



Energy Sector Management  
Assistance Program



ESMAP 2024

# Hydropower: Unveiling the Socioeconomic Benefits

September 25, 2024



# About the Report

- Designed to complement the handbook “A Sure Path to Sustainable Renewable Energy: Maximizing Socioeconomic Benefits Triggered by Renewables.”
- Focuses on socioeconomic benefits that can be influenced during hydropower project planning, development and operation.
- These benefits extend beyond the risk mitigation requirements of environmental and social safeguard frameworks.

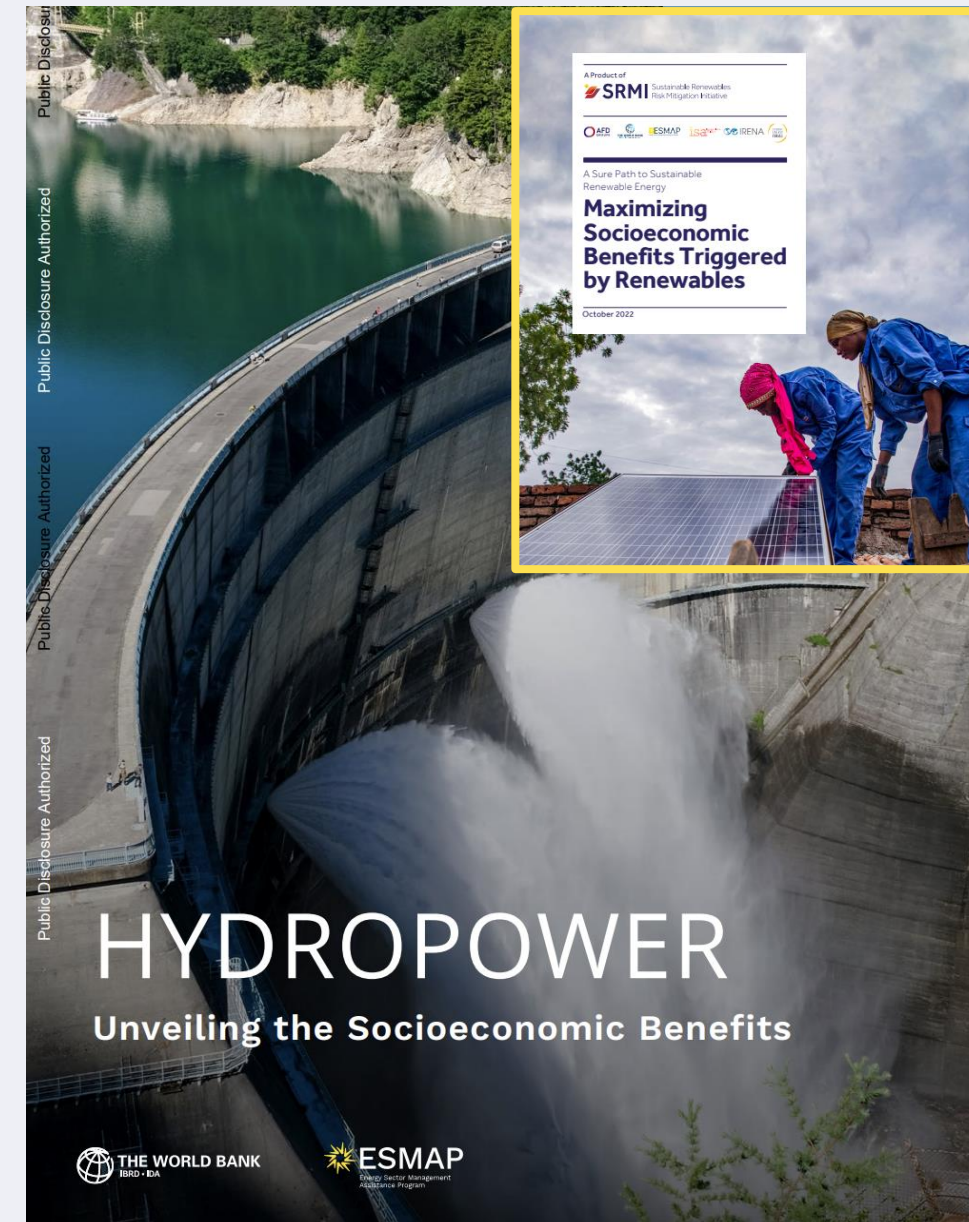
**50+**

**Stakeholders consulted**

**34**

**Case studies showcasing  
best practices**

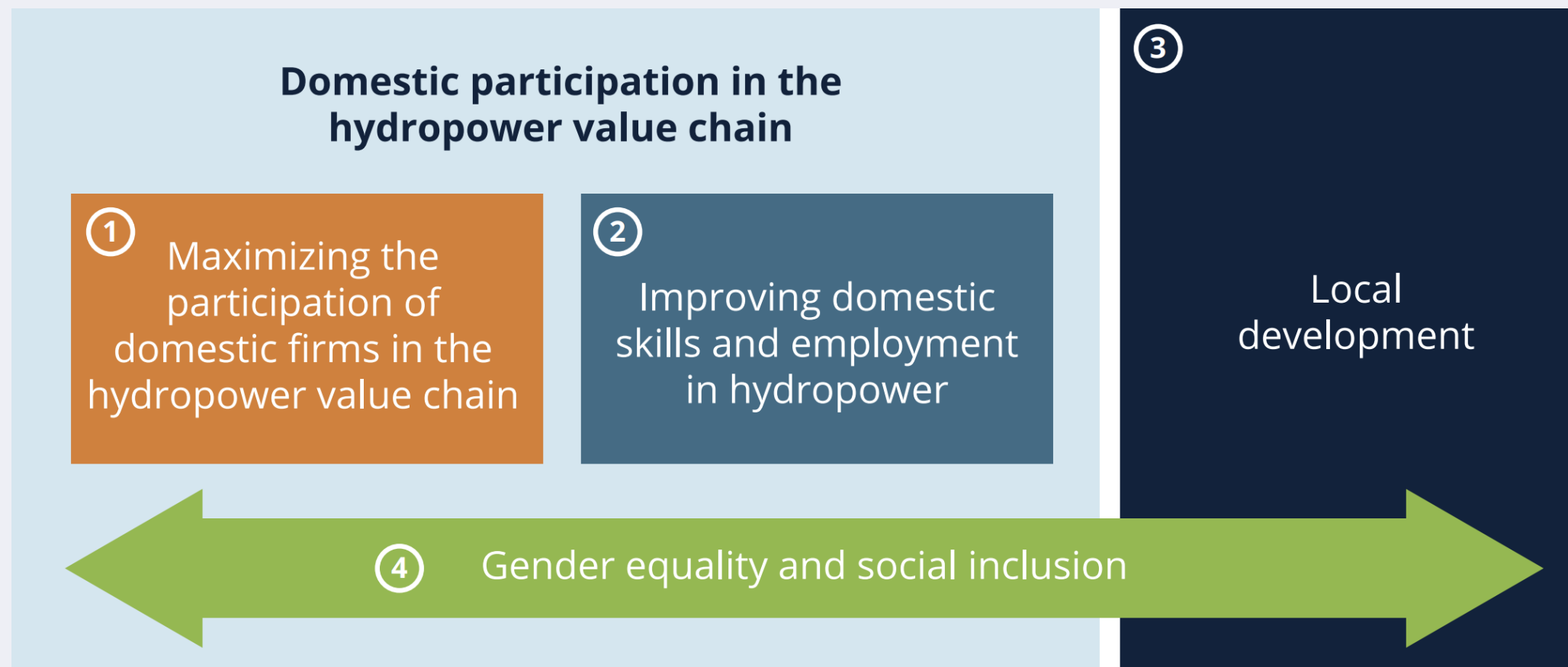
**ESMAP 2024**



# Types of Socioeconomic Benefits

ESMAP 2024

- The report examines benefits across four categories, derived from the World Bank's Sustainable Renewables Risk Mitigation Initiative.



