



# IPEEC

ESMAP Exchange Forum, Vienna, June 2015

## Supporting Energy Efficiency in Major Economies





# Quality of life Survey in 2015

**#1 Tokyo**

**#2 Vienna**

**#3 Berlin**

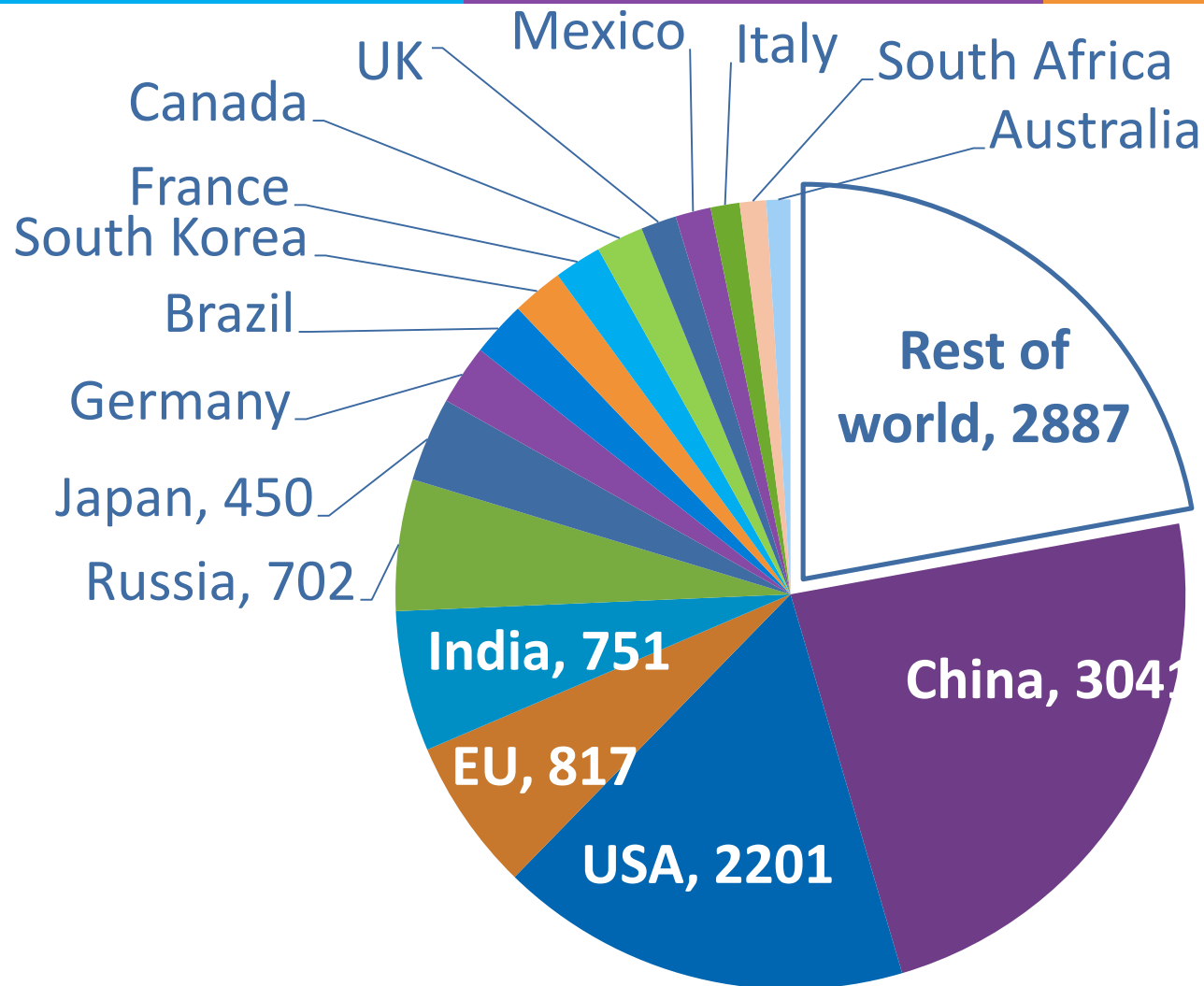
**Source: Monocle Magazine 2015**

# IPEEC Members are Major Economies





# IPEEC Member Countries weight >75% of World Energy Consumption



Global Energy Consumption (Source: IPEEI)







