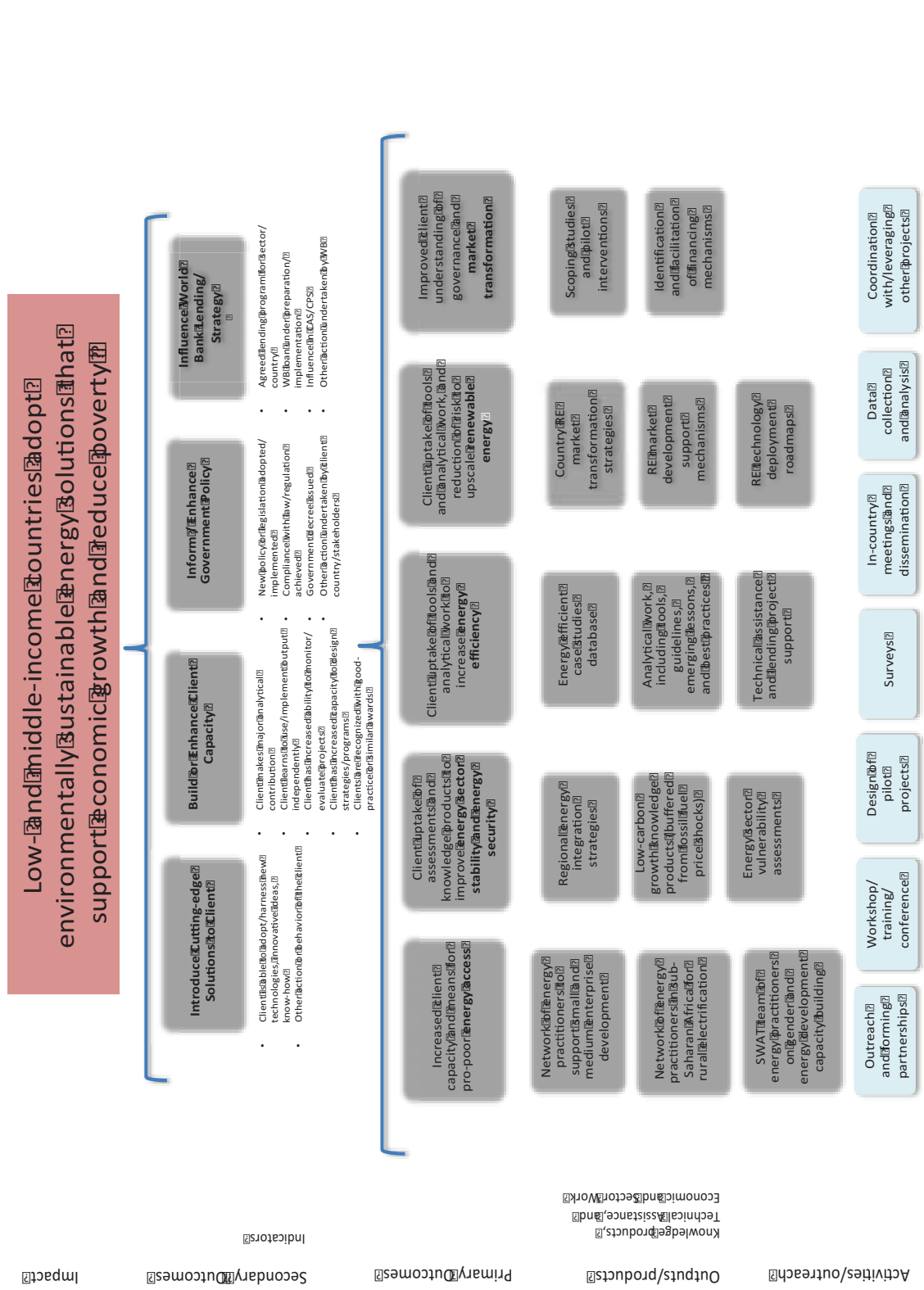
Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
<p>Q5g. To what extent has ESMAP demonstrated adaptability or responsiveness to the changing global environment, including external shocks? (<i>Management and operations, Sustainability, Effectiveness</i>)</p> <p><b>Level of analysis: all</b></p>	<p>J5g. ESMAP is adaptable and responsive to changes in the evolving global environment (slow-paced external changes)</p>	<ul style="list-style-type: none"> <li>Examples of how and when ESMAP manages long-term external shocks/global shifts and how the responses fared in terms of:               <ul style="list-style-type: none"> <li>- timeliness</li> <li>- commensurate/appropriateness in degree and nature</li> <li>- thoroughness/comprehensiveness</li> <li>- degree of sustained/resolution of the key issues</li> </ul> </li> <li>Perceptions of clients, partners, and stakeholders as to ESMAP's adaptability and responsiveness to global environmental shifts/slow-moving changes</li> </ul>	<p>Field visits</p> <p>Interviews</p> <p>Desk review</p> <p>Field visits</p> <p>Interviews</p> <p>Field visits</p> <p>Field visits</p> <p>Interviews</p> <p>Desk review</p> <p>Interviews</p> <p>Field visits</p>	<p>In selected countries/projects</p> <p>World Bank TTLS managing ESMAP projects and staff</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, and national development reports</p> <p>In selected countries/projects</p> <p>ESMAP partners, peers, and stakeholders</p> <p>In selected countries/projects</p> <p>In selected countries/projects</p> <p>ESMAP selected TTLS and relevant peers and stakeholders</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP clients, stakeholders, and partners</p> <p>In selected countries/projects</p>
<p>Q5h. To what extent can ESMAP-initiated activities be broadened to a wider and larger beneficiary group, and be leveraged to bring about even more benefits than originally intended without higher cost implications? (<i>Sustainability, Management and operations, Efficiency</i>)</p> <p><b>Level of analysis: all</b></p>	<p>This question will be answered based on the analysis of the questions above and from additional data to be collected on the indicators presented below.</p> <p>J5hi. ESMAP-initiated activities can spread to a wider set of beneficiaries</p>	<ul style="list-style-type: none"> <li>Amount of resources (time, budget, human resources) devoted to developing stronger links between ESMAP activities and local beneficiary groups</li> <li>Evidence of client interest and capacity to identify ways to broaden the beneficiary group</li> </ul>	<p>Desk review</p> <p>Field visits</p> <p>Interviews</p> <p>Field visits</p> <p>Interviews</p> <p>Desk review</p>	<p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>In selected countries/projects</p> <p>World Bank TTLS managing ESMAP projects, staff and clients, stakeholders, and partners</p> <p>In selected countries/projects</p> <p>ESMAP clients, partners, and stakeholders</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p> <p>ESMAP clients, stakeholders, and partners</p> <p>ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs</p>

Evaluation Questions	Judgment Criteria	Indicator(s) proposed	Means of verification	Source of verification
	<p>J5hii. ESMAP-initiated activities can reach a wider set of beneficiaries without additional costs</p>	<ul style="list-style-type: none"> <li>● Identified methods and strategies used for leveraging ESMAP activities to reach a larger number of targeted beneficiaries for the same inputs/expenditures</li> <li>● Evidence of how comparable funds or organizations expand the reach of their resources</li> </ul>	Desk review	reviews, TAG reports, CG meetings, other relevant docs
			Interviews	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
			Field visits	World Bank TTIs managing ESMAP projects, staff, CG, TAG
			Desk review	In selected countries/projects
			Interviews	ESMAP evaluations and reviews, TAG reports, CG meetings, other relevant docs
			Field visits	World Bank Group Global GPPs, ESMAP peers
				In selected countries/projects



# Annex 2 - Intervention Logic

Figure A3 – 1 ESMAP Intervention Logic



## Annex 3 - List of Documents Reviewed

### ESMAP Annual Reports

- Annual Report 2006
- Annual Report 2007-2008
- Annual Report 2009
- Annual Report 2010

### Evaluations and Reviews

- ESMAP Portfolio Review FY2005–07; An Assessment of Impact of the ESMAP Portfolio; March 22, 2010
- Evaluation of ESMAP; Government of Canada/Government of the Netherlands, 1988
- Donor-Funded Energy Programs; Final report for external review; June 30, 2000 (Guy Caruso, Abeeku Brew-Hammond, Aldo Fabris, Rakesh Kaker, Erik Sorensen, Negda A. Jahanshahi)
- Quality assessment of global and regional programs and partnerships (GRPPs) – Task summary sheet, 2010
- ESMAP Portfolio Review FY2009–11, 2011

### TAG Reports

- TAG report to consultative group of donors, 23 February 2006 (Andrew Barnett, Elisabeth Cecelski, Dr. Amitav Rath)
- TAG report to consultative group of donors, 24 February 2007 (Andrew Barnett, Elisabeth Cecelski, Dr. Amitav Rath)
- TAG report to consultative group of donors, 4 February 2008 (Elisabeth Cecelski, Dr. Amitav Rath, Winfried Rijssenbeek)
- TAG report to consultative group of donors, 17 March 2009 (Elisabeth Cecelski, Dr. Amitav Rath, Winfried Rijssenbeek)
- TAG report to consultative group of donors, 10 March 2010, and revision dated 7 June 2010 (Elisabeth Cecelski, Dr. Amitav Rath, Winfried Rijssenbeek)
- TAG report to consultative group of donors, 17-18 March 2011 (Judy Wakhungu, Wolfgang Mostert, Winfried Rijssenbeek)
- TAG report to the CG, PowerPoint presentation), 18 March 2011 (Judy Wakhungu, Wolfgang Mostert, Winfried Rijssenbeek)

### ESMAP Business Plans

- Securing Energy for Poverty Reduction and Economic Growth, ESMAP, 2005–07 Business Plan
- ESMAP Strategic Business Plan 2008–13

### CG Meeting 2011

- Proceedings - 2011 Consultative Group Meeting for Energy Trust-Funded Programs (ESMAP, AFREA, and ASTAE), March 18, 2011, Washington, DC
- Closed Session Minutes - 2011 Consultative Group Meeting for Energy Trust-Funded Programs March 18, 2011, Washington, DC
- Agenda
- List of Documents
- TAG report, 2011
- FY10 Annual Report on ESMAP Multi-Donor Trust Fund for Clean Energy Investment Framework: Energy for Low-Carbon Economy and Climate Mitigation
- FY10 Annual Report on ESMAP Multi-Donor Trust Fund for Clean Energy Investment Framework: Africa Renewable Energy Access
- Financial Status of the ESMAP Multi-Donor Trust Fund (TF071398)
- Progress Report on ASTAE, 2011
- Draft Terms of Reference for the External Evaluation of ESMAP, 2011
- DOCK Support Program - A Joint Initiative of UNDP, ESMAP and the World Bank

- Management's Response to the TAG Report, 2011
- ESMAP Knowledge exchange forum 2011 – PowerPoint presentation of different countries' initiatives

### Program Brochures

- Country Energy Sector Vulnerability Assessments Program (CESVA)
- Energy-Efficient Cities Initiative (EECI)
- Low-Carbon Growth - Country Studies Program (LCCS)
- Renewable Energy Market Transformation Initiative (REMTI)

### PowerPoint Presentations

- Facilitating the Shift to Clean Energy, The World Bank, 2011 (Pierre Audinet, Program Team Leader)
- ESMAP FY2012–13 Work Program, October 2011
- ESMAP Cost Assessment Study, October 2011
- ESMAP's Monitoring and Evaluation (M&E) Framework, 2011
- Non-lending services, ESW/TA, ESMAP

### ESMAP M&E Framework

- Concept Note for Establishing a Results-Based Monitoring and Evaluation (M&E) System, 2010
- ESMAP Program Logframe, 2011
- Program Component 1\_EASP\_M&E\_Framework
- Program Component 2\_EECI\_M&E\_Framework
- Program Component 3\_REMTI\_M&E\_Framework
- Program Component 4\_PEA-TAP\_M&E\_Framework

### Other

- Operational Manual Annexes, 2011
- ESMAP Operational Manual (Draft), 2011

**Table A4 - 1** Desk Review Project Documentation

Theme	Product Line	Country	Project Number	Title	Status (Oct 2011)	Documents Reviewed
<b>ENERGY ACCESS</b>	IBRD/IDA (Lending)	Mali	P073036	Household Energy & Universal Access	completed	BTOR Attachment 2 BTOR Integrated Safeguards Datasheet ISR Mali ADD FIN HEURA Project Paper Final InfoShop Minutes Decision Meeting, Attachments 1–9 Minutes Decision Meeting PCN Peer Reviews PID Risk Identification Worksheet
<b>EASP</b>	ESMAP Funded Project	China	P082160	Heat Pricing Study	completed	Detailed Workplan Draft Report_Phase I Final Report Interim Report Interim Report Mission Report Attachments 1–5

Theme	Product Line	Country	Project Number	Title	Status (Oct 2011)	Documents Reviewed
						Mission Report Note from TTL on outputs delivered Peer Reviews PSF Workshop presentations
<b>ENERGY EFFICIENCY</b>	ESMAP Funded Project	Poland	P086790	Financial Intermediary Energy Efficiency	completed	Project Concept Note Activity Completion Report Final Report: "Opportunities for Pooled Financing Facilities in Poland" (Aug. 2007) ESMAP/World Bank Poland Mission Report
<b>ENERGY ACCESS</b>	TA Lend	Non- Peru	P093486	Peru Rural Electrification	completed	ACS BTOR 1&2 Final Report GRM Invitation for QER PCN PSF QER Annex 1& 2
<b>ENERGY ACCESS</b>	Knowledge Product	Bangladesh	P094768	Improving Indoor Air in Bangladesh	completed	Project Concept Note Activity Completion Report Activity Completion Summary Final Report: "Improving Indoor Air Quality for Poor Families: A Controlled Experiment in Bangladesh" (Apr. 2008) Knowledge Exchange Series No. 13 ("Improving Indoor Air in Rural Bangladesh: Results of Controlled Experiments")
<b>ENERGY ACCESS</b>	TA Lend	Non- GLOBAL	P095153	Decentralized Energy Services	completed	Project Memorandum (Feb. 2005) Work Plan (Jan. 2008) SME Project Completion Report (June 2009) Addendum to Project Completion Report (June 2009)
<b>EASP</b>	ESW	China	P096826	Coal Bed Methane Strategy	completed	ACS PSF Final Report Peer Reviewers' Comments
<b>ENERGY ACCESS</b>	GEF	Rwanda	P097818	Sustainable Energy Development Project (GEF)	completed	ACS Project Appraisal Document PCN Restructuring Paper 1 & 2 Minutes Concept Review Meeting (2006) Minutes Decision Review Meeting (2009) Decision Review Meeting attachments 2-4