# Domestic Participation in the Hydropower Value Chain

- Understanding the hydropower value chain is crucial for identifying areas to maximize benefits to the project country.
- Localization efforts, particularly in construction and operation and maintenance segments, offer substantial room for growth.
- Governments are using project procurement to encourage localization along the value chain, however careful consideration is needed.
- Many strategies exist to create a more enabling environment for the growth of domestic businesses, from the development of specialized financing programs to the creation of industry associations.

ESMAP 2024



© World Bank



# Spotlight: Philippines

ESMAP 2024

- Yamog, a nonprofit in the Philippines, has worked with remote communities for 29 years to develop micro-hydro systems.
- In the past, faced high costs due to importing electromechanical equipment.
- In 2022, Yamog partnered with an Indonesian entity to transfer technology, setting up a workshop in Davao City to manufacture turbines locally, reducing reliance on imports.



© Yamog

# Hydropower Skills and Jobs

ESMAP 2024

- Construction and O&M offer significant job creation potential, with construction roles being short term and O&M generating employment over the project cycle.
- However, skill shortages exist, especially in high-skilled positions, limiting the potential benefits to project countries.
- To fully realize the employment potentials of hydropower, these challenges point to a need for improved strategies to:
  - Attract youth to the sector
  - Upskill individuals—in classrooms as well as on the job
  - Increase the availability of training and education opportunities



© Seventyfour/Adobe Stock



# Spotlight: Zambia

ESMAP 2024

- The Kafue Gorge Regional Training Centre (KGRTC) in Zambia provides essential hydropower training for operation and maintenance personnel.
- KGRTC offers courses to help power sector staff adapt to new roles as well as train individuals that are new to the sector and looking to grow their careers in hydropower.
- The center supports women in hydropower with a 50% scholarship funded by the Swedish International Development Cooperation Agency.



© KGRTC

# Local Development & Benefit Sharing

ESMAP 2024

- Equitable benefit distribution is vital for successful community collaboration and obtaining a 'social license to operate.'
- Benefit sharing can broadly be grouped into three categories:
  - Infrastructure and service enhancement;
  - Community skill and capability enhancement; and
  - Revenue and/or ownership sharing arrangements.
- Legal frameworks in some jurisdictions mandate localized benefit distribution through mechanisms like royalties and production bonuses.
- Including benefit sharing considerations in procurement documents can align developers' actions with community expectations and government plans.



© World Bank



# Spotlight: Rusumo Falls

ESMAP 2024

- 80% of construction staff (410 individuals) were hired from Tanzania, Rwanda, and Burundi, with employment distributed evenly across the three countries.
- Each country received an equal benefit-sharing budget of US\$5 million for community-led projects.
- The benefit-sharing projects were self-directed, empowering the community to prioritize initiatives.
- While the Project Implementation Unit supervised the budget, the communities underwent procurement and financial management training, which enhanced their capacity to manage the allocated resources effectively.