**6 000 years ago, Sahara was green**

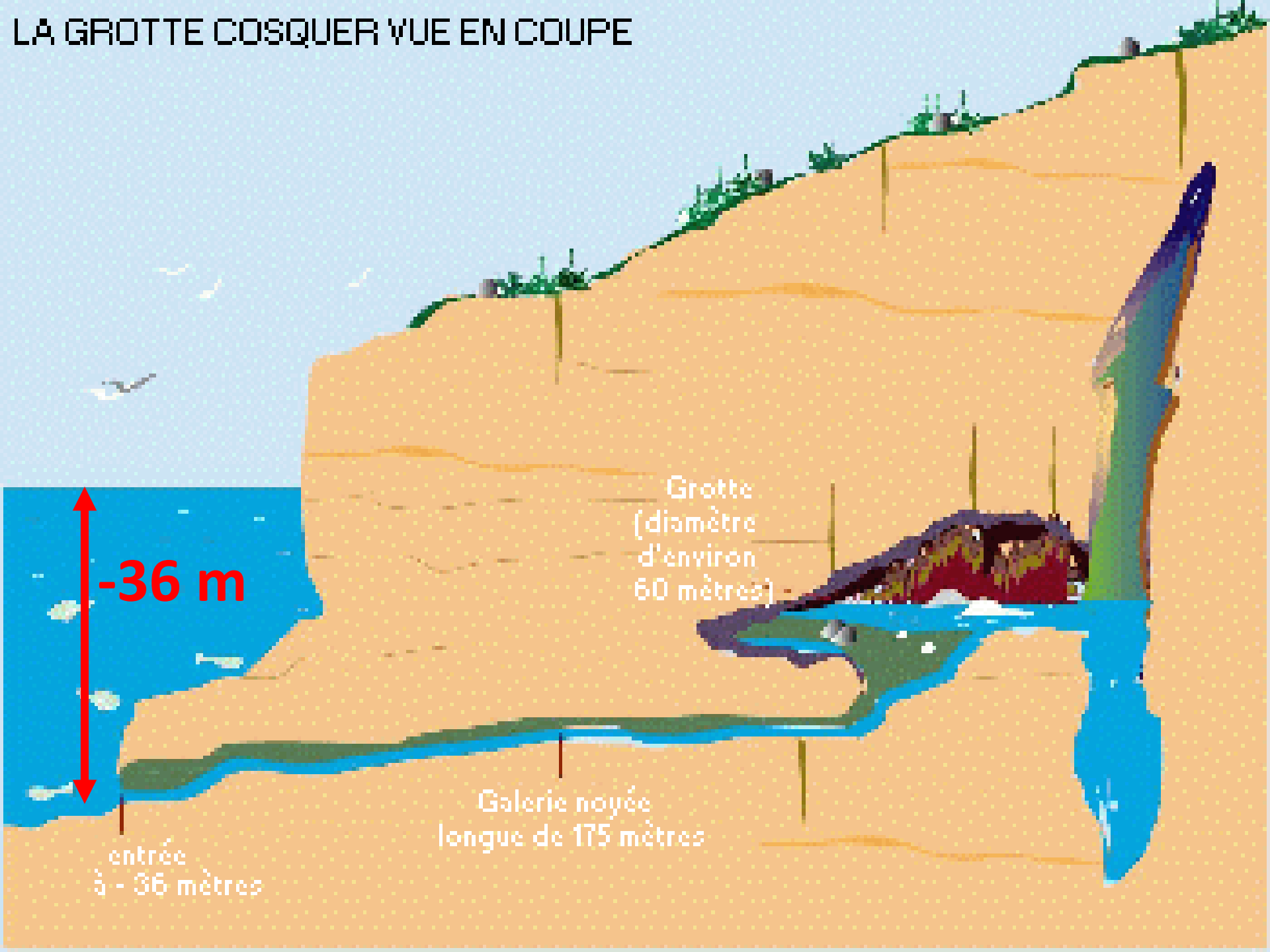
**Today it is a desert**







# LA GROTTE COSQUER VUE EN COUPE



# The Mediterranean 2015



**The Mediterranean see 15 000 years ago**

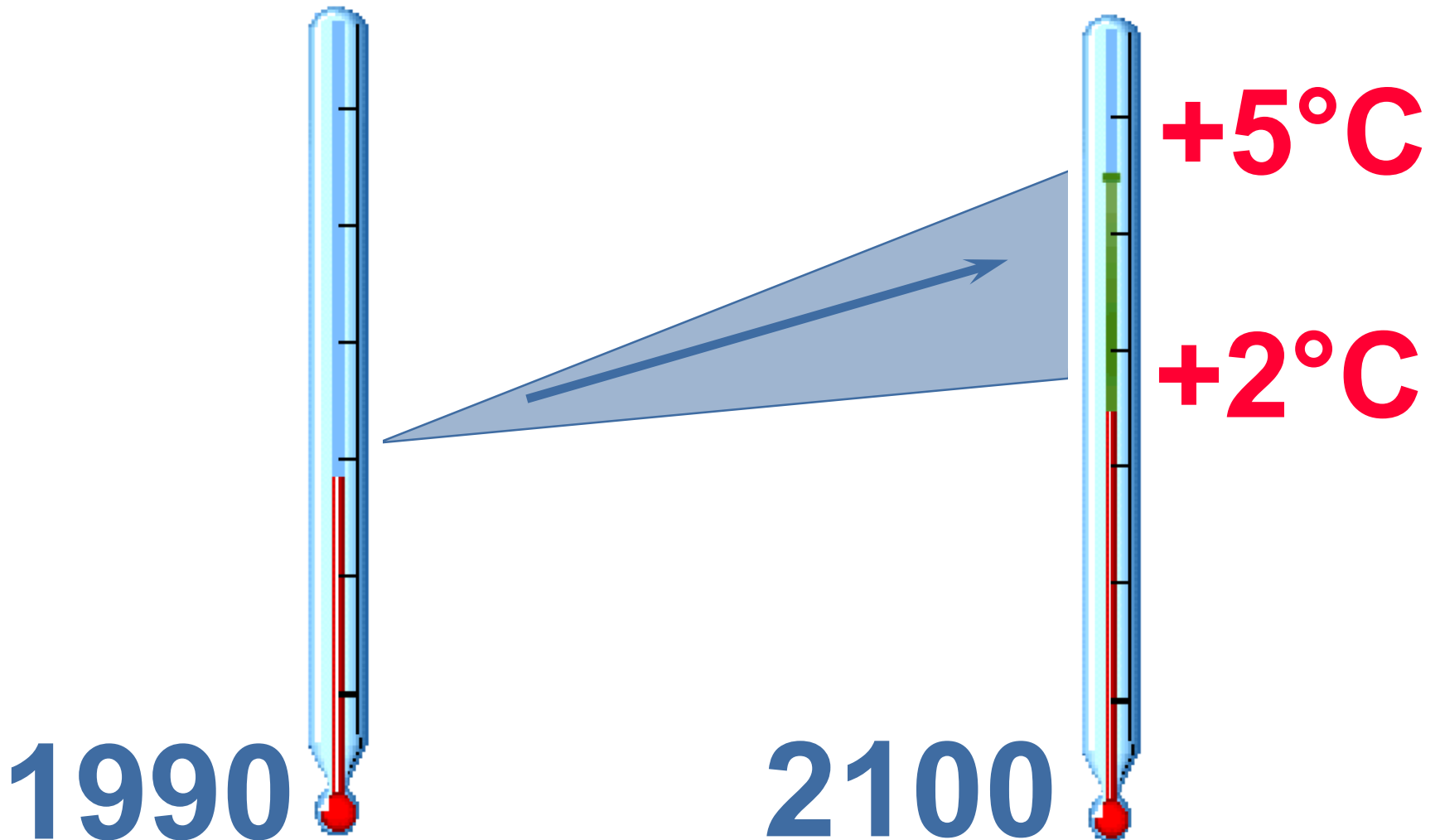
**-5 °C**

**Compared to today's earth average**





# Possible Evolution of Earth Average Temperature over the next century





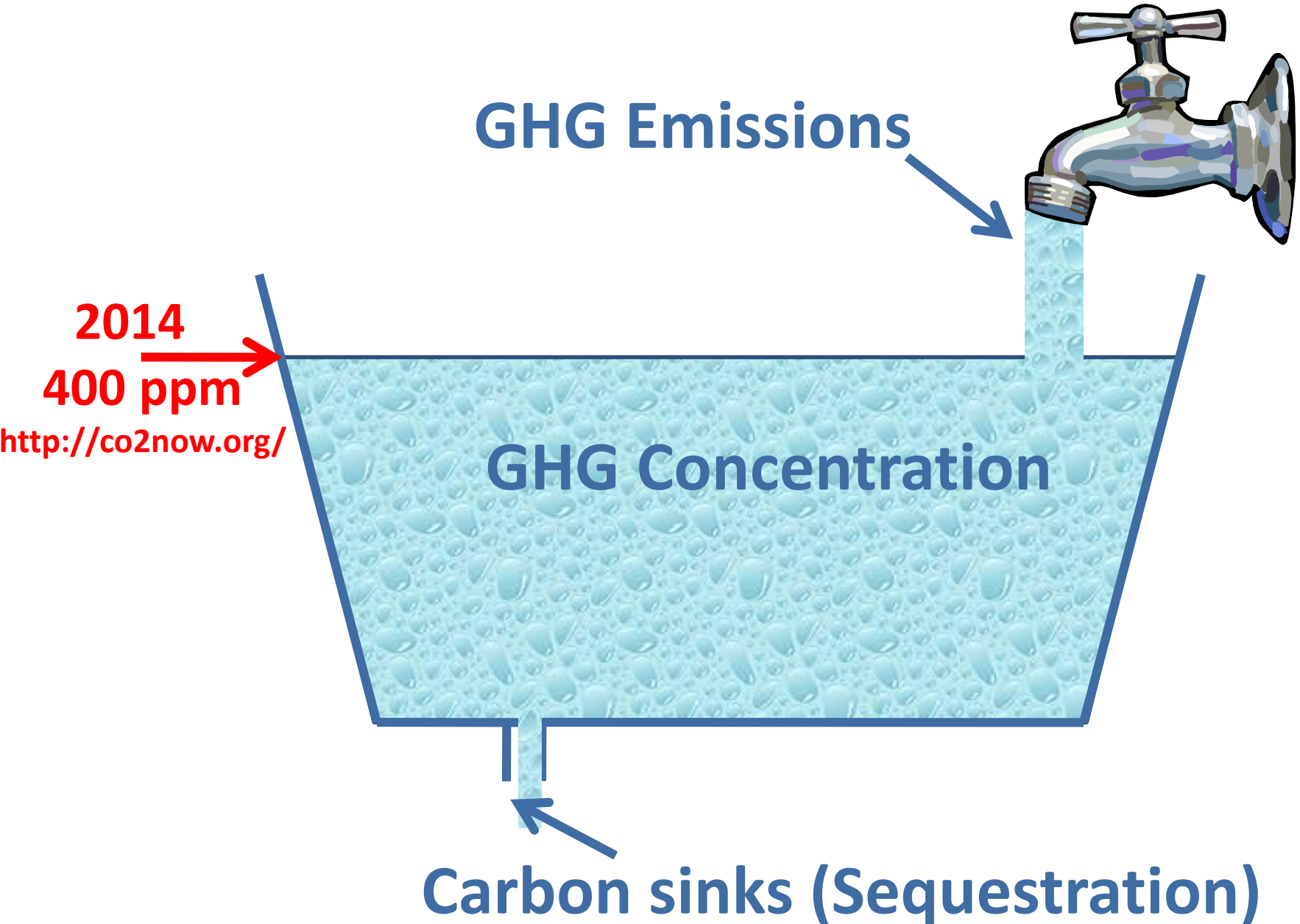
**GHG Emissions**



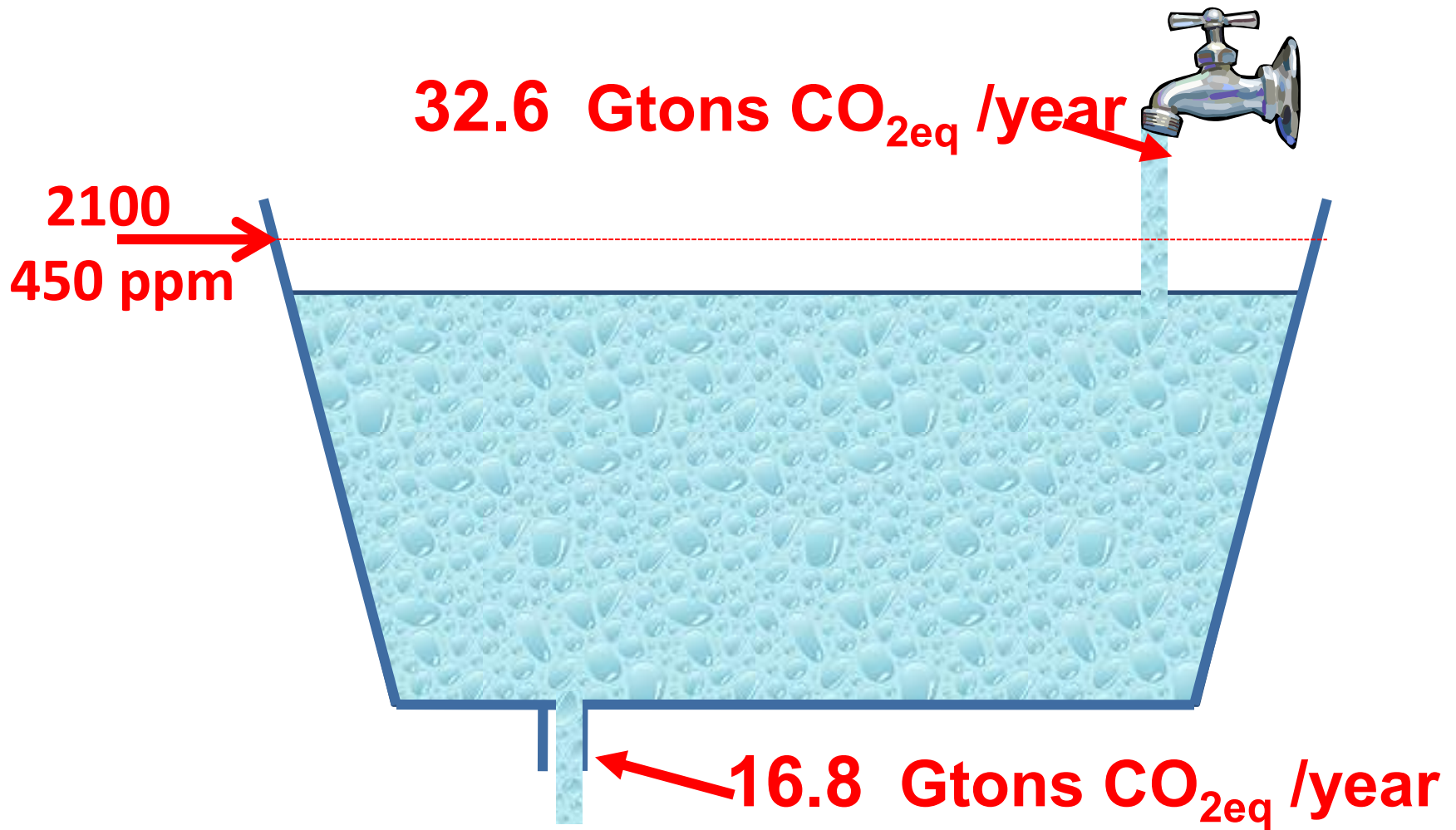
**2014**  
**400 ppm**  
<http://co2now.org/>