Theme	Product Line	Country	Project Number	Title	Status (Oct 2011)	Documents Reviewed
<b>CLEAN ENERGY</b>	TA Non-Lend	Morocco	P098904	Renewable Energy Regulation	completed	ACS Final Report Annex Final Report Minutes Concept Review Meeting PCN Morocco Energy DPL PSF
<b>CLEAN ENERGY</b>	ESW	India	P099005	Renewable Energy Investment Climate in India	ongoing	Project Concept Note Final Report: “Unleashing the Potential of Renewable Energy in India” Minutes of the Virtual Review Meeting Activity Completion Summary
<b>CLEAN ENERGY</b>	ESW	Serbia	P099075	Renewable & Low-Carbon Energy	completed	ACS Concept Note BTO Serbia Inception Report (June 2006) Stakeholder Workshop (June 2007) Final Report
<b>EASP</b>	Knowledge Product	Latin America	P100819	6L (SF) Benchmarking of the Electricity	completed	Project Concept Note Draft Report: “Benchmarking Analysis of the Electricity Distribution Sector in the Latin American and Caribbean Region” (Mar 2007) Peer Reviewer Comments Activity Completion Summary
<b>CLEAN ENERGY</b>	Knowledge Product	GLOBAL	P101182	Trade Policies for Liquid Biofuels	completed	Activity Completion Summary Concept Note & Scope of Work Final Report PCN Peer Review Comments – 1&2 Email – Proposed Scope of Work Emails – Review comments by DECRG & others Email – Review Notification
<b>EASP</b>	ESW	Ecuador	P101408	EC Energy Strategy	completed	ACS Decision Meeting Review Attachments 1-3 Decision Meeting Review Attachment 4 - Final Report Decision Meeting Review Final Report Spanish Version Minutes Concept Review Meeting Project Concept Note
<b>CLEAN ENERGY</b>	ESW	India	P101555	Low-Carbon Growth	ongoing	Project Concept Note Minutes of Concept Note Review Meeting Final Report: “Energy Intensive Sectors of the Indian Economy: Path to Low-Carbon Development” (May 2011) Virtual review - Decision Note

Theme	Product Line	Country	Project Number	Title	Status (Oct 2011)	Documents Reviewed
						Grant Reporting and Monitoring Report Activity Completion Summary
<b>CLEAN ENERGY</b>	ESW	Mozambique	P101999	Modern Biofuels Assessment	completed	Terms of Reference and Concept Note Concept Note Review Project Summary Form Inception Report Interim Report Final Report: "Mozambique Biofuels Assessment" (May 2008) Activity Completion Summary
<b>EASP</b>	ESW	GLOBAL	P105189	Regional Energy Trade	completed	Central Asia South Asia Electricity Transmission and Trade - CASAREM CASA 1000 PCN (distributed) CASAREM CASA 1000 PID-Concept Stage Final Report Annexes Final Report Peer Reviews PSF
<b>EASP</b>	ESW	Egypt, Arab Rep. of	P105664	Structuring of PPP in Natural Gas	completed	ACS DRAFT Report PCN Presentation "Structuring Gas Distribution Concessions" (July 2007)
<b>CLEAN ENERGY</b>	ESW	Brazil	P105702	CCH Low-Carbon Country Case Study	ongoing	ACS Decision Meeting & Attachment Final Report PCN and Minutes 1 & 2 Project Summary Form
<b>ENERGY EFFICIENCY</b>	TA Lend	Non-Vietnam	P105834	Vietnam Energy Efficiency Program	completed	ACS Final Report
<b>EASP</b>	ESW	Djibouti	P107067	Energy Sector Master Plan	completed	Concept Note Final Report Vol. 2 Minutes Concept Note Note Decision Review Meeting
<b>ENERGY ACCESS</b>	TA Lend	Non-Cameroon	P107606	Capacity Building Small Scale	completed	ACS AFRICA Region Comments on QAG report Final Report_Cameroon Rural Energy Fund Manual Final Report PCN QAG review
<b>ENERGY EFFICIENCY</b>	IBRD/IDA (Lending)	Belarus	P108023	Energy Efficiency	ongoing	Project Information Document Grant Funding Request Inception Report Project Appraisal Document Activity Completion Summary

Theme	Product Line		Country	Project Number	Title	Status (Oct 2011)	Documents Reviewed
<b>CLEAN ENERGY</b>	Knowledge Product		GLOBAL	P108154	Economics of Adaptation to Climate Change	ongoing	ACS Briefing Note GFR Minutes Concept Review meeting EACC Methodology Report EACC M-id Study Update EACC Report 0928 Final EACC web site EACC ICM
<b>ENERGY ACCESS</b>	TA Lend	Non-	Guinea	P108841	SMEs in Rural Electrification (FY10)	completed	Project Summary Form Concept Note – Application Form Interim Report: “Préparation de la Stratégie de Développement de l’Accès a l’Energie Moderne En Milieu Rural Pour la Réduction de la Pauvreté En Guinée” (no date) Activity Completion Summary
<b>EASP</b>	TA Lend	Non-	Africa	P109447	Institutional Framework Development & Capacity Building	completed	ACS PSF BTOR with attachments Partner Co-ordination Meeting Report 1&2 WAPP-Sub-Program Concept for LSG concept note
<b>EASP</b>	Partnership		GLOBAL	P109952	Gender and Energy	completed	Terms of Reference – ESMAP Gender Horizon Scanning Workshop Proceedings: “Gender and Energy: From Planning to Action” Activity Completion Summary
<b>EASP</b>	TA Lend	Non-	Jordan	P110853	Energy Sector	ongoing	Project Concept Note 1: “Assessment of Smart Grid Application to Jordan Transmission System” Project Concept Note 2: “Assessment of Carbon Capture and Storage Potential and Capacity-Building” Minutes of PCN Review Final Report: “Assessment of Smart Grid Application to Jordan Transmission System” (June 2011) Activity Completion Summary
<b>EASP</b>	ESW		Peru	P111012	Natural Gas Study	completed	ACS BTOR (June 2008) Final Report GRM (Sept 2008–Feb 2010) Minutes Concept Review Meeting Minutes Decision Meeting PCN
<b>EASP</b>	ESW		Africa	P111483	Regulating Electricity Trading in	completed	Project Concept Note Draft Minutes of PCN Review Virtual Meeting

Theme	Product Line	Country	Project Number	Title	Status (Oct 2011)	Documents Reviewed
				SADC		Final Report 1: “International Experience with Cross-border Power Trading” Final Report 2: “Guidelines for Regulating Cross-border Power Trading in Southern Africa” Final Report 3: “Electricity Exports and Imports in SADC: Potential Roles for National Electricity Regulators” Final Report 4: “Manual for RERA Guidelines for Regulating Cross-border Power Trading in the SADC Region” Minutes Virtual Decision Meeting Activity Completion Summary
<b>ENERGY EFFICIENCY</b>	Partnership	GLOBAL	P112187	Public Procurement of Energy Efficiency	ongoing	ACS PCN PCN reviews and comments 1&2 Presentation (DEC08) Final Report EECI-Public Procurement Getting Started
<b>CLEAN ENERGY</b>	Knowledge Product	Philippines	P112371	Renewable Development and Market Reform	ongoing	ACS PCN Project Summary Form Virtual concept review comments Virtual concept review “Technical Expansion and Cost Recovery Options for Planning Transmission for Renewable Energy: Methodological Elements for Planning And Cost Recovery in the Philippines.” Final Report (June 2010) “Pricing and Contracting Mechanisms For Renewable Energy Development in the Philippines” (Jan. 2009) “Philippines Renewable Energy Implementation and Coordination of Feed-In Tariffs and Renewable Portfolio Standard Technical Paper I: Implementing FIT Rules: Calculation of FIT-ALL” (undated) “Philippines: Reliable and Sustainable Integration of Renewables in the Competitive Electricity Market: Technical Paper 2.1: Reserves for Hydro and New Renewables Reliable Integration in Electricity Market” (Oct. 2011) ‘Generation and Contracts Reference Pricing: Inception Report V02’ (Aug.



Theme	Product Line	Country	Project Number	Title	Status (Oct 2011)	Documents Reviewed
						09)
<b>ENERGY EFFICIENCY</b>	ESW	Moldova	P113570	District Heating Restructuring	completed	ACS PCN Decision Meeting comments Final report P113570 Presentation GRM
<b>ENERGY EFFICIENCY</b>	TA Lend	Non-Lebanon	P113858	Support to Implementation of Electricity Sector	ongoing	ACS Lebanon Report Final Ver 00. Minutes of Decision Meeting Project Concept Note Stakeholder consultation workshop
<b>AFREA</b>	AFREA	Tanzania	P114094	Reliable and Affordable Solar Lighting in N. Tanzania	completed	CEIF MDTF Proposal for Lighting Africa Support 11.4.08 ESMAP LA PCN-Final 04. 24. 07 GRM LADM 4509: LADM_Project_ProgressReport_Final Completion_Aug. 2010; 4509_Zara_Financials P3_Final Aug 2010; Closure Letter TF 93352 LADM Final Project Summaries: LADM 4217- CAMCO; LADM 4322- G24j; LADM 4335-CB Energie; LADM 4347- THRIVE; LADM 4374 - Solar World; LADM 4509-Zara Solar; LADM 4535- Global Village Cameroon; LADM 4700- GPower; LADM 4745- CSET; LADM Ghana – Solux; LADM Tanzania – dissigno; LADM Uganda – Sunlabob LADM process: Assessor Orientation Nov 12; DM Brochure Final Sept 2007; LADM Brochure; LADM juror guidelines; LADM Juror Presentation April 17, 2008 P114094_project GFR
<b>ENERGY EFFICIENCY</b>	Knowledge Product	GLOBAL	P114361	Operational Toolkit for Energy Efficient Lighting	ongoing	ACS Project Concept Note PCN_Comments Matrix PCN_Review PCN_Comments 2 Team Meeting Minutes (Nov. 08) Report (Draft Final Report for evaluation) Toolkit_Final Report (Executive Summary only)

Theme	Product Line	Country	Project Number	Title	Status (Oct 2011)	Documents Reviewed
<b>ENERGY EFFICIENCY</b>	Partnership	GLOBAL	P115773	EE Cities Outreach and Dissemination	completed	ACS EECI Program Document EECI_Briefing Note EECI_Brochure EECI_Outreach and Partnerships_ESMAP web site EECI_Presentation EECI-Public-Procurement-Getting-Started Energy Efficient Cities Case Studies Database_ESMAP web site Energy Efficient Cities Initiative ESMAP web site_main page ESMAP EECI_Program Presentation
<b>CLEAN ENERGY</b>	ESW	GLOBAL	P116023	Financing Instruments for Climate Change Mitigation	ongoing	Project Concept Note Final Report: "Beyond the Sum of Its Parts: Combining Financial Instruments to Support Low-Carbon Development" Decision Meeting Minutes Activity Completion Summary
<b>EASP</b>	TA Lend	China	P116044	China Heat Regulation Phase II	completed	ACS Concept Note Review Concept Note_Comments 1&2 P116044_draft report P116044_Peer review comments on PCN Project Concept Note
<b>EASP</b>	TA Lend	Non-Middle East and North Africa	P116206	5M-Assessment of Energy Sector Credit Constraints	ongoing	ACS Project Concept Note Decision meeting Report_Egypt Report_Jordon Report_main Report_Morocco Report_Tunisia
<b>ENERGY ACCESS</b>	Partnership	GLOBAL	P116227	Economic Benefits of Electricity Supply	completed	Decision Note for PCN Final Inception Report Project GFR
<b>EASP</b>	Int Training	GLOBAL	P116252	ESMAP Practitioners' Forum	ongoing	ACS (corrected version) Attachment 3 – Colombia, Panama, Vietnam PPT
<b>CLEAN ENERGY</b>	TA Lend	Non-Mexico	P117870	Renewable Energy Assistance Program	completed	ACS Action Report 1 Action Report 2 & 3 (Small Scale RE) Actions Executive Summary (Small Scale RE) Externalities Calculation Report Geothermal Technology Study PCN - ESMAP Renewable Energy

Theme	Product Line	Country	Project Number	Title	Status (Oct 2011)	Documents Reviewed
						Assistance Program PCN Comment Matrix- ESMAP Renewable Energy Assistance Program Predesign of Solar Schools Study RE Actions Report RE Cost Curves Targets Study RE Inventory Report Solar PV for Schools
<b>CLEAN ENERGY</b>	TA Lend	Non-Mexico	P118293	MX-Promoting Mini-Hydro Potential	completed	ACS Final Report PCN Minihydros Presentation
<b>ENERGY EFFICIENCY</b>	Knowledge Product	GLOBAL	P118728	Smart Meters	completed	Project Concept Note Report: "Technical Relevant Aspects to Consider for AMR/AMI Implementation" Grant Reporting and Monitoring Report Activity Completion Summary
<b>EASP</b>	ESW	Mongolia	P119796	Diagnostic of Economic Crisis to Infrastructure	completed	ACS PCN Reports 1, 6, 7 & 9
<b>CLEAN ENERGY</b>	Partnership	GLOBAL	P120449	REMTI Knowledge Exchange (Geothermal)	dropped	ACS TOR GAC Africa Mission (Nov. 09) BTOR GAC Mission (Dec 16, 2009) GAC PCN Final Draft GAC Presentation Dec09 ESMAP staff Rwanda Geo Diagnostic Report Draft Tanzania Geo Diagnostic Report Draft Uganda Geo Diagnostic Report Draft GRM
<b>AFREA</b>	AFREA	Burkina Faso	P120478	Burkina Faso: Capacity Upgrading for West African Partners in Renewable Energy Education Project	completed	ACS PCN Review Comments PCN review REEP TF-097319 BF REEP-Concept Note - The Energy Centre KNUST EDULink REEP-Support Final Report (May 11, 2010 ) Signed Capacity Upgrading for West African Partners in Renewable Energy Education Project KNUST Grant No TF096613
<b>EASP</b>	TA Lend	Non-Nepal	P122960	Support to Strategic Energy Sector Development	ongoing	None

## Annex 4 - Desk Review and Field Visit Sampling

Considering the time constraints and resources available for desk studies, 50 (out of a portfolio of nearly 300) projects were chosen for desk review, according to the methodology described in section 2. Eight of these projects also overlap with field visit projects. The fifty desk review projects were selected randomly from each geographical group and are illustrated in the table below. There are four work program themes that crosscut ESMAP components and sub-components: energy assessment and strategy; energy access; clean energy; and, energy efficiency. The desk review sample mirrors the evaluation period portfolio in terms of themes, with about 30 percent each of clean energy and EASP projects, and about 20 percent each of energy efficiency and energy access projects:

- Energy Assessment and Strategy Programs (EASP)**  
 Of 17 of the 50 desk review projects that fall under the EASP theme, for a total disbursement of \$2.00 million out of \$16.92 million under this theme in the portfolio, 14 were completed and 3 were ongoing at the time of review. One completed project was also a part of the field visit sample.
- Energy Access**  
 Nine of the 50 desk review projects fall under energy access, for a total disbursement of \$1.66 million out of \$22.58 million under this theme (including AFREA) in the portfolio; 7 of these were completed and 2 were ongoing at the time of review. One completed and one ongoing project were also a part of the field visit sample.
- Clean Energy**  
 Fifteen of the 50 desk review projects fall under clean energy, for a total disbursement of \$6.19 million out of \$21.5 million under this theme (including AFREA) in the portfolio; 7 of these were completed and 8 were ongoing at the time of review. One completed and 3 ongoing projects were also a part of the field visit sample.
- Energy Efficiency**  
 Nine of the fifty desk review projects fall under energy efficiency, for a total disbursement of \$1.39 million out of \$6.02 million under this theme in the portfolio overall; 5 of these were completed and 4 were ongoing at the time of review. One ongoing project was also a part of the field visit sample.
- Africa Renewable Energy Access Program (AFREA)**  
 AFREA projects fall outside the normal ESMAP activities, and consist mainly of TA non-lending assistance for either clean energy or energy access. There are 38 AFREA projects and sub-projects in the evaluation time frame, 18 of which are recipient-executed (excluding AFREA projects and sub-projects, the ESMAP portfolio is comprised of 289 projects) and 20 of which are Bank-executed (including those providing supervisory support for recipient-executed grants). There are 5 AFREA projects in the desk review, with 3 ongoing (recipient-executed) and 2 completed (Bank-executed), totaling \$.69 million out of \$12.4 million (about 6 percent of the AFREA-only portfolio by disbursement, and 13 percent by number of projects).