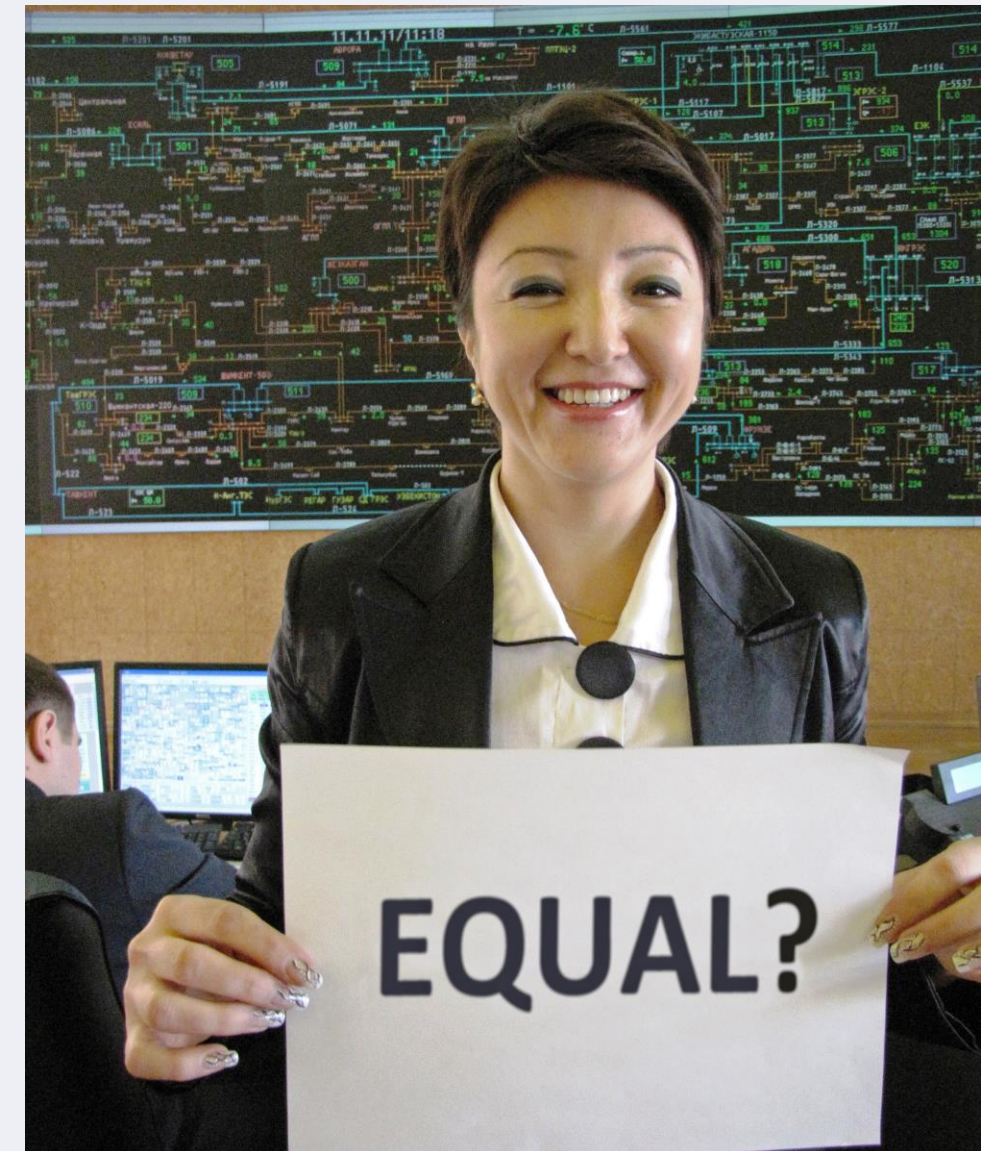


© Rusumo Falls Hydropower Project

# Gender Equality & Social Inclusion

ESMAP 2024

- Women and marginalized groups face unique challenges to realize the socioeconomic benefits along the hydropower value chain:
  - Greater barriers to the development of businesses
  - Underrepresented in the hydropower workforce
  - At the community level, cultural barriers and social norms often stand in the way of meaningful consultation and equitable delivery of benefits.
- These issues require attention and tailored responses. Progressive policies, support programs, and targets for increased participation have proven effective.



© World Bank



# Spotlight: Brazil

ESMAP 2024

- ENGIE Brasil launched a program for female engineers, selecting 13 out of 2,800 applicants for year-long training, all of whom were hired full time.
- The company reserves 50% of its technical intern, graduate, and apprentice positions for women, raising the female workforce to 26.7% in 2022.
- ENGIE also promotes inclusion through a "People with Disabilities" program, providing 15-month training for selected students, creating opportunities for their first job experience.



© Engie Brasil

# THANK YOU

Stephanie Pinnington  
[spinnington@worldbank.org](mailto:spinnington@worldbank.org)