**GHG Concentration**

**Carbon sinks (Sequestration)**

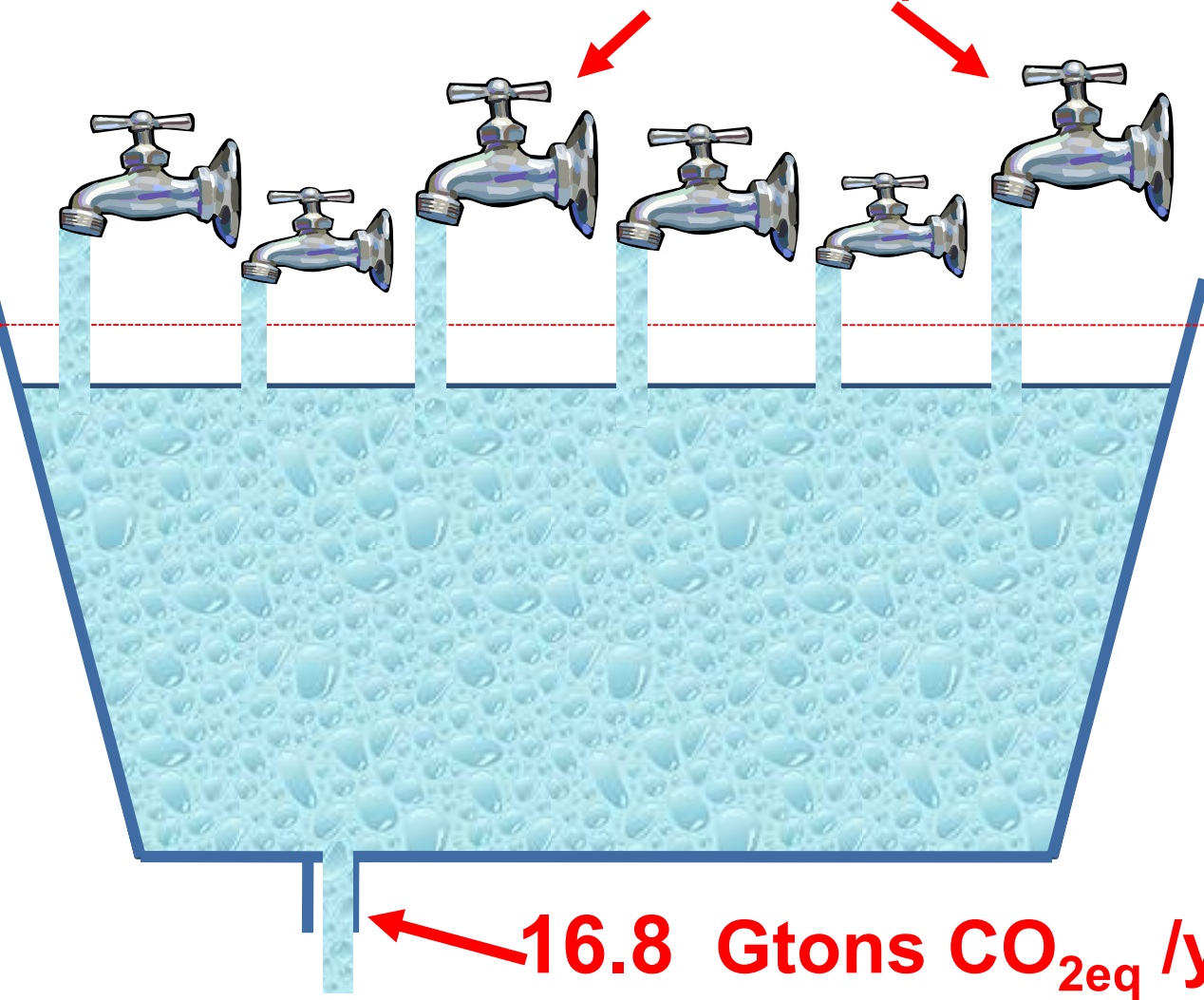




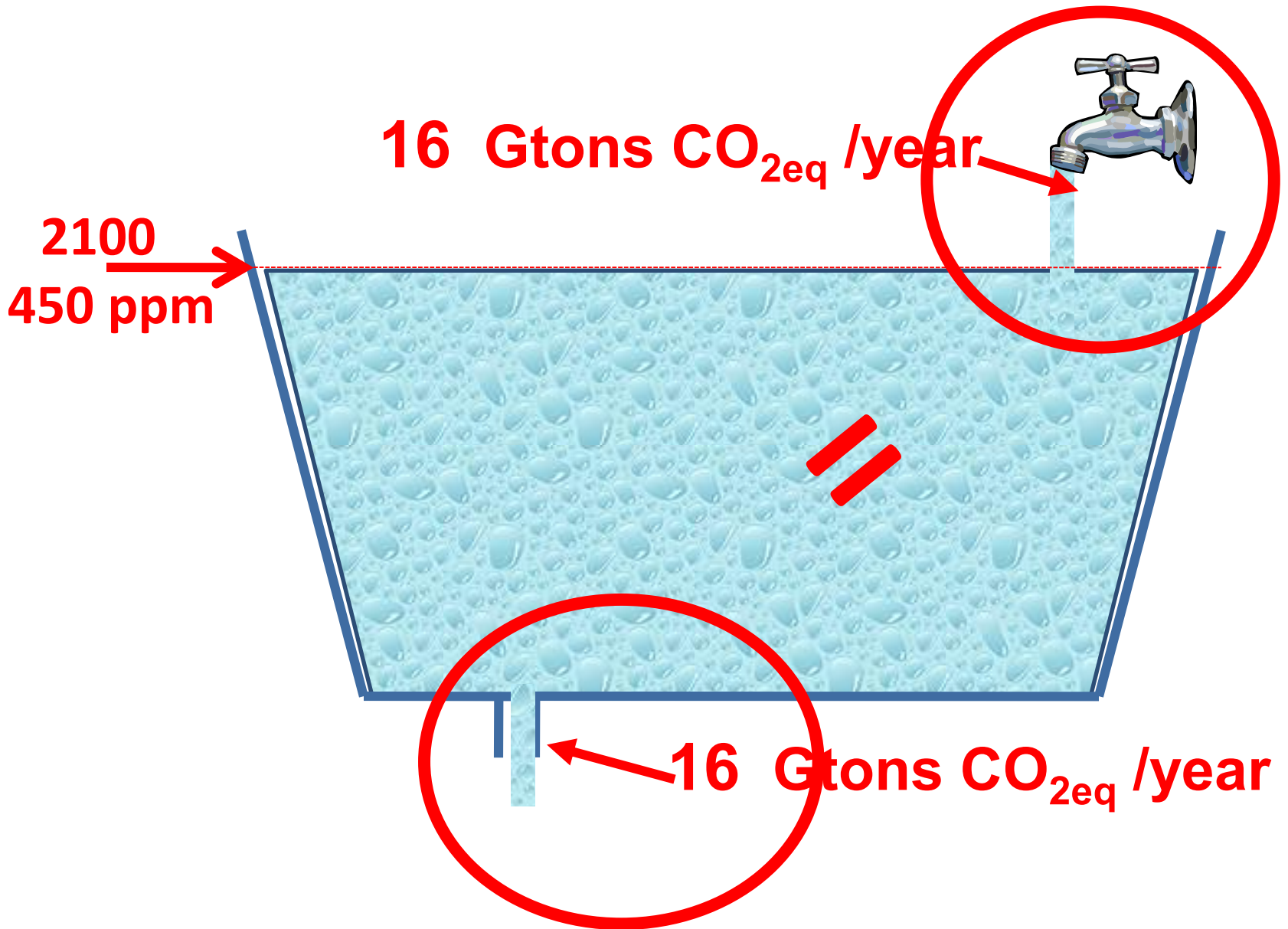


**32.6 Gtons CO<sub>2eq</sub> /year**

**2100  
450 ppm**



**16.8 Gtons CO<sub>2eq</sub> /year**

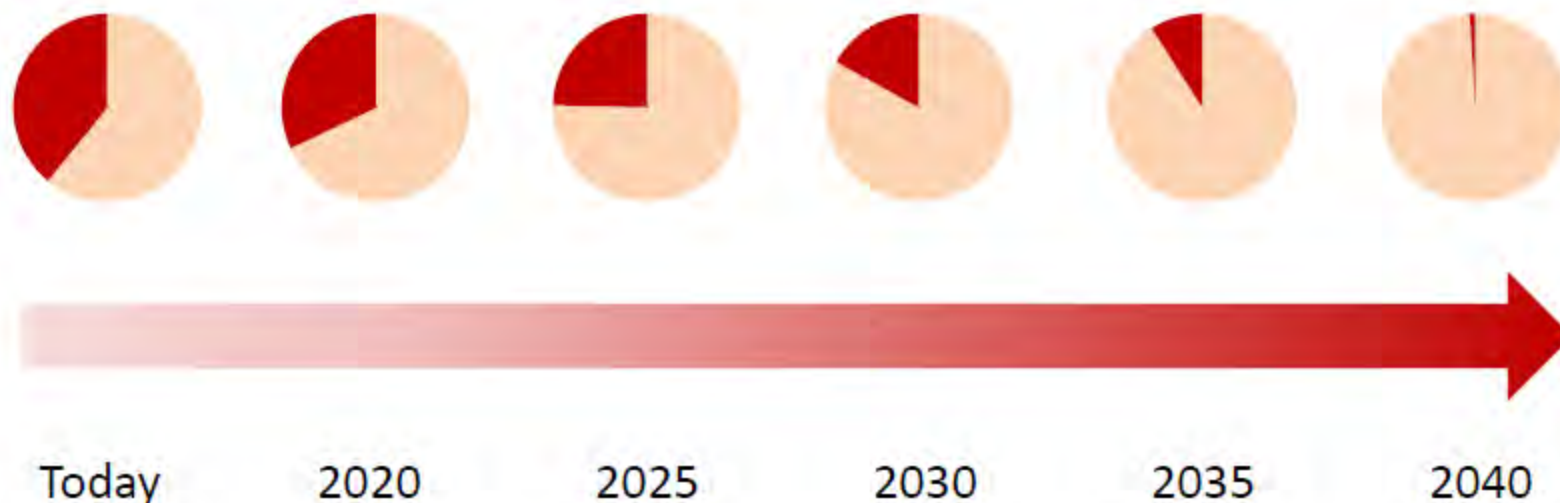




## ***2. Five-year revision:*** **World's carbon budget is shrinking**

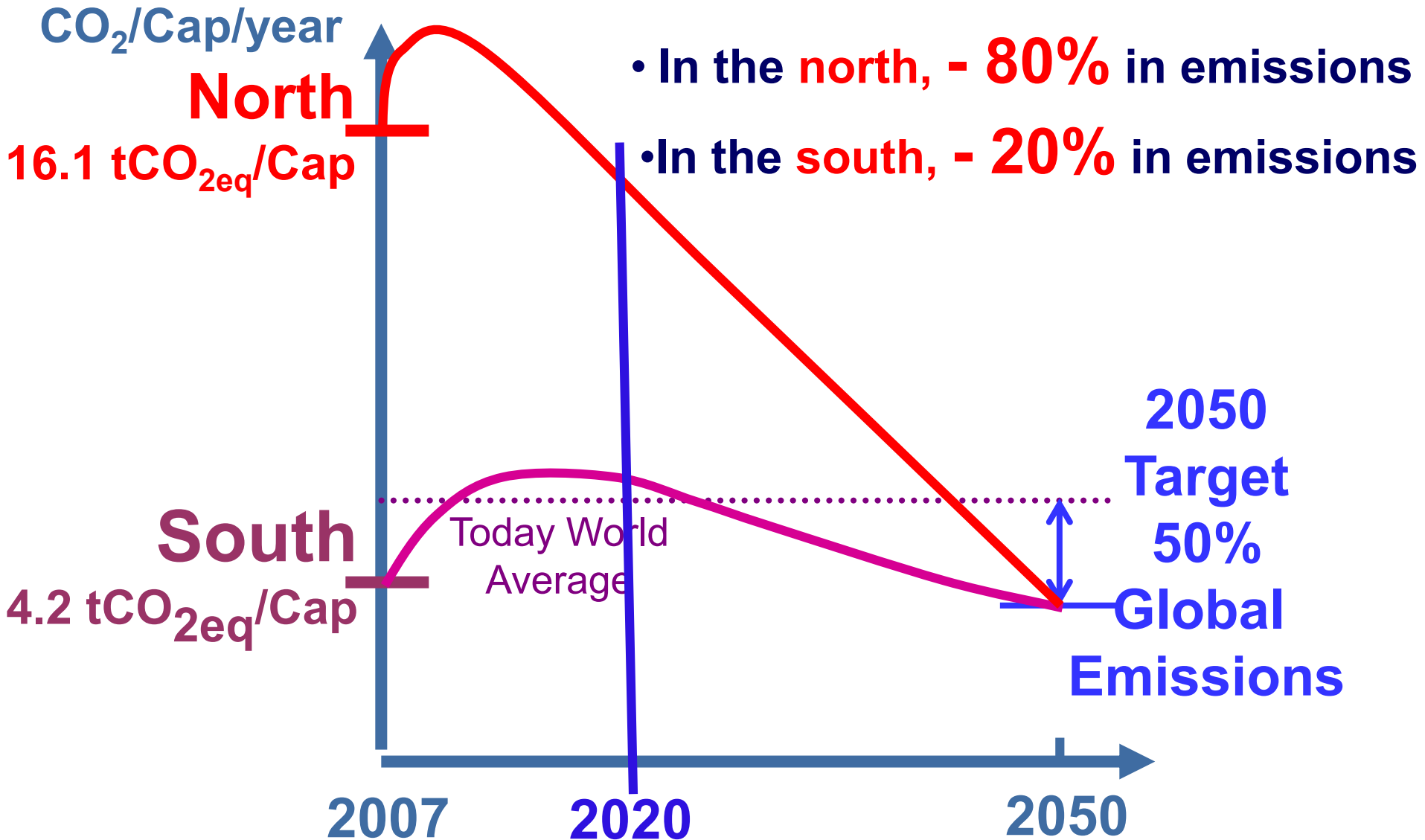
WEO Special  
Report on  
**Energy &  
Climate  
Change**

**World's remaining carbon budget**

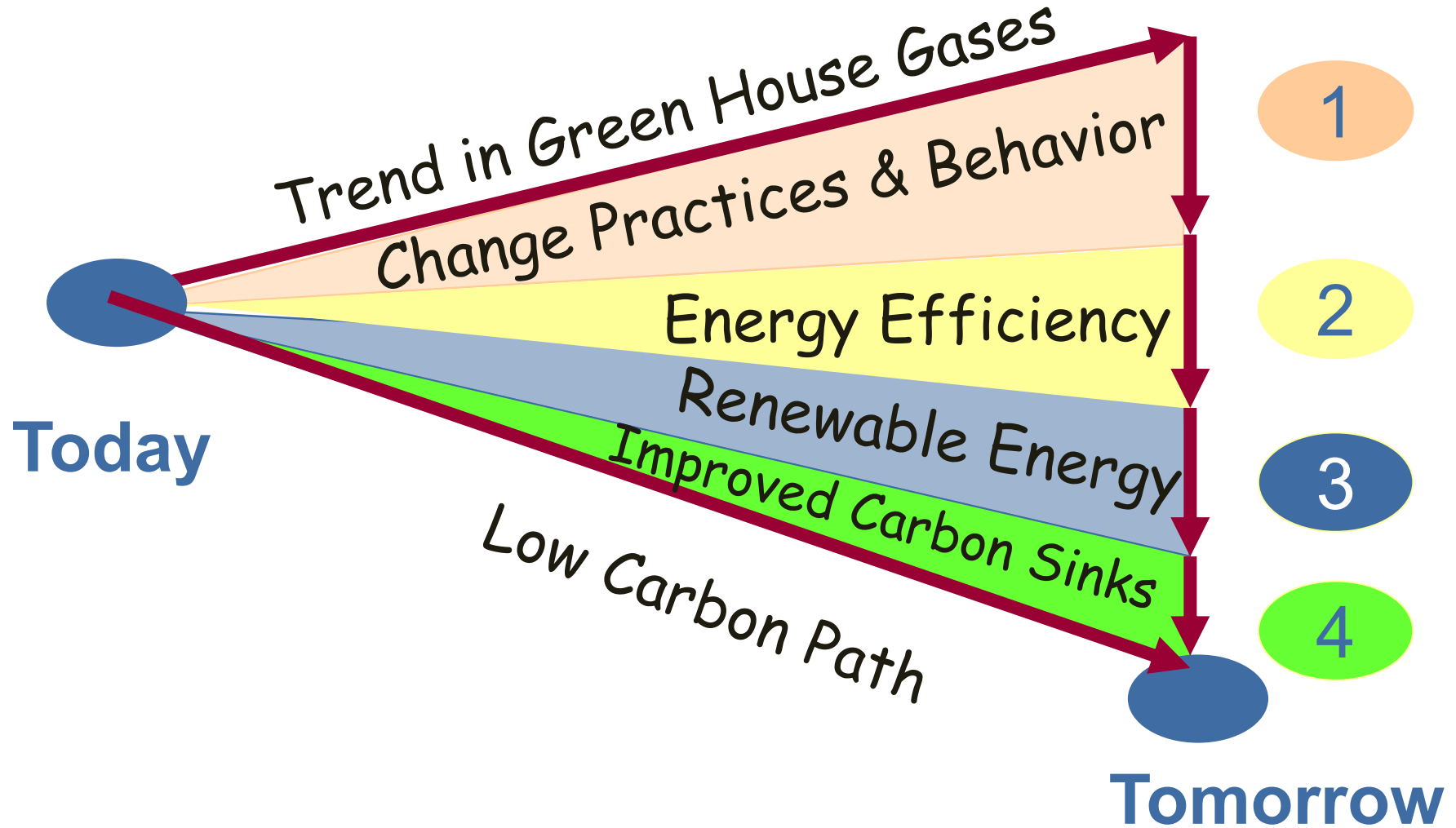


***A five-year review cycle would enable pledges to keep pace with energy sector innovation; building ambition before the carbon budget is consumed***

# Pathway towards a 2°C Global Warming



# Four wedges for a low carbon development



# Mitigation Measures



## More efficient use of energy



## Greater use of low-carbon and no-carbon energy

- Many of these technologies exist today



## Improved carbon sinks

- Reduced deforestation and improved forest management and planting of new forests
- Bio-energy with carbon capture and storage

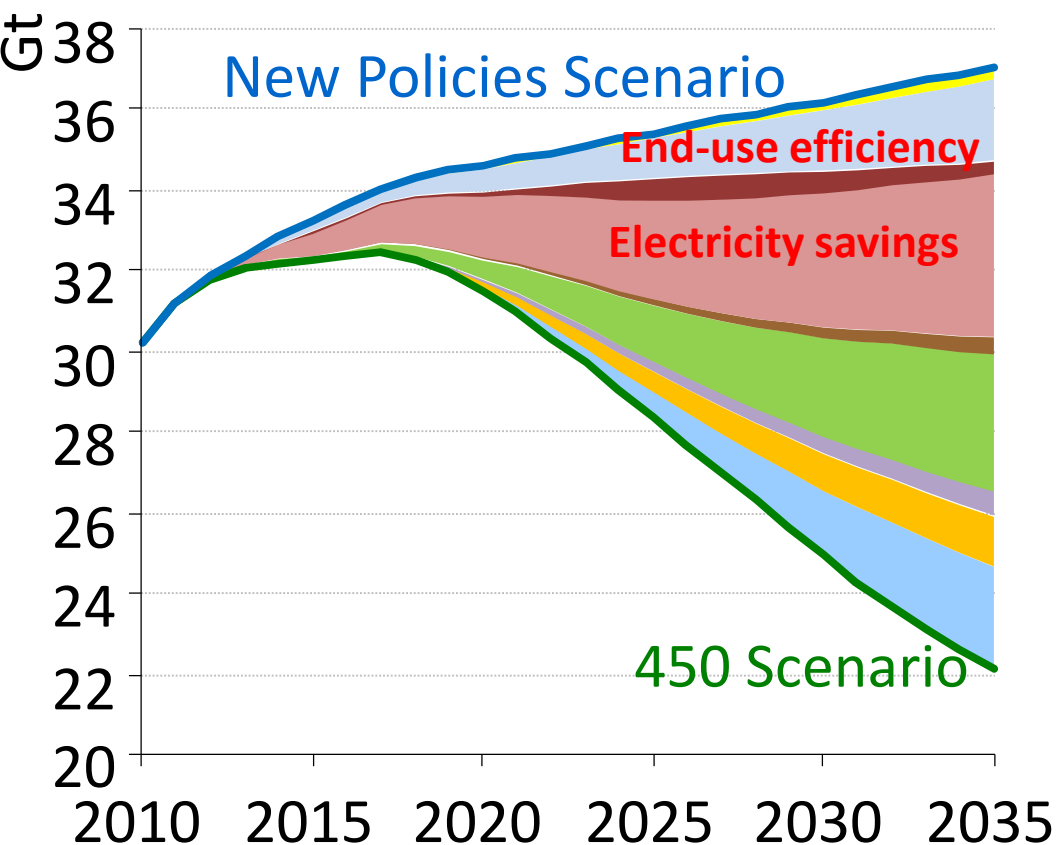


## Lifestyle and behavioural changes

AR5 WGII SPM



# Global energy-related CO<sub>2</sub> emissions abatement in the 450 Scenario