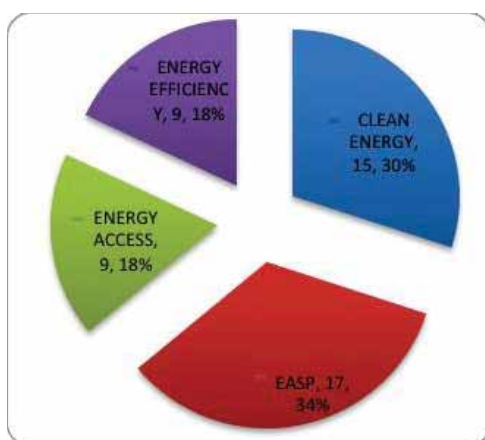


Figure A5 - 1 Desk Review Sample by Theme

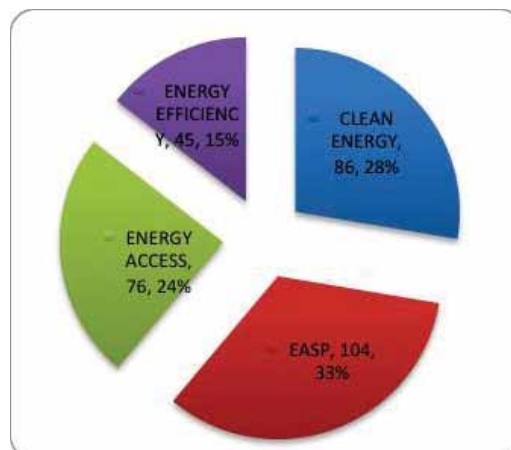
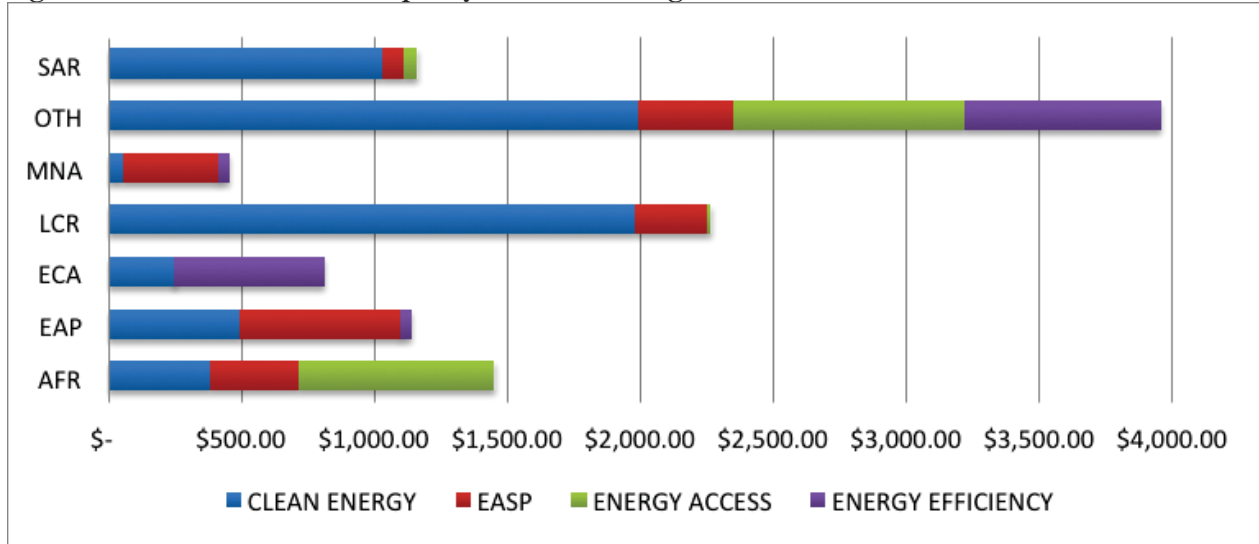


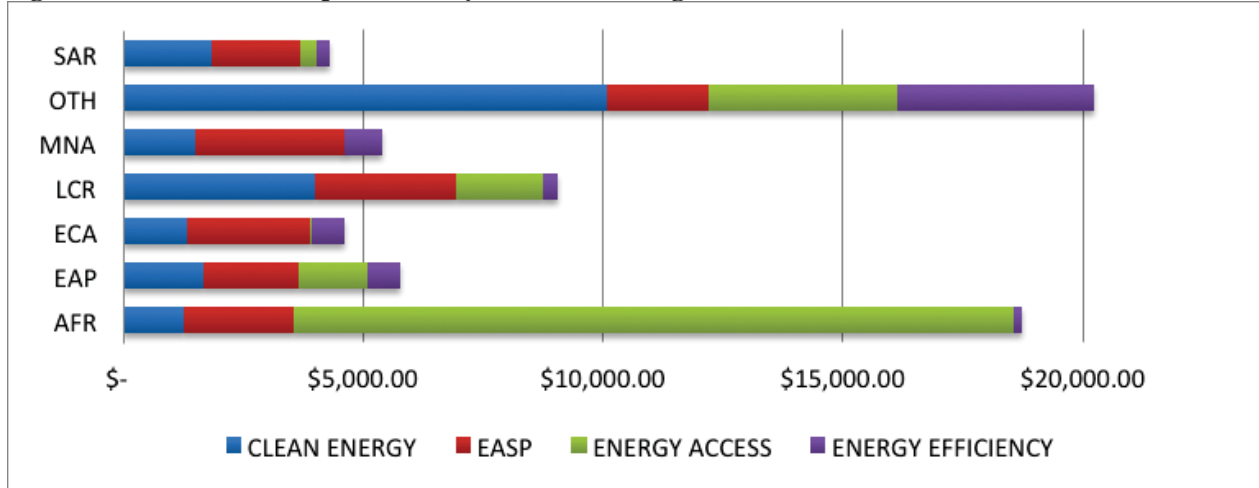
Figure A5 - 2 Portfolio by Theme

In terms of distribution across regions, the desk review sample is also comparable, representing approximately 16 percent of both the total number of projects and total expenditures, or \$11.24 million out of the \$68.15 million in disbursements over the evaluation portfolio period (50 out of 289 ESMAP projects, or 311 projects including AFREA Bank-managed and recipient-managed projects). The desk review sample has a slightly larger relative proportion of projects from Latin America and of the clean energy theme, and fewer projects from Africa and the Middle East and North Africa.

**Figure A5 - 3 Desk Review Sample by Theme and Region**



**Figure A5 - 4 Portfolio Expenditure by Theme and Region**



Finally, the field visits sample covers one country in each of the six regions according to the methodology described in Section 2.2 and are outlined in the table below.

Table A5 - 1 Field Visit Project Sample

Theme	Product Line		Country	Unit	Task Team Leader (TTL)	Project ID	Activity Name	
<b>CLEAN ENERGY</b>	ESW		India	SASSD	Khanna	P099005	Renewable Energy Investment Climate in India	
<b>CLEAN ENERGY</b>	ESW		India	SASSD	Gaba	P101555	Low-Carbon Growth	
<b>EASP</b>	ESW		India	SASSD	Hamso	P105191	Energy Efficiency Improvement in Coal-Fired Generation	
<b>EASP</b>	ESW		India	SASSD	Hussain	P105194	Coal-Fired Power Plant - Energy Efficiency Regulations	
<b>EASP</b>	TA Lend	Non-	India	SASSD	Saraswat	P111243	Org Trans & PPPs in MSETCL	
<b>CLEAN ENERGY</b>	TA Lend	Non-	India	SASSD	Khanna	P119536	CSP-Renewable Energy Market Transformation I	
<b>EASP</b>	Knowledge Product		India	SASSD	Pargal	P122931	Power Sector Stocktaking	
<b>ENERGY EFFICIENCY</b>	ESW		Moldova	ECSSD	Stuggins	P113570	District Heating Restructuring	
<b>ENERGY EFFICIENCY</b>	TA Lend	Non-	Moldova	ECSSD	Nishimura	P123396	Chisinau Energy Supply Improvement	
<b>CLEAN ENERGY</b>	TA Lend	Non-	Morocco	MNSSD	Audinet	P098904	Renewable Energy Regulation	
<b>ENERGY EFFICIENCY</b>	ESW		Morocco	MNSSD	Crochet	P101264	Transport and Energy Efficiency	
<b>ENERGY ACCESS</b>	TA Lend	Non-	Morocco	MNSSD	Audinet	P104085	MA-ESMAP Social Safety Net for LPG Sub	
<b>EASP</b>	TA Lend	Non-	Morocco	MNSSD	Audinet	P104086	Oil Products Sector Liberalization	
<b>EASP</b>	TA Lend	Non-	Morocco	MNSSD	Audinet	P104087	ESMAP: MA-Structuring New Energy Agency	
<b>EASP</b>	TA Lend	Non-	Morocco	MNSSD	Pariante	P108120	Energy Supply Strategy	
<b>ENERGY ACCESS</b>	TA Lend	Non-	Peru	LCSSD	Bogach	P093486	Peru Rural Electrification	
<b>CLEAN ENERGY</b>	TA Lend	Non-	Peru	LCSSD	Bogach	P103422	Small Hydropower	
<b>ENERGY ACCESS</b>	Knowledge Product		Peru	LCSSD	Bogach	P104354	SMEs Energy Services Delivery in Peru	
<b>CLEAN ENERGY</b>	ESW		Peru	LCSSD	Bogach	P109969	(CCH) Overcoming Barriers to Hydropower	
<b>CLEAN ENERGY</b>	TA Lend	Non-	Peru	LCSSD	Bogach	P110305	Assessment of CC in Hydrology	
<b>EASP</b>	ESW		Peru	LCSSD	Reinstein	P111012	Natural Gas Study	
<b>ENERGY ACCESS</b>	Knowledge Product		Peru	LCSSD	Bogach	P123643	Promoting Productive Uses of Electricity	
<b>CLEAN ENERGY</b>	Knowledge Product		Philippines	EASSD	Arizu de Jablonski	P112371	Renewable Development and Market Reform	
<b>ENERGY ACCESS</b>	GEF		Tanzania	AFTSN	Rysankova	P092154	GEF Energy Development and Access Expansion	

<b>ENERGY ACCESS</b>	TA Non-Lend	Tanzania	AFTSN	Rysankova	P107301	Integrating SMEs in Tanzania's Rural Energy Initiatives
<b>ENERGY ACCESS</b>	AFREA Recipient-executed	Tanzania	AFTEG	Ms. Dana Rysankova	P114094	LADM 4509: Providing Affordable And Reliable Solar Systems In Northern Tanzania
<b>ENERGY ACCESS</b>	IBRD/IDA (Lending)	Tanzania	AFTSN	Rysankova	P117260	Additional Financing -TEDAP
<b>ENERGY ACCESS</b>	AFREA Recipient-executed	Tanzania	AFTSN	Rysankova	P117260i	Africa Renewable Energy Access Trust Fund - Lighting Rural Tanzania Project

Table A5 - 2 Desk Review Project Sample

Theme	Product Line	Country	Region	Unit	Task Team Leader (TTL)	Project ID	Activity Name	Status as of Oct 2011	Initial FY	Final FY
EASP	TA Non-Lend	Africa	AFR	AFTSN	Missfeldt-Ringius	P109447	Institutional Framework Development & Capacity Building	completed	FY09	FY10
EASP	ESW	Africa	AFR	AFTSN	Hughes	P111483	Regulating Electricity Trading in SADC	completed	FY09	FY10
CLEAN ENERGY	AFREA	Africa	AFR	AFTSN	Pumpuni	P120478i	Capacity Upgrading for West African Partners: Renewable Energy Education Project	ongoing	FY10	FY12
ENERGY ACCESS	Knowledge Product	Bangladesh	SAR	DRGIE	Dasgupta	P094768	Improving Indoor Air in Bangladesh	completed	FY06	FY08
ENERGY EFFICIENCY	IBRD/IDA (Lending)	Belarus	ECA	ECSSD	Salminen	P108023	Energy Efficiency	ongoing	FY10	
CLEAN ENERGY	ESW	Brazil	LCR	LCSSD	De Gouvello	P105702	CCH Low-Carbon Country Case Study	ongoing	FY07	
CLEAN ENERGY	AFREA	Burkina Faso	AFR	AFTSN	Pumpuni	P120478ii	Burkina Faso: Capacity Upgrading for West African Partners in Renewable Energy Education Project	ongoing	FY10	FY12
ENERGY ACCESS	TA Non-Lend	Cameroon	AFR	AFTSN	Manroth	P107606	Capacity Building Small Scale	completed	FY08	FY09
EASP	ESMAP-Funded Project									
EASP	ESW	China	EAP	EASSD	Taylor	P082160	Heat Pricing Study	completed	FY04	FY08
EASP	ESW	China	EAP	EASSD	Zhao	P096826	Coal Bed Methane Strategy	completed	FY07	FY07
EASP	TA Non-Lend	China	EAP	EASSD	Draugelis	P116044	China Heat Regulation Phase II	ongoing	FY09	
EASP	ESW	Djibouti	MNA	MNSSD	Audinet	P107067	Energy Sector Master Plan	completed	FY09	FY10
EASP	ESW	Ecuador	LCR	LCSSD	Bogach	P101408	EC Energy Strategy	completed	FY07	FY07
EASP	ESW	Egypt, Arab Rep	MNA	MNSSD	Bjerde	P105664	Structuring of PPP in Natural Gas	completed	FY08	FY08
ENERGY ACCESS	TA Non-Lend	GLOBAL	OTH	SEGES	Bossman	P095153	Decentralized Energy Services	completed	FY05	FY10
CLEAN ENERGY	Knowledge Product	GLOBAL	OTH	SEGOM	Kojima	P101182	Trade Policies for Liquid Biofuels	completed	FY06	FY08
EASP	ESW	GLOBAL	OTH	SASSD	Sharma	P105189	Regional Energy Trade	completed	FY07	FY08
CLEAN ENERGY	Knowledge Product	GLOBAL	OTH	ENV	Narain	P108154	Economics of Adaptation to Climate Change	ongoing	FY08	
EASP	Partnership	GLOBAL	OTH	SEGES	Carneiro de Miranda	P109952	Gender and Energy	completed	FY08	FY09
ENERGY EFFICIENCY	Partnership	GLOBAL	OTH	SEGES	Singh	P112187	Public Procurement of Energy Efficiency	completed	FY08	FY10



Theme	Product Line	Country	Region	Unit	Task Team Leader (TTL)	Project ID	Activity Name	Status as of Oct 2011	Initial FY	Final FY
ENERGY EFFICIENCY	Knowledge Product	GLOBAL	OTH	SEGES	Sarkar	P114361	Operational Toolkit for Energy Efficient Lighting	completed	FY09	FY10
ENERGY EFFICIENCY	Partnership	GLOBAL	OTH	SEGES	Singh	P115773	EE Cities Outreach and Dissemination	ongoing	FY09	
CLEAN ENERGY	ESW	GLOBAL	OTH	ENV	Hosier	P116023	Financing Instruments for Climate Change Mitigation	completed	FY09	FY10
ENERGY ACCESS	Partnership	GLOBAL	OTH	SEGES	Audinet	P116227	Economic Benefits of Electricity Supply	ongoing	FY10	
EASP	Internal Training	GLOBAL	OTH	SEGES	Rivera	P116252	ESMAP Practitioners' Forum	completed	FY09	FY10
ENERGY EFFICIENCY	Knowledge Product	GLOBAL	OTH	SEGEN	Madrigal	P118728	Smart Meters	completed	FY10	FY10
CLEAN ENERGY	Partnership	GLOBAL	OTH	SEGES	Suh	P120449	REMTI Knowledge Exchange (Geothermal)	completed	FY10	FY10
ENERGY ACCESS	TA Non-Lend	Guinea	AFR	AFTSN	Capoor	P108841	SMEs in Rural Electrification (FY10)	completed	FY08	FY09
CLEAN ENERGY	ESW	India	SAR	SASSD	Khanna	P099005	Renewable Energy Investment Climate in India	ongoing	FY06	
CLEAN ENERGY	ESW	India	SAR	SASSD	Gaba	P101555	Low-Carbon Growth	ongoing	FY07	
EASP	TA Non-Lend	Jordan	MNA	MNSSD	Beides	P110853	Energy Sector	ongoing	FY09	
EASP	Knowledge Product	Latin America	LCR	LCSSD	Andres	P100819	6L (SF) Benchmarking of the Electricity Sector	completed	FY06	FY08
ENERGY EFFICIENCY	TA Non-Lend	Lebanon	MNA	MNSSD	Stolp	P113858	Support to Implementation of Electricity Sector	ongoing	FY11	
ENERGY ACCESS	IBRD/IDA (Lending)	Mali	AFR	AFTSN	Ekouevi	P073036	Household Energy & Universal Access	ongoing	FY10	
CLEAN ENERGY	TA Non-Lend	Mexico	LCR	LCSSD	Montanez	P117870	Renewable Energy Assistance Program	ongoing	FY10	
CLEAN ENERGY	TA Non-Lend	Mexico	LCR	LCSSD	Yepez-Garcia	P118293	MX-Promoting Mini-Hydro Potential	completed	FY10	FY10
EASP	TA Non-Lend	Middle East and North Africa	MNA	MNSSD	Chavapritha	P116206	5M-Assessment of Energy SectorCredit Constraints	completed	FY09	FY10
ENERGY EFFICIENCY	ESW	Moldova	ECA	ECSSD	Stuggins	P113570	District Heating Restructuring	ongoing	FY09	
EASP	ESW	Mongolia	EAP	EASSD	Tsevegmid	P119796	Diagnostic of Econ Crisis to Infrastructure	completed	FY10	FY10
CLEAN ENERGY	TA Non-Lend	Morocco	MNA	MNSSD	Audinet	P098904	Renewable Energy Regulation	completed	FY06	FY08

Theme	Product Line	Country	Region	Unit	Task Team Leader (TTL)	Project ID	Activity Name	Status as of Oct 2011	Initial FY	Final FY
CLEAN ENERGY	ESW	Mozambique	AFR	AFTSN	Utria	P101999	Modern Biofuels Assessment	completed	FY07	FY09
EASP ENERGY ACCESS	TA Non-Lend	Nepal	SAR	SASSD	Haney	P122960	Support to Strategic Energy Sector Development	ongoing	FY11	
EASP ENERGY ACCESS	TA Non-Lend	Peru	LCR	LCSSD	Bogach	P093486	Peru Rural Electrification	completed	FY07	FY08
EASP ENERGY ACCESS	ESW	Peru	LCR	LCSSD	Reinstein	P111012	Natural Gas Study	completed	FY09	FY10
CLEAN ENERGY	Knowledge Product	Philippines	EAP	EASSD	Arizu de Jablonski	P112371	Renewable Development and Market Reform	ongoing	FY09	
ENERGY EFFICIENCY	ESMAP Funded Project									
ENERGY ACCESS	GEF	Poland	ECA	ECSSD	Johansen	P086790	Financial Intermediary Energy Efficiency	completed	FY04	FY08
CLEAN ENERGY	GEF	Rwanda	AFR	AFTSN	Baringanire	P097818	Sustainable Energy Development Project (GEF)	ongoing	FY10	
ENERGY ACCESS	ESW	Serbia	ECA	ECSSD	Atur	P099075	Renewable & Low-Carbon Energy	completed	FY06	FY08
ENERGY ACCESS	AFREA	Tanzania	AFR	AFTEG	Ms. Dana Rysankova	P114094	LADM 4509: Providing Affordable and Reliable Solar Systems in Northern Tanzania	completed	FY08	FY10
ENERGY EFFICIENCY	TA Non-Lend	Vietnam	EAP	EASSD	Tran	P105834	Vietnam Energy Efficiency Program	completed	FY09	FY09

Table A5 - 3 Field Visit Country Selection and Details

Country	Total Number of Projects in Evaluation Portfolio	Total Closed Projects in Evaluation Portfolio *[]	Total Field Visit Projects in Desk Review Sample	Clean Energy	Energy Assessments and Strategy Programs	Energy Access	Energy Efficiency	Economic and Sector Work	Technical Assistance	Knowledge Products	Other
Tanzania	3	1	1	0	0	3[1]	0	0	1[1]	0	2
Morocco	7	0	1	1	4	1	1	1	5	0	1
Moldova	2	2	1	0	0	0	2[2]	1[1]	0	0	1[1]
Philippines	1	1	1	1[1]	0	0	0	0	0	1[1]	0
India	8	5	2	4 [4]	4 [1]	0	0	4 [2]	2 [1]	1 [1]	1 [1]
Peru	7	3	2	3 [2]	1	3 [1]	0	2 [1]	3 [1]	2 [1]	0
<b>TOTAL</b>	<b>28</b>	<b>12</b>	<b>8</b>	<b>9 [7]</b>	<b>9 [1]</b>	<b>7 [2]</b>	<b>3 [2]</b>	<b>8 [4]</b>	<b>11 [3]</b>	<b>4 [3]</b>	<b>5 [2]</b>
Field Visit Sample (completed)				58%	8%	17%	17%	33%	25%	25%	17%
ESMAP Portfolio (completed)				21%	49%	22%	8%	36%	44%	11%	8%
ESMAP Portfolio (total)				27%	36%	21%	16%	30%	35%	15%	10%

\*Notes: 1. Numbers in brackets indicate how many of the activities are ongoing; 2. Tanzania also offers the opportunity for studying three recipient-executed AFREA projects. Every country provides an opportunity to study at least one regional activity.

## Annex 5 - List of People Interviewed

### *Face-to-face meetings in Washington, D.C.*

- Mr. Rohit Khanna
- Mr. Andres Londono
- Mr. Feng Lui
- Mr. Oliver Knight
- Mr. Amadou Camara
- Mr. Venkata Putti
- Ms. Dana Rysankova
- Mr. Ranjit J. Lamech (ECA)
- Ms. Lydia Kruse Tietz (SDNVP)
- Mr. Vijay Jagannathan (EAP)
- Mr. Pierre Audinet (ESMAP and MNA)
- Mr. Ashok Sarkar (Energy Anchor Unit)
- Ms. Susan V. Bogach (LAC)
- Mr. David Reinstein (LAC)
- Ms. Fowzia Hassan (MENA) (by phone)

### *Telephone interviews*

#### **ESMAP CG Members:**

- Mr. Andrew Shepard, Australian Agency for International Development, Infrastructure Manager, Infrastructure, Water and Sanitation Section, Australia
- Mr. Niels Hedegaard Jørgensen, Ministry of Foreign Affairs, Head of Section, Department for Environment, Energy and Climate Change, Denmark
- Ms. Anu Maria Hassinen, Ministry for Foreign Affairs, Energy Adviser, Department for Development Policy, Finland
- Mr. Hen Winnbust, Federal Ministry for Economic Cooperation and Development (BMZ), Germany
- Mr. Hermann Ingólfsson, Ministry for Foreign Affairs, Director General, Directorate for International Development, Iceland
- Ms. Bente Weisser, Royal Ministry of Foreign Affairs, Norway
- Ms. Sara Stenhammar, Swedish International Development Cooperation Agency, Program Manager Environment and Energy, Team Global Programmes, Department for Development Partnerships, Sweden
- Ms. Tineke Roholl, Ministry of Foreign Affairs, Head of Section, Climate and Energy Section, Climate, Energy, Environment and Water Department, The Netherlands
- Mr. Simon Ratcliffe, Department for International Development, Energy Advisor, UK
- Mr. Arnaud Desmarchelier, Agence Française de Développement, Energy Advisor, France

#### **Former ESMAP Manager:**

- Mr. Kwei Armar

#### **TAG Members:**

##### Former Members

- Mr. Amitav Rath

##### Current Members

- Ms. Judi W. Wakhungu
- Mr. Wolfgang Mostert
- Mr. Winfried Rijssenbeek

**Table A6 - 1 Country Case Study, Interviews Conducted: Moldova**

Name	Organization and Position
Mr. Alexandru URSUL Mr. Dumitru BUDIANSCHI	UNDP Moldova - Project Manager, Energy and Biomass Project - Institutional and Energy Sector Expert
Mr. Tohir MIRZOEV	IMF, Resident Representative
Mr. Mihai CERNEI	TERMOCOM, General Director
Mr. Tudor MOISEEV	CET 1, General Director
Mr. Ilarion POPA	Ministry of Economy and Commerce, Vice Minister
Ms. Galina PARSIAN	Ministry of Economy and Commerce, Director of Thermo-energetic Department
Mr. Vadim CEBAN	Ministry of Economy and Commerce, Director of Department of Energy Security and Efficiency
Mr. Dorin CHIRTOACA	Mayorality of Chisinau Municipality, Chisinau Municipality, Mayor
Mr. Ion MARGINEANU	INFOCOM, General Director
Mr. Abdoulaye SECK Mr. Sandu GHIDIRIM	World Bank Moldova Office - Country Manager - Operations Officer
Ms. Dagmar Karjarikova	EU Delegation Project Manager for Environment, Transport and Energy
Mr. Patrik STALGREN	SIDA Deputy Head of Development Cooperation
Mr. Constantin ENCIU	GIZ Moldova Project Advisor, Modernization of Local Public Services, Moldova
Mr. Victor PARLICOV Mr. Leonid BELINSCHI	ANRE - General Director - Technical Director
Mr. Shinya Nishimura	Financial Analyst, TTL for P123396, World Bank
Mr. Gary Stiggins	Lead Energy Economist, TTL for P113570, World Bank
Ms. Melanie Marlett	Former Country Manager for Moldova (2008–10), World Bank
Mr. Peter Robinson	ECA, consultant for P123396

**Table A6 - 2 Country Case Study, Interviews Conducted: India**

Name	Organization and Position
Eng. Bhai Lal	Central Electricity Authority, Director
Mr. Inderjit Kapoor	NTPC, Commercial Director
Dr. Ashvini Kumar	Ministry of New and Renewable Energy, Director
Dr. (Ms) Indrani Chandrashekhran Ranjan Chatterjee	Planning Commission, Environment & Forestry - Advisor - Consultant
Mr. Alok	Ministry of Power - Director

Mr. Sanjay Garg	- Additional General Manager, Project Monitoring Cell
Dr. T. C. Tripathi	Former advisor to MNRE
Prof. Rajiv Shekhar	Centre for Solar Energy Technologies, IIT Rajasthan, Head
Mr. G.J. Girase Mr. M.G. Waghmode	Maharashtra State Power Generation Co. Ltd, Mumbai - Director, Finance - Director, Operations
Mr. Subrat Ratho	Maharashtra State Power Generation Co. Ltd., Managing Director
Dr. Sapna Purohit	Formerly Maharashtra State Electricity Transmission Co. Ltd.
Mr. V. Rao Karbar	Asian Development Bank, Team Leader, Energy
Mr. S. Padmanaban Mr. Monali Zeya Hazra	USAID India - Director, South Asia Regional Initiative for Energy - Program Management Specialist, Clean Energy and Environment Office
Mr. Ashish Khanna	World Bank, India Energy Team Leader
Mr. Kwawu Gaba	World Bank, Lead Energy Specialist, South Asia Region
Mr. Chandrasekaran Subramaniam	World Bank, Senior Power Engineer

**Table A6- 3 Country Case Study, Interviews Conducted: Tanzania**

<b>Name</b>	<b>Organization and Position</b>
Mr. Frank Ole Majeori	Ministry of Energy and Minerals, TEDAP Focal Point
Mr. Lutengano Mwakahesya Mr. Eng. Bengiel Msofe Mr. George Nchwali	Rural Energy Agency - Director General - Director, Technical Services - Director, Finance and Administration
Mr. Hamis Mikate Mr. Prosper Magali	Ensol - Managing Director - Director of Projects
Mr. Andrew Mnzava	CAMCO, Senior Consultant
Mr. Anastas Bawala Mr. Norbert Cayoja Mr. Simon Everest	EWURA - Director, Electricity - Commercial Manager - Electrical Engineer
Mr. Mohammedrafik Parpia	Zara Solar, Managing Director
Mr. Medard Kachubo	Intra-Professions East Africa, Ltd., Managing Director
Mr. Emmanuel Manirabona	TANESCO, Manager, T&D Projects
Ms. Anna Mpangala	Amani Makoro Dispensary, Mbinga, Clinic Officer
Ms. Mary Papunda Mr./Dr. Athum Songoro	Myangayanga Dispensary, Mbinga - Staff - Clinic officer
Mr. Stephen Mwakifwamba Mr. Samer Al Fayadh	SIDA - Programme Officer, Energy - First Secretary
Mr. Baptiste Bobillier	European Union, Energy Sector Program, Program

	Officer, Natural Resources Management, Energy and Climate Change
Mr. Dennis Tessier	ARTI, Managing Director
Ms. Dana Rysankova	Senior Energy Specialist, Africa Energy Unit, World Bank
Ms. Raluca Golumbeanu	Coordinator, Africa Electrification Initiative (AEI)
Ms. Kathryn Heller	Social Development Specialist, World Bank, Project Coordinator for Gender and Energy project
Mr. Simon Karunditu	CEO, Realway Capitol Partners, Ltd., Kenya, consultant for Lighting Rural Tazania/TEDAP
Mr. Bernard Tanenbaum	Senior energy policy and regulation expert, LRTz and TEDAP consultant

**Table A6 - 4 Country Case Study, Interviews Conducted: Morocco**

<b>Name</b>	<b>Organization and Position</b>
Mrs. Maya Aherdane	Ministry of Energy, Mines, Water and Environment, Observation and Planning, Director,
Mr. Said Mouline	National Agency for Renewable Energy Development and Energy Efficiency (ADEREE), General Manager
Mr. Yassir Benabdallaoui	UNDP, Program Manager
Mr. Said el Aoufir	Ministry of Energy, Mines, Water and Environment, Oil and Fuel Products, Division Director
Ms. Amal Haddouche	Ministry of Energy, mines, water and environment Oil and fuel products, General engineer
Mr. Allal Reqadi	Ministry of Energy, Mines, Water and Environment, Distribution and Electricity Markets, Division Chief
Mrs. Zohra Ettaik	Chief engineer, Department of Renewable Energy and Energy Efficiency
Pr Hassan Hamdi	National School of Mineral Industry, Director of Studies
Mrs. Silvia Pariente-David	World Bank, Energy Specialist for Middle East and Africa
Mr. Mohammed Sahri, Mr. Olivier Pannetier	AFD, Project Manager
Mr. Abdelaziz Ezzaim	Ministry of Infrastructure And Transport, Director, National Testing Center, Division Of Road Transport Security
Mr. Mohamed Fait Mr. Fahd Guasmi Mr. Hajji Hamadi Mr. Lissigui Hassan Mr. Tannour Mounir	National Office Of Electricity (ONE) - Division Chief, Finance Department - Division Chief, Marketing and Sales Department - Division Chief, Strategy and Planning Department - Division Chief, Studies Department - Division Chief, Socioeconomic Uses, Studies Department, Rural Electrification
Mme Zahraa Ouacifi.	Ministry of Infrastructure And Transport, Division Chief, Coordination And Transport Facilities
Mlle Sabah Benchekroun	Ministry of Economic and General Affairs Assistant to the Chief of Government for Economic and International Relations

Mr. Abdelâdim El Guerrouj	Minister of Public Function and Modernization of the Administration
Mr. Nabil Saimi	Moroccan Agency for Solar Energy /MASEN Director for International Cooperation
Mr. Pierre Audinet	Ex-World Bank TTL, now ESMAP
Mr. Jean-Charles Crochet	World Bank TTL

**Table A6 - 5 Country Case Study, Interviews Conducted: Peru**

Name	Organization and position
Mr. Edgar Gonzales Mr. Pedro Ponce Mr. Luis Ampuero	Ministry of Energy and Mines (MINEM) - Main Specialist, UPE - Specialist, UPE - Director, External Funds
Mr. Ivan Inocente Mr. Martin Flores Revollar	Ministry of Energy and Mines (MINEM) - Renewable Energies Officer, SF - Consultant, FV
Mr. Carlos Centeno	Ministry of Energy and Mines (MINEM), RE Project Manager 2006–07
Mr. Carlos Huari	EX-Technical Coordinator RE Project, MINEM
Mr. Jaime Quijandria	EX- Minister of Energy and Mines, MINEM
Mr. Pedro Sanchez Gamarra	EX- Minister of Energy and Mines, MINEM
Mr. Edwin Quintanilla Acosta	OSINERGMI, General manager
Mr. Juan Miguel Cayo	EDELNOR, Regulation Manager EX –Vice Minister of Energy and Mines, MINEM
Mr. Pedro Gamio	EX –Vice Minister of Energy and Mines, MINEM
Mr. Victor Ormeño	OSINERGMIN, General Manager, Tariffs
Mr. Hugo Uriarte	SWISS Contact
Mr. Eduardo Zolezzi	Consultant
Mr. Percy Cueva Ormeño	ELECTROCENTO
Mr. Enrique Crousillat	Consultant
Ms. Ruth Alarcon	DESCO
Ms. Sandra Manco	Ministry of Economy and Finance Assistant to the General Director for Multi-Annual Programming, Energy and Mines Sector
Mr. Carlos Cervantes	Practical Action-ITDG, Ex-MINEM
Ms. Patricia Ormeno	MEM/MINEM Project Coordinator, Survey Study
Ms. Susan Bogash	World Bank TTL
Mr. David Reinstein	World Bank TTL

**Table A6 - 6 Country Case Study, Interviews Conducted: Philippines**

Name	Organization and position
Mr. Ernesto Pantango	FirstGen
Mr. Al Santos	FirstGen
Mr. Anthony Jude	ADB
Mr. Pete Maniego	Chair, NREB and EP President of Philippine IPP Association (PIPPA)
Mr. Marcelino Madrigal	World Bank
Mr. Cholo Bernad	ABOITIZ, RE Developer

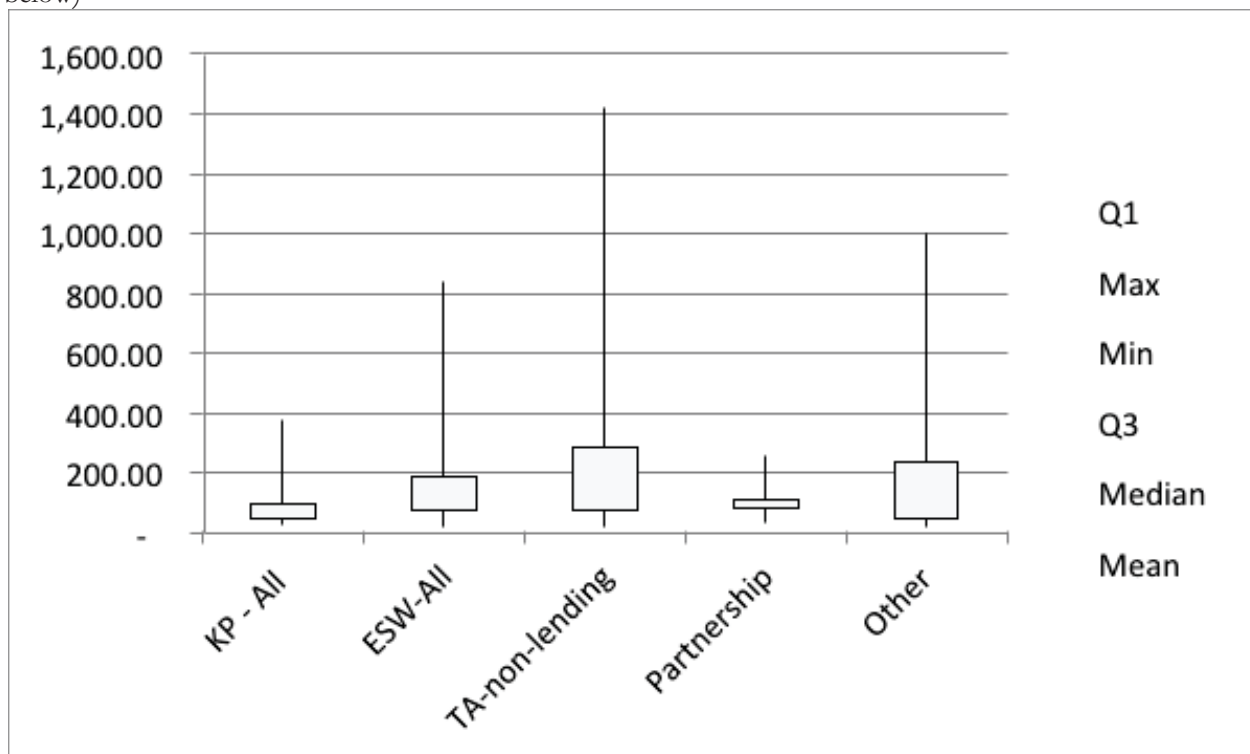


Mr. Ernest Leung	Foundation for Economic Freedom
Ms. Mylene Capongcol	Director, DOE, Power Industry Monitoring Board
Mr. Victor Dato	World Bank Manila
Ms. Rosario Venturina	Wind Energy Developers Association of the Philippines (WEDAP)
Mr. Saturnino C. Juan Ms. Sharon Montaner Ms. Ellen Ebcos	Electricity Regulatory Commission
Mr. Fortunator Sibayan Ms. Carmencita A Bariso Mr. Jesus Tamang	DOE REMB and Energy Policy and Planning Bureau  Director
Mr. Rod N Padua	Director, National Electrification Administration (NEA)
Mr. Rafael Abergas Mr. Froilan Tampinco	CEO, National Power Corporation (NPC-SPUG)
Mr. Philip Adviento Ms. Claris	Philippines Electricity Market Corporation (PEMC)
Mr. Giovanni Galang	NGCP
Mr. Bienvenido Valeros Mr. Tenedy A Elarmo	National Transmission Company (TRANSCO)
Ms. Divina Chingcuanco (IGA) Mr. Michael Pitlock (IGA)	USAID (IGA Contractor)
Ms. Federika C Rentoy Ms. Andrea Po Mr. Ricardo Aureo Mr. Jeriel Niguidula	Head of Environment, Quezon City Hall Acting Chief of Environment Building Official Building Official

## Annex 6 - Efficiency: detailed analysis of expenditures per output

The evaluation team has carried out an assessment of the costs for completed projects/activities. During the period 2006–11, 182 ESMAP activities were completed with a total budget of US\$37.2 million

**Figure A7 – 1a** Box Plot of Range of Disbursements for ESMAP Product Types (June 2011) (see table below)



**Table A7 – 1b** Table of Range of Disbursements for ESMAP Product Types (June 2011) (box plot above)

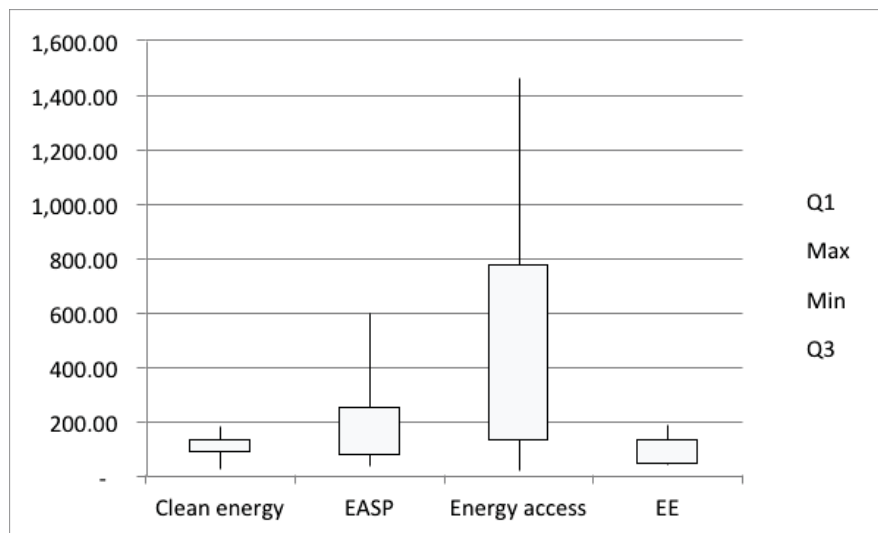
	ES MAP all	KP - All	ES W-All	TA-non-lending	Partnership	Other
Q <sub>1</sub>	55.95	45.06	67.80	69.91	75.48	40.37
Max	1,455.86	373.58	836.30	1,412.61	248.51	998.37
Min	13.37	19.80	13.73	15.58	27.19	13.37
Q <sub>3</sub>	225.88	120.24	233.84	288.01	130.05	296.02
Median	121.95	86.89	138.33	144.00	102	157.95
Mean	204.24	92.04	180.25	276.58	103.81	229.43
IQR	169.93	75.18	166.04	218.10	54.57	255.65
Frequency	182.00	24.00	54.00	69.00	15.00	20.00
Budget disbursed	37,172	2,209	9,733	19,084	1,557	4,589

The largest number of these projects were TA non-lending, with 69 projects completed, with budgets varying from US\$15,500 to US\$1.45 million per project. The large range in budgets reflects the wide-ranging types of

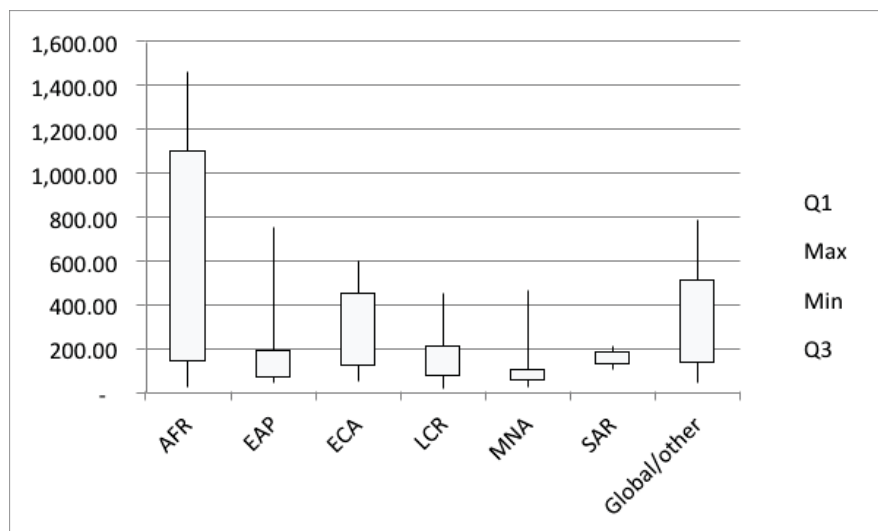
outputs from TA-non-lending activities. These include: institutional development plans, ranging from broad-based strategies to fully implementable plans; operational guidance, which includes technical notes, step-by-step instructions, and procedural guidelines; workshops, training, and conferences; and data collection and analysis surveys. In particular, energy access activities vary widely in range while clean energy and energy-efficiency projects are in a much smaller range. More than 50 percent of the budget is disbursed in Africa.

One respondent to the online survey, who was generally happy with ESMAP, mentioned that “the allocations are just too small to carry out meaningful technical assistance and often the work required to get funding for US\$100,000 by far outweighs the benefits. Hence, many TTLs and program leaders seek other forms of grant financing.”

**Figure A7 - 2 Disbursements for TA Lending between 2006-2011 for Completed Projects, by Theme**



**Figure A7 - 3 Disbursements for TA Lending between 2006-2011 for Completed Projects, by Region**

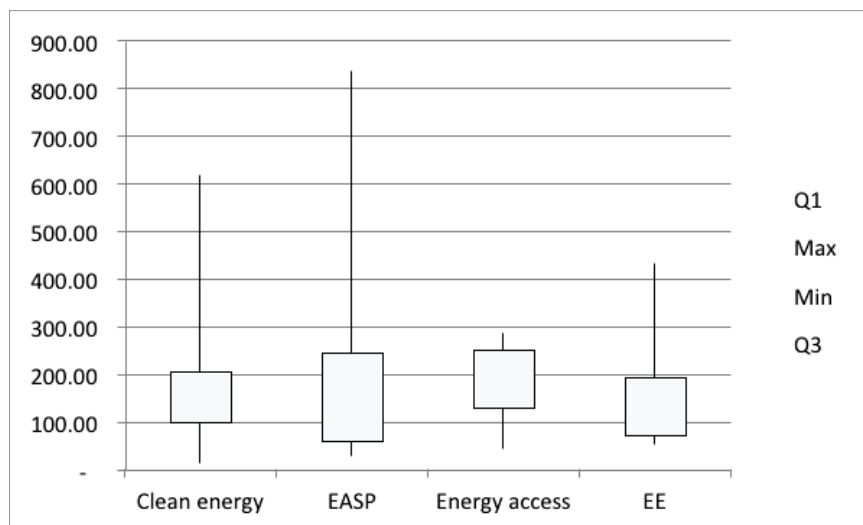


ESW work includes outputs of Sector Assessments/Reports that provide detailed analysis of thematic issues in the energy sector and policy notes that provide "just-in-time" advice to a client. One project could have a number of different components, comprising numerous reports, while another could be just one

report/output. Within the evaluation period, 54 projects were completed, with budgets varying between US\$13,700 and US\$836,300. The majority of these projects (61 percent) were EASP projects; this includes the most expensive project (an African regional multiyear project on transmission expansion). The analysis shows that there is little difference in expenditure per theme for ESW work. By region, work in Africa is more wide-ranging in cost and takes the majority of the budget.

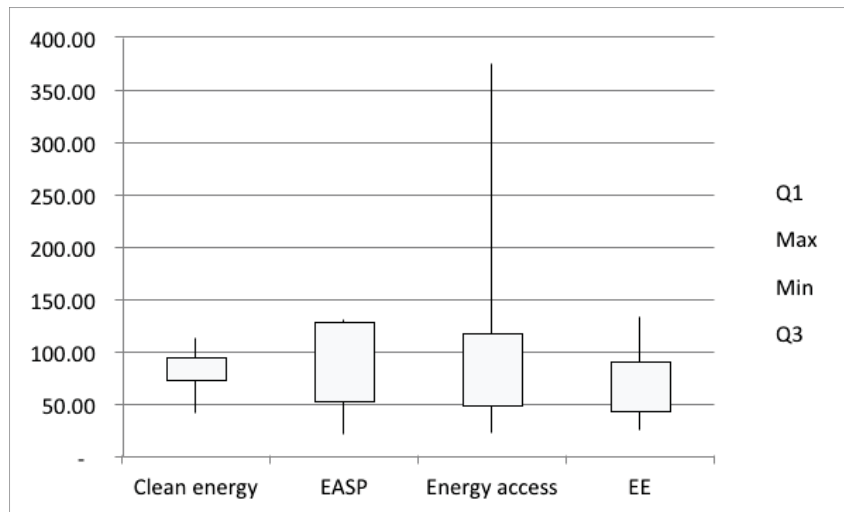
The desk review included three policy notes; the budgets varied from US\$44,700 for the Structuring PPP for Natural Gas in Egypt policy note to the Ecuador Energy Strategy policy note at US\$221,000. The Moldova District Heating Restructuring policy note cost more than double the estimated budget: (US\$166,000, compared to the estimated US\$80,000). However the value for money of the two studies, and their impact to date, were seen as relatively good by those in the country, and relative to other donor projects. One interviewee from a key energy-sector donor was impressed with how quickly ESMAP was able to act on this issue, and surprised with how relatively inexpensive the ESMAP studies were, considering the research and input that went into them.

**Figure A7 - 4 Disbursements for ESW Projects Between 2006-2011 for Completed Projects, by Theme**

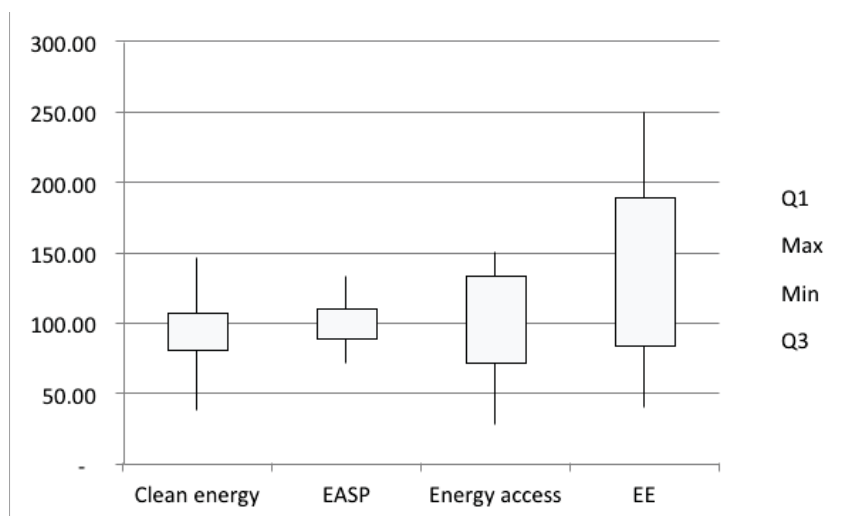


During the evaluation period, 24 knowledge product projects were completed with a total budget of US\$2.2 million. Nine (38 percent) of these were global projects, using 27 percent of the budget, while 21 percent (5 projects) in LAC used 38 percent of the budget, a difference driven by one more expensive product in LAC. Again, the range in costs per project reflects the variability in the work.

Knowledge products include studies that support the Bank's business and toolkits, handbooks, and guidelines. During FY09-11, 15 ESMAP activities developed innovative products that will benefit the wider energy practice in client countries, Egypt: time of use tariffs; LCR: energy auctions; Tool for Rapid Assessment of City Energy (TRACE); online database of utility performance indicators in Africa; low-carbon planning tool -- EFFECT model and MACTool; CFL toolkit. These last products are available on the ESMAP website and provide invaluable information/tools to clients. To ensure that value for money is achieved, dissemination activities need to be carried out to make clients aware of the products. Assuming there are users of the tools, then they are very good value for money—for example, the CFL Toolkit cost US\$131,900 and has already produced two key documents on how to develop a CFL program.

**Figure A7 - 5 Disbursements for Knowledge Products 2006-2011 for Completed Projects, by Theme**

There were 15 partnership projects completed during the evaluation period, with a budget of US\$1.56 million. All except two of these projects were global projects spread among the four themes.

**Figure A7 - 6 Disbursements for Partnerships from 2006-2011 for Completed Projects, by Theme**

As a comparison to ESMAP, during fiscal 2010 ASTAE disbursed a total of US\$2,123,893—an amount essentially stable from the previous year. This provided funding for 21 activities in 12 countries.<sup>210</sup>

The key finding of the cost analysis is that, as expected, there are substantial variations in the costs of activities in the same category. This was mirrored in both the 2005–07 desk review and the ESMAP cost assessment.

The 2005–07 desk review looked at seven activities with expenditures of \$US 1 million, with the number of outputs given as 15–20, equivalent to US\$50,000 to US\$66,000 per output. The study stated “These seven activities reviewed reflect the multiplicity of products that one activity might produce. In the case of the Tajikistan and Uzbekistan activities, the activity produced three or more reports and contributed to the Poverty and Social Impact Assessment (PSIA) in one country. In the case of the Market Efficiency project, the activity resulted in ESMAP working papers as well as published reports. In the case of the ongoing

projects in India and Africa Lighting, several outputs have been produced, including workshop proceedings, presentations, reports, web portals, and tools.<sup>211</sup><sup>22</sup>

## Annex 7 – Terms of Reference

*At the 2010 ESMAP's annual donors meeting, the donors agreed to an external evaluation of the program to be conducted in FY12. It is proposed that the evaluation covers the period of five years, from July 2006 through June 2011.*

### 1. Introduction and Background

#### 1.1 The Energy Sector Management Assistance Program (ESMAP)

ESMAP is a global knowledge and technical assistance partnership administered by the World Bank (the Bank) and supported and governed by official bilateral donors (Consultative Group of Donors<sup>1</sup>, or the CG). ESMAP's primary mission is to assist low- and middle-income countries to increase know-how and institutional capacity to achieve environmentally sustainable energy solutions for poverty reduction and economic growth.

ESMAP-financed activities are led by the Bank Group staff in partnership with international, national, regional, and local organizations. Since its inception in 1983, the program has implemented over 900 activities across more than 100 countries. ESMAP's mandate and products have evolved over time to meet the changing needs of its clients from low-income, emerging, and transition economies.

ESMAP focuses its efforts “upstream” through three core functions: think tank, knowledge clearinghouse, and operational leveraging—all aimed at helping client countries make better informed choices, enhance capacity, and adopt cutting-edge solutions. ESMAP's product lines include targeted technical studies, strategic advice, best practice dissemination, and pre-investment work.

Under its current Strategic Business Plan, 2008-2013, ESMAP is extending its engagement with client countries, mirroring the changing landscape of global energy challenges, to encompass the nexus of energy security, energy access, and climate change. Additional information about ESMAP is available at [www.esmap.org](http://www.esmap.org).

#### 1.2 Funding Sources, Major Partners, Scope and Reach

The current 5-year Business Plan (2008-13) is built around an estimated annual budget of \$11 million. ESMAP's Annual Block Grants to the Bank's six regions represent approximately 55% (\$1 million per

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<sup>1</sup> During the period to be covered by the evaluation, the following countries and organization have been, or are, members of the CG: Australia, Austria, Canada, Denmark, Finland, France, Germany, Iceland, the Netherlands, Norway, Sweden, United Kingdom, and the World Bank.

FY per region) of the program budget. The actual annual disbursements for the evaluation period are as follow: US\$13.8m in FY08, US\$20.1m in FY09, US\$20.6m in FY10, and US\$26.8m in FY11<sup>2</sup>. The budget figures included in the Business Plan are indicative and subject to the CG's endorsement of the annual work program as well as actual funds available.

For operational flexibility in accommodating the multi-year funding requirements of all core programs, a new, single multi-donor programmatic trust fund (MDTF) was established in November 2009, and all donors have agreed to make new contributions into this vehicle. This will allow untied funding to support program administration and the core set of multi-year programs and cross-cutting initiatives endorsed by the CG, without specific restrictions. The previous ESMAP Core Multi-Donor Trust Fund closed in November 2010, and other earmarked trust funds will be phased out by the end of 2012.

In practical terms, the current portfolio of projects is a mix of both earmarked and unrestricted funds, and it will not be until FY13-14 that all ESMAP projects will be funded wholly by the new programmatic TF.

### 1.3 Program Governance

ESMAP is governed by the Consultative Group of Donors (CG), comprising representatives of the donor countries and the World Bank. The CG is chaired by the Bank's Sustainable Development (SDN) Network Vice President (or his/her designee).

ESMAP's mission is represented in a results framework endorsed by the CG (Figure 1). Based on their respective energy sector and broader international development priorities, CG members reach consensus on the global thematic challenges that underpin funding priorities for each ESMAP business cycle. These global thematic challenges, in turn, inform the choice of energy practice areas in which ESMAP works during each business plan cycle.

ESMAP also has a Technical Advisory Group (TAG), a three-member external body appointed by the CG. The TAG's role is to provide an independent assessment and informed recommendations about the strategic direction and priorities of the program.

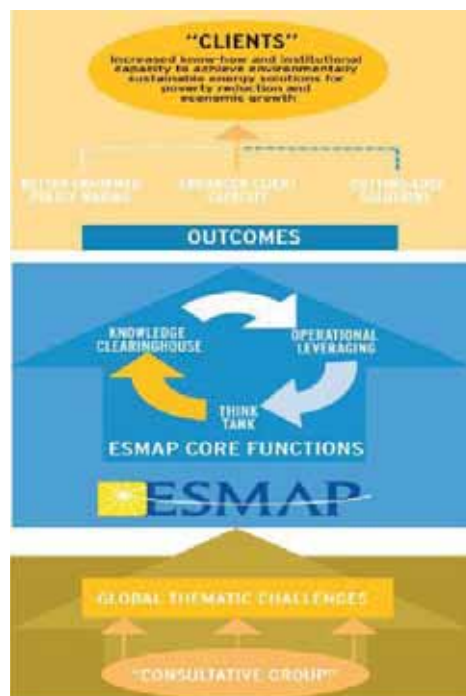
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<sup>2</sup> FY09-11 includes disbursements to AFREA and the CEIF. FY11 data is as of December 2010. This figure will be updated when the current FY ends on June 30, 2011.



They also assess the program’s impact and effectiveness in meeting its mission. The TAG reports directly to the CG.

**Figure 1 – ESMAP’s Overall Results Framework**



#### 1.4 Program Management

The Program Secretariat is located within the Bank’s SDN Vice Presidential Unit in Washington, DC, and headed by a Program Manager and a team of approximately 20 staff. The program reports to the Director of SEG (Sustainable Energy Department) and follows the Bank’s rules, policies and procedures in executing its programs and managing human resources.

##### *Portfolio Management*

Beginning with the current business plan cycle, ESMAP has aligned its operational leveraging activities with the Bank’s FY cycle (July 1<sup>st</sup> – June 30<sup>th</sup> of the following year) for executing analytical and advisory activities and expanded coverage of the annual block grants across all core ESMAP functions.

ESMAP has also put in place a comprehensive portfolio monitoring and evaluation (M&E) system and a dedicated team to better assess the effectiveness of the core functions in terms of timely and sustainable delivery of client outcomes. The M&E system is designed to strengthen the focus on outcomes and results while ensuring relevance to ESMAP’s mission and implementation strategy.

## 1.5 Previous Evaluations

### *External Evaluations*

In 1990, donors commissioned a review of ESMAP “to support the program respond more effectively to the needs of developing countries while liaising more effectively with donors and the co-sponsors.” The review commission suggested a number of changes in program governance, most of which became effective during the year, including the establishment of a CG for ESMAP and the TAG. In addition, in 2000, the Bank’s Operations Evaluation Department conducted an external review of several energy programs, including ESMAP.

### *Internal Evaluations*

In November 2009, the Quality Assurance Group (QAG) of the World Bank conducted an internal review of the ESMAP program as part of quality assessment of Global & Regional Programs and Partnership (GRPPs). The purpose of the review was to assess the value for money for ESMAP’s analytic and advisory services and non-lending TA focusing on relevance, quality of the analysis, and likely impact. Under the assessment, the QAG suggested recommendations aimed at enhancing the impact of ESMAP’s work program and activities. The QAG review panel proposed two key recommendations to the ESMAP Program Unit with a view to enhancing the impact of ESMAP activities as follows: i) review the findings of ESMAP funded activities globally with a view to extracting practical lessons and ideas for dissemination; and ii) reserve some of ESMAP funding to explore new areas not being addressed in the regional ESMAP activities, given the Bank’s predominant focus on operational activities.

### *Other Evaluations and Reviews*

For the March 2010 CG Meeting, ESMAP management commissioned a desk review of external advisory bodies of other Global Programs and Partnerships that are managed by the Bank, to identify best practice governance structures of such groups. The purpose of the review was to help inform the CG in revising the TAG’s terms of reference. The review recommended that TAG membership should be limited in size and diverse in terms of professional and technical backgrounds, and that the primary role of the TAG should be to provide strategic advice and avoid micro-management.

ESMAP has also been carrying out self-evaluation of its performance through its annual reports, which provide portfolio status updates, and discusses trends and particular highlights for the reporting period. The primary audience of these reports is CG members and other partners.

The annual reports are also complemented by the TAG’s independent review of ESMAP, which is prepared annually for the CG. The TAG’s assessments are based on an extensive review of ESMAP

activities and interviews with ESMAP staff and other stakeholders, mostly the Bank's regional operations staff carrying out ESMAP-funded activities. The TAG reports directly to the CG, and TAG findings and recommendations are typically discussed at the annual CG meeting.

## **2. Scope and Objectives of Evaluation**

### **2.1. Scope of the Evaluation**

The evaluation will be an independent review of the outcomes and achievements of ESMAP for the last five years. The information and recommendations generated from the evaluation are expected to inform the CG and the Bank/ESMAP management to help improve the program's effectiveness as well as to provide inputs for strategic directions. To this end, the main thrust of the exercise is on learning objectives.

The proposed review period is July 2006 - June 2011, which includes the last year of the 2005-2007 Business Plan and the first four years of the current Business Plan 2008- 2013.. The evaluation will also cover changes to ESMAP's strategic business planning and work program delivery, as well as transition from earmarked and single-country TFs to a single programmatic MDTF.

The evaluation will cover program-level effectiveness and results, including governance, country-level and activity-level performance of ESMAP's portfolio. The evaluation will cover all activities funded through ESMAP TFs, including those managed under the Clean Energy Investment Framework Multi-Donor Trust Fund.

### **2.2. Objectives of the Evaluation**

The primary objectives of the evaluation are the following: i) assess the effectiveness of ESMAP as a global TA program; ii) assess the major factors which have influenced results either positively or negatively; iii) draw key lessons learned; and iv) recommend how to better meet the objectives of the program. In addressing these objectives, the evaluation will assess what impact ESMAP has had in helping to achieve poverty reduction in client countries.

### **2.3. Institutional Arrangement for the Evaluation**

The evaluation is being commissioned by ESMAP's governing body, the CG, which will be requested to endorse the TOR. It is proposed that two members of the CG participate in selecting the

consultant team. Consultant will be selected competitively through the Bank's Quality- and Cost-Based Selection procedure.

ESMAP management will serve as the administrative agent of the CG, as per the normal practice for TF programs at the Bank. Specifically, ESMAP management will be responsible for the procurement process and for signing the Consultant contract and for providing day-to-day support (sharing data, reports and arranging field visits as relevant). Consultant will report evaluation findings concurrently to both ESMAP management and the CG, following a preliminary fact-checking process with ESMAP on its draft report.

### 3. Evaluation Criteria and Questions

**3.1.** The evaluation will be made in terms of: relevance, effectiveness, and efficiency of ESMAP's mission and related business plans, overall institutional arrangements, and strategy for continued sustainability of the program including resource mobilization and financial management.<sup>3</sup> It is suggested that each of these aspects of ESMAP's operations be assessed for the period under consideration as follows:

#### *A. Relevance*

- a. To what extent are ESMAP's objectives and design of the program consistent with current global/regional challenges and concerns in the energy sector and with the needs and priorities of its client countries and groups?
- b. How successfully has ESMAP identified and developed new business lines and program priorities? To what extent are the business lines and program priorities appropriate for achieving its objectives?
- c. Does ESMAP have a comparative advantage in the energy sector, and if so, was it correctly defined and articulated? To what extent is ESMAP competing with other programs or entities that are providing similar goods and services?
- d. Are the stated objectives of ESMAP, consistent with this comparative advantage, clearly defined in strategy documents? Are the program results measurable?
- e. In each area of the work plan, are the identified activities, outputs, and products appropriate to the objectives of the program?

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<sup>3</sup> The consultant will have flexibility on the structure of the evaluation report, provided that the evaluation criteria are taken into account.

- f. Are the stated objectives of ESMAP, consistent with this comparative advantage, clearly defined in strategy documents? Are the program results measurable?

### B. *Effectiveness*

- a. To what extent does ESMAP management have the flexibility to design and effectively execute the activities to achieve program goals?
- b. To what extent do products, outputs, and activities achieve the intended objectives? (This aspect to be assessed across all work plans.)
- c. To what extent does the program have an effective monitoring, reporting and evaluation framework including measurable indicators, systematic and regular processes for collecting data, and feedback processes to facilitate decision making and learning?
- d. How has the program fulfilled its strategic role? How can this role be made more effective in the future, and what are the related options and possibilities going forward?
- e. Which activities are most effective in contributing to stated objectives, what are the characteristics of these activities and to what extent can they have be replicated in other work plans (*i.e.*, in other regions or thematic areas)?
- f. To what extent has the transition to core and/or programmatic funding facilitated flexibility and effectiveness in program planning and management?
- g. How effective are ESMAP's linkages to the Bank's operations, and to what extent are these linkages established at the country or local levels?
- h. To what extent has ESMAP, directly or indirectly, influenced World Bank's lending operations and investments from the private sector and the donor community?

### C. *Efficiency*

- a. To what extent are the impact and benefits arising from ESMAP activities commensurate with the level of effort and resources expended?
- b. What are the most cost-effective areas of ESMAP operations (by country, region, or thematic area of work, including partnerships)?

*D. Institutional Arrangements and Management*

- a. How appropriate and effective are ESMAP's organizational structure and staffing profile in realizing a relevant, effective and efficient business plan? What changes, if any, are needed to ESMAP's organizational structure, and staffing profile to carry out its mandate?
- b. How effectively has ESMAP management's accountability been exercised, and how well is M&E built into programming and strategy to strengthen accountability?
- c. How well does the CG operate as a primary governance body and what are the recommendations for improving the effectiveness and efficiency of the existing structure?
- d. How effective is the TAG's role as an advisory body to the CG and in providing strategic advice on ESMAP's strategy, overall priorities and their development into practical business plans?
- e. To what extent do the governance and management structures permit and facilitate the effective participation and voice of client countries and other partners and stakeholders in major governance and management decisions? How are the interests of the different categories of stakeholders represented in the governance of the program?

*E. Strategy for Program Sustainability*

- a. To what extent has the program managed its growth in a proactive and effective manner?
- b. What is the optimum resource level for ESMAP and what needs to be done to achieve and sustain this level?
- c. How effective is ESMAP in building and developing internal and external partnerships to achieve its mission objectives?
- d. What is the most identifiable development impact of ESMAP and how is it perceived by other constituents, organizations and partners beyond its client base?
- e. To what extent has the program learned internally from its experiences?
- f. How has the program identified and managed risks?
- g. To what extent has ESMAP demonstrated adaptability or responsiveness to the changing global environment including external shocks?
- h. To what extent can ESMAP-initiated activities be broadened to a wider and larger beneficiary group, and be leveraged to bring about even more benefits than originally intended without higher cost implications?

### 3.3 Follow-up actions

Preliminary findings and recommendations of the evaluation will be presented to the CG at its meeting in spring 2012, along with a preliminary ESMAP management response and action plan. The evaluation will be finalized soon thereafter for the CG's endorsement, and will be disseminated to partners and operational staff, as well as other stakeholders, in order to facilitate learning and transparency.

## 4 Evaluation Design and Methodology

Consultant will propose the design and methodological approach for conducting the evaluation when submitting a proposal, based on the existing data and information, as well as through structured interviews or surveys and client country visits.<sup>4</sup> It is expected that the consultant will interview a cross-section of ESMAP stakeholders, such as client country government officials, Bank operations staff and sector managers, representatives of bilateral development agencies, partners, CG and TAG members, in addition to ESMAP staff.

## 5 Budgeting

No budget will be specified and bidder proposals will include both technical and financial proposals. This will also allow bidders to specify a preferred methodology, estimate its costs, and have control over their ability to provide the deliverables.

### 5.1 Cost Estimate

The cost estimate should include the costs of staff/consultant time, travel and associated expenses, communications, production of all reports and other expenses.

Payment will be made on a lump sum basis upon delivery of the following reports:

Advance	10%
Inception Report	30%
Draft Evaluation	35%
Final Evaluation	25%

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<sup>4</sup> It is proposed that the consultant visit at least one country in each Bank operational region covering all of ESMAP strategic programs and initiatives during the evaluation period.).

## **6. Deliverables**

The Consultant will have the following deliverables: **6.1.**

### ***Inception Report***

The inception report will outline:

- i) Proposed approach to the evaluation in the context of the global/regional energy challenges facing ESMAP and its client countries.
- ii) List of key documents and resource people for the evaluation.
- iii) Work program for the evaluation.
- iv) Draft of detailed program for site visits to a sample of ESMAP projects in client countries and consultation meetings.
- v) First draft of criteria and indicators for assessing the relevance, effectiveness, and efficiency of ESMAP operations and sustainability of the program; and
- vi) List of specific questions and concerns relating to the evaluation to which ESMAP management and/or CG will respond.

### ***6.2. Draft Evaluation Report***

The draft evaluation will form the basis for more detailed consultation and will contain:

- i) Assessment of general performance against agreed indicators in the period 2007-2011.
- ii) Assessment of the general effectiveness, flexibility/adaptability and efficiency of the institutional arrangements.
- iii) Preliminary assessment of appropriate levels of growth, funding, and staffing.
- iv) Recommendations.

### ***6.3 Final Evaluation Report***

The consultants will prepare a final evaluation report based on the feedback received from ESMAP management and the CG.



### ***6.4 Presentation of Evidence***

Consultant is expected to meet the standards of a high-quality, rigorous evaluation, which at a minimum, ensures that all findings and conclusions should be based on evidence which is presented in the evaluation report. Such evidence may be in the form of tabulations of data, compilation of survey results, statistical analysis, case study reports, testimonials, objective observations of measurable data, etc. In cases where the source of information is interviews, the method of selecting those to be interviewed should be presented in the evaluation report. For case studies, site visits, or reviews of a subset of activities, the criteria and processes for selecting those cases should be presented. In the case of surveys, the questionnaire, information on the population or samples, and the response rates should be presented in the report.

## **7. Work Plan and Schedule A**

timetable is proposed in Annex 1.

## **8. Qualifications of the Evaluation Team**

The review team would consist of three to four professionals exhibiting a range of skills, including the following:

- Proven track record of experience in organizational behavior, strategic planning, institutional development, performance measurement, or other related areas.
- Demonstrated ability to work with national, provincial and municipal governments, as well as public international organizations.
- Experience in engaging senior policymakers as well as a wide range of stakeholders and facilitating change management initiatives.
- Knowledge of the energy sector in developing countries.
- Working knowledge of social development, particularly gender, issues in developing countries.
- Previous experience in evaluation of programs or organizations related or involved in the energy sector.

## ***9. ESMAP Contributions***

ESMAP will provide significant inputs to the process of the evaluation exercise. These contributions include:

- **Staff Time:** Approximately 1 staff week for each of the Program Team Leaders, Lead Economist, and Operations Officer. Up to 2 weeks of Program Manager. Up to 1 week of Resource Management Analyst. Up to 0.5 weeks of any other staff member as required for participation in consultation meetings.
- Participation of World Bank ESMAP Regional Coordinators and Task Team Leaders.
- Rapid and timely input to draft reports produced by the team.
- Costs of production of final evaluation report for formal distribution to ESMAP partners and clients.

## 10. Management

This consultancy contract will be supervised by the ESMAP Program Manager. ESMAP will provide the necessary administrative support and data/information, and facilitate meetings with Bank staff.

All preliminary reports will be submitted simultaneously to the Program Manager and the CG.

## **Annex 1: Proposed Methodology and Timeframe**

For this evaluation, ESMAP estimates that it will take a team of three to four consultants and approximately 35-40 person-weeks altogether to complete. Specific requirements for each of the team members are defined above. ESMAP proposes the following timeline for the evaluation exercise:

1. Early October 2011 – The evaluation team to meet with ESMAP management. The purpose of this visit is for the evaluation team to become familiar with ESMAP and its processes. This will also allow the team time to examine ESMAP files and documents and to identify any additional information the team will require. ESMAP staff members will plan on designating 2 work days each to assist the team. Additional administrative support will be available as necessary.
2. November 2011 – January 2012 – The team conducts site visits and meets with client representatives, other officials and stakeholders, as well as relevant Bank teams. The visits will be facilitated by the relevant TTLs.
3. Mid-February 2012 – The evaluation team prepares a draft report and transmits the draft to ESMAP for fact checking.
4. Early March 2012 – Evaluation team revises the report, and submits a final draft to CG, ESMAP and TAG.
5. Mid-March 2012 – ESMAP prepares preliminary management response and submits to CG and TAG.
6. Spring 2012 – CG Meeting discusses draft final report.
7. Summer 2012 – CG's comments and ESMAP's final management responses are incorporated, and final version is produced.

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- <sup>1</sup> Economic and Social Commission for Asia and the Pacific, “Policies and Perspectives on Energy for Sustainable Development: Review of Strategies and Draft Action Programme for Promoting Sustainable Development, 2001-2005” E/ESCAP/SO/MESD/2, 26 October 2000.
- <sup>2</sup> Seventh Meeting of the Global Forum on Sustainable Energy « Energy Efficiency for Developing Countries: Strong Policies and New Technologies », 21–23 November 2007, Vienna International Center, Austria.
- <sup>3</sup> Lights Out? The Outlook for Energy in Eastern Europe and the Former Soviet Union. World Bank, 2010.
- <sup>4</sup> One Goal, Two Paths: Achieving Universal Access to Modern Energy in East Asia and Pacific., World Bank, AUSAID, 2011.
- <sup>5</sup> Energy Matters: Achieving Secure and Clean Energy in Latin America and the Caribbean, IBRD Results. World Bank, 2010.
- <sup>6</sup> Energy in MENA. World Bank, 2010.  
<http://web.worldbank.org/WorldBankSITE/EXTERNAL/COUNTRIES/MENAEXT/0,,contentMDK:22307440~pagePK:146736~piPK:146830~theSitePK:256299,00.html>.
- <sup>7</sup> Regional cooperation and integration – Energy : Opportunity for Trade  
<http://web.worldbank.org/WorldBankSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/0,,contentMDK:21510953~pagePK:146736~piPK:146830~theSitePK:223547,00.html>.
- <sup>8</sup> Fact Sheet: The World Bank and Energy in Africa  
<http://web.worldbank.org/WorldBankSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,contentMDK:21935594~pagePK:146736~piPK:146830~theSitePK:258644,00.html>.
- <sup>9</sup> <http://fluidsurveys.com/>
- <sup>10</sup> As per result-based management concepts and terminology.
- <sup>11</sup> IEA 2011. World Energy Outlook. Executive Summary.
- <sup>12</sup> UN-Energy 2010. Delivering on Energy. An overview of activities by UN-Energy and its members.
- <sup>13</sup> ESMAP 2010. Portfolio Review 2005-2007.
- <sup>14</sup> ESMAP 2007. Strategic Business Plan 2008-2013.
- <sup>15</sup> ESMAP 2005. Strategic Business Plan 2005-2007.
- <sup>16</sup> Business Plan 2008-2013, p 21.
- <sup>17</sup> Business Plan 2008-2013, p 23.
- <sup>18</sup> ESMAP. Energy Efficient Cities Initiative. TRACE brochure, p 2.
- <sup>19</sup> P114361 - Development of an Operational Toolkit for Energy Efficient, CPN.
- <sup>20</sup> ESMAP 2009. Annual report..
- <sup>21</sup> Program Brochure 1 CESVA.
- <sup>22</sup> ESMAP website. Results-Based Funding for Energy Sector Development. <http://www.esmap.org/esmap/Results-Based%20Funding>.
- <sup>23</sup> ESMAP website. Tool for Rapid Assessment of City Energy (TRACE): Helping Cities Use Energy Efficiently. <http://www.esmap.org/esmap/TRACE>.
- <sup>24</sup> ESMAP website. Modeling Tools and E-Learning: MACTool. <http://www.esmap.org/esmap/MACTool>.
- <sup>25</sup> Most of the benchmark studies mentioned have been conducted for the Moroccan government, which is certainly a reason why ESMAP’s international experience is very recognized in this country.
- <sup>26</sup> ESMAP 2007. Strategic Business Plan 2008-2013. Results Framework, p 28.
- <sup>27</sup> ESMAP 2009. Annual Report.
- <sup>28</sup> Ibid.
- <sup>29</sup> ESMAP 2010. M&E Framework. Draft.
- <sup>30</sup> Ibid.
- <sup>31</sup> P095153. Project memorandum.
- <sup>32</sup> Specific, measurable, accurate, relevant, timely.
- <sup>33</sup> ESMAP 2011. Operational Manual. p 26.
- <sup>34</sup> ESMAP 2010. Annual report.
- <sup>35</sup> ESMAP 2011. Operational Manual. p 41.
- <sup>36</sup> Gender and Energy GAP (P111786).
- <sup>37</sup> ESMAP 2008. Gender & Energy Development Strategies Program. CD CHAPTERS\_Worshop Proceedings. P 12.
- <sup>38</sup> P111012, 2010. Peru Downstream Natural Gas Study. Minutes of the decision meeting.

- <sup>39</sup> ESMAP 2008. Gender & Energy Development Strategies Program. BROCHURE\_Worshop Proceedings. p9.
- <sup>40</sup> P109952 2008. Gender and Energy. PCN. P 1.
- <sup>41</sup> ESMAP 2007. Technical Advisory Group Report to the Consultative Group of Donors. Final Report. p 27.
- <sup>42</sup> ESMAP 2010. Technical Advisory Group Report To The Consultative Group Of Donors. P 6.
- <sup>43</sup> P108841, Activity Completion Summary (ACS), 2010.
- <sup>44</sup> P108841, Opportunities for Pooled Financing Facilities in Poland, Final Report, August 2007, pp 27-28.
- <sup>45</sup> P108154, Economics of Adaptation to Climate Change (EACC), Implementation Completion Memorandum (ICM), 20 January 2012, p 4.
- <sup>46</sup> P120449 - REMTI Knowledge Exchange (Geothermal), GRM.
- <sup>47</sup> Section 2.7 and 2.8 and Chapter 3 on efficiency will each discuss ESMAP results relative to influencing and leveraging World Bank investment.
- <sup>48</sup> Business Plan 2008-2013.
- <sup>49</sup> No ESMAP business plans or annual report states the definition of these three objectives; text here is built on AR 2010 and draft M&E log-frame 2011.
- <sup>50</sup> Out of the 50 projects in the sample and based on the PCN and or other planning document: counted if the stated objectives include an intended improvement of design or implementation of policy, improve client know-how or capacity, or introduce new or cutting-edge solutions, respectively.
- <sup>51</sup> Evidence from ACS or other final assessment stating that key objectives were met as planned at the time of review.
- <sup>52</sup> Evidence from ACS or other monitoring or assessment documentation that some key objectives have been met as planned at the time of review.
- <sup>53</sup> Projects for which monitoring and/or assessment documentation was available and indicated that objectives were not met as planned.
- <sup>54</sup> Closed projects with no assessment or evaluative evidence to suggest whether objectives have been met as planned.
- <sup>55</sup> Projects that are ongoing and do not have monitoring or assessment documentation to assess
- <sup>56</sup> Percentage of fully + partially met is calculated by “fully” + “partially” / total number of possible projects (or total closed number of projects minus “too early”).
- <sup>57</sup> Note: the desk review sample does not include dropped projects, which reduces (or possibly eliminates) the proportion of projects that did not achieve objectives.
- <sup>58</sup> This table is broken down by number of objectives instead of number of projects, since there can be multiple objectives per project and product line.
- <sup>59</sup> Since some projects may have multiple objectives, these columns pertain to the number of objectives met, not the number of projects.
- <sup>60</sup> Number of projects for the respective product line.
- <sup>61</sup> Total number of objectives relevant to the three key objectives of improve design or implementation of policy, enhance client know-how or capacity, or introduce new or cutting-edge solutions.
- <sup>62</sup> Evidence from ACS or other final assessment stating that key objectives were met as planned at the time of review.
- <sup>63</sup> Evidence from ACS or other monitoring or assessment documentation that some key objectives have been met as planned at the time of review.
- <sup>64</sup> Projects for which monitoring and/or assessment documentation was available and indicated that objectives were not met as planned.
- <sup>65</sup> Closed projects with no assessment or evaluative evidence to suggest whether objectives have been met as planned.
- <sup>66</sup> Projects that are ongoing and do not have monitoring or assessment documentation to assess.
- <sup>67</sup> Percentage taken from among project objectives with evidence of achievement (i.e. unmet, partially met and fully met); does not include “unknown” and “too early” category.,
- <sup>68</sup> Other: Research Services, Sector Strategy Paper, New Product Development, GEF, Internal Training, External Training, GPP, Lending (IBRD/IDA), ESMAP-funded project.
- <sup>69</sup> Average performance level across all products based on % “fully met” + “partially met” objectives.
- <sup>70</sup> TAG notes concern over the low replenishment rates of the Energy Trust Funded Programs (ETFPs) in 2009.
- <sup>71</sup> This section does not comprehensively consider the 2005-2007 M&E framework because it is largely irrelevant to the current portfolio.
- <sup>72</sup> For ongoing projects and those whose ACS/final assessment report t was unreadable or not provided to the Evaluation Team.
- <sup>73</sup> Note QAG was disbanded at the tail end of the evaluation period, in 2011.
- <sup>74</sup> ESMAP 2010. 2005-2007 Desk Review. 28.
- <sup>75</sup> This is not a final figure but rather an estimate made by the World Bank team.
- <sup>76</sup> ASTAE. 2011. Progress Report. Feb 24, 2011.
- <sup>77</sup> ESMAP TAG. 2011 Report.

- <sup>78</sup> ESMAP CG 2011. SIDS Proposal.
- <sup>79</sup> ESMAP CG 2010. Annual Report.
- <sup>80</sup> ESMAP 2009. Annual Report.
- <sup>81</sup> ESMAP 2010. REMTI Brochure.
- <sup>82</sup> ASTAE 2011. Program Brochure.
- <sup>83</sup> ESMAP 2008. Peru Rural Electrification GRM. p.2
- <sup>84</sup> ESMAP Annual Report 2010.
- <sup>85</sup> ESMAP Annual Report 2010.
- <sup>86</sup> Ibid.
- <sup>87</sup> ESMAP Annual Report 05-07.
- <sup>88</sup> The Portfolio review shows that 54 projects had a budget of US\$23 million between 2009 and 2011.
- <sup>89</sup> ESMAP Portfolio Review 2009-11. Note that the portfolio review the report goes on to detail the completed projects and the financing under each theme – which adds up to US\$12.58 billion.
- <sup>90</sup> ESMAP Annual Report 2010.
- <sup>91</sup> [http://www.evwind.es/noticias.php?id\\_not=15263](http://www.evwind.es/noticias.php?id_not=15263).
- <sup>92</sup> In comparison, the portfolio review states that EECI has supported municipal EE components for seven Bank lending projects, in Armenia, China, Macedonia, Mexico, Ukraine, and West Bank, which leveraged over US\$150 million of World Bank financing for EE improvement in municipalities. (59)
- <sup>93</sup> P115773 EECI Outreach and Dissemination, Briefing note 3.
- <sup>94</sup> TAG Report 2008.
- <sup>95</sup> ESMAP Annual Report 2006.
- <sup>96</sup> P082160 China Heat Pricing Study, PSF.
- <sup>97</sup> P107606 Cameroon SME Capacity Building, Comments on QAG, p 2.
- <sup>98</sup> CG ASTAE report 2010.
- <sup>99</sup> Data based on ACS information where possible. Some desk review projects do not have complete information and in other cases the information was not clear.
- <sup>100</sup> P107606 Cameroon SME Capacity Building, QAG, p11.
- <sup>101</sup> P111012 Peru Natural Gas Study, GRM1.
- <sup>102</sup> P101408 Ecuador Energy Strategy, PCN RM 8.
- <sup>103</sup> CG Knowledge Exchange Forum, Presentation on Turkey Electricity Market Reform, March 2011.
- <sup>104</sup> According to SAP data.
- <sup>105</sup> P107606 Cameroon SME Capacity Building, QAG review p 17.
- <sup>106</sup> P093486 Peru Rural Electrification Study, GRM, p 2.
- <sup>107</sup> P073036 Mali Household Energy and Universal Access, ISR.
- <sup>108</sup> P111483 Regulating Electricity Trading in SADC, PCN Review 2.
- <sup>109</sup> P101182 Trade policies for liquid biofuel, ACR 1.
- <sup>110</sup> Data source from ESMAP Portfolio Review 2005-2007.
- <sup>111</sup> Cost Assessment presentation, October 2011.
- <sup>112</sup> Annual Report 2006 states that for 2006, the expenditure on “program management” is US\$1.19 million out of a total expenditure of US\$10.25 million, equal to 18.6 percent. Note this is different from the figures shown in the annual report 2008, which states the project management costs are US\$723,000. The 2006 figure is up from 10.3 percent the previous year, and 8.1 percent in 2004. The text accompanying the figures states: “The increase in program management costs is mainly the result of the expansion of staff strength at ESMAP and the increased volume of activities.”
- <sup>113</sup> Annual Report 3.
- <sup>114</sup> CG Report on ASTAE 2010.
- <sup>115</sup> AR 05-07, 09, 10.
- <sup>116</sup> TAG Report 2009.
- <sup>117</sup> ESMAP 2009. Business Plan 2008-13.
- <sup>118</sup> ESMAP 2008. TAG Report..
- <sup>119</sup> ESMAP 2011. TAG Report..
- <sup>120</sup> <http://www.esmap.org/esmap/node/55>.
- <sup>121</sup> ESMAP 2010. Annual report..
- <sup>122</sup> ESMAP 2011. TAG report 2011.
- <sup>123</sup> Ibid.
- <sup>124</sup> ESMAP 2011. Operational Manual..
- <sup>125</sup> ESMAP 2011. TAG Report.

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- <sup>126</sup> ESMAP 2011. Operational Manual.
- <sup>127</sup> ESMAP 2011. M&E Framework.
- <sup>128</sup> ESMAP 2011. CG Open proceedings.
- <sup>129</sup> ESMAP 2011. CG management response to 2011 TAG report.
- <sup>130</sup> EMSAP 2011. CG Exchange forum 2011.
- <sup>131</sup> ESMAP 2011. CG Open proceedings 2011.
- <sup>132</sup> ESMAP 2011. CG Closed session.
- <sup>133</sup> Ibid.
- <sup>134</sup> Ibid.
- <sup>135</sup> ESMAP 2008. TAG Report.
- <sup>136</sup> ESMAP 2009. TAG Report.
- <sup>137</sup> ESMAP 2009. TAG Report.
- <sup>138</sup> ESMAP 2008. TAG Report.
- <sup>139</sup> ESMAP 2011. TAG Report.
- <sup>140</sup> ESMAP 2011. CG Open Proceedings 2011.
- <sup>141</sup> Ibid.
- <sup>142</sup> ESMAP Annual Reports.
- <sup>143</sup> “Terms of Reference for the External Evaluation of ESMAP” (2011).
- <sup>144</sup> “SIDS DOCK Proposal” (2011)
- <sup>145</sup> TAG Report (2011)
- <sup>146</sup> TAG Report (2009)
- <sup>147</sup> Annex 4 of the 2010 TAG Report: “ESMAP Management Team Response.”
- <sup>148</sup> Annex 2 of the 2010 Annual Report: “Proceedings from CG Meeting 2010.”
- <sup>149</sup> TAG Report (2010).
- <sup>150</sup> The new Terms of Reference are presented in the 2011 TAG Report.
- <sup>151</sup> Minutes of the closed session of the 2011 CG Meeting.
- <sup>152</sup> Note that the question numbering used here is for the convenience of this discussion, and does not reflect the actual question numbers as they appeared in the survey.
- <sup>153</sup> There were also two responses relating to what appeared to be isolated incidences of communication breakdown, but these were not felt to be indicative of more general problems.
- <sup>154</sup> “ESMAP Operational Manual” (2011).
- <sup>155</sup> This solution was suggested by one of the TTLs interviewed for this evaluation.
- <sup>156</sup> “Financial Status of the ESMAP Multi-Donor Trust Fund” (2011).
- <sup>157</sup> Not including contributions to AFREA.
- <sup>158</sup> TAG Report (2011).
- <sup>159</sup> Annual Report (2009).
- <sup>160</sup> TAG Report (2011).
- <sup>161</sup> TAG Report (2011).
- <sup>162</sup> TAG Report (2011).
- <sup>163</sup> The new M&E framework has included indicators relating to external partnerships, although these indicators appear at present to relate only to the number of forums conducted in partnership with (usually) specifically named external organizations.
- <sup>164</sup> CDKN was cofounded by DfID and the Netherlands.
- <sup>165</sup> This fund supported “small, innovative and sustainable energy projects around the world working to bring modern energy services to a wider population and especially to those living in rural areas with little income” (from GVEP International website)
- <sup>166</sup> Interview with Maharashtra State Electricity Transmission Company Ltd.
- <sup>167</sup> Grant Reporting and Monitoring Report for project P101555.
- <sup>168</sup> For the older projects, the objectives were: inform lending; inform government policy; build client analytical capacity; inform/stimulate public debate; influence development community. For more recent projects, this list of five has been reduced to three: assist in client policy/program implementation; develop/strengthen institutions; facilitate knowledge exchange.
- <sup>169</sup> The most notable example of this was the naming of a child “Solar” by a mother who gave birth under solar lighting.
- <sup>170</sup> See, for example, “The Balanced Scorecard – Measures That Drive Performance”; R.S.Kaplan and D.P.Norton. Harvard Business Review, January-February 1992.
- <sup>171</sup> The details of these experiences and lessons learned are not examined here, as the process of developing the 2005-07 Business Plan falls outside the time-scope of this evaluation.
- <sup>172</sup> TAG Report (2008).
- <sup>173</sup> Annual Report (2007-08).

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- <sup>174</sup> Strategic Business Plan 2008-13.  
<sup>175</sup> Annual Report (2010).  
<sup>176</sup> TAG Report (2011)  
<sup>177</sup> Management's Response to the TAG Report (2011).  
<sup>178</sup> TAG Report (2011).  
<sup>179</sup> EECI Project document.  
<sup>180</sup> Decision Note for P.  
<sup>181</sup> P105664 Structuring of PPP in Natural Gas, Project Concept Note.  
<sup>182</sup> Evaluation Report 2005-2007.  
<sup>183</sup> 2007 and 2008 TAG report.  
<sup>184</sup> Ibid.  
<sup>185</sup> 2007 TAG report.  
<sup>186</sup> ESMAP Strategic Business Plan 2008-2013.  
<sup>187</sup> 2009 TAG report.  
<sup>188</sup> 2011 TAG report.  
<sup>189</sup> Ibid.  
<sup>190</sup> 2007 TAG report.  
<sup>191</sup> 2005- 007 Annual Report.  
<sup>192</sup> CG mgt response to TAG2011.  
<sup>193</sup> EACC website, accessed 18/03/12.  
<sup>194</sup> P108154 Economics of Adaptation to Climate Change , GRF.  
<sup>195</sup> EECI Brochure, 2009.  
<sup>196</sup> TAG 2011.  
<sup>197</sup> P115773 EECI Outreach and Dissemination, Project Document.  
<sup>198</sup> Some peer reviewers pointed out that oil will still play a key energy role in the next few years, and to look beyond the short-term a bit more. The study ended up choosing a medium timeframe of 5-10 years.  
<sup>199</sup> P101182 Considering Trade Policies for Liquid Biofuels, Masami Kojima, Donald Mitchell, and William Ward, May 2007, ESMAP, India.  
<sup>200</sup> P105834 Development of Monitoring and Evaluation (M&E) Framework for VNEEP, Final Report, Energy Consult, May 2011, The World Bank and Ministry of Industry and Trade – Vietnam.  
<sup>201</sup> P116206 Power Sector Financial Vulnerability Assessment, decision review meeting.  
<sup>202</sup> P122960 Support to Strategic Energy Sector Development, PSF.  
<sup>203</sup> P107067 Djibouti Energy Sector Masterplan, Minutes of Concept Note.  
<sup>204</sup> EECI website, Outreach and partnerships page.  
<sup>205</sup> P120478 Renewable Energy Education, Project Concept Note review.  
<sup>206</sup> P107067 Djibouti Energy Sector Masterplan, decision review meeting.  
<sup>207</sup> P113858 Lebanon Support to Impl of Electricity Sect, Stakeholder Consultation Workshop Powerpoint.  
<sup>208</sup> P116227 Economic Benefits of Electricity Supply, GFR.  
<sup>209</sup> P105664 Egypt Structuring of PPP in Natural Gas, ACS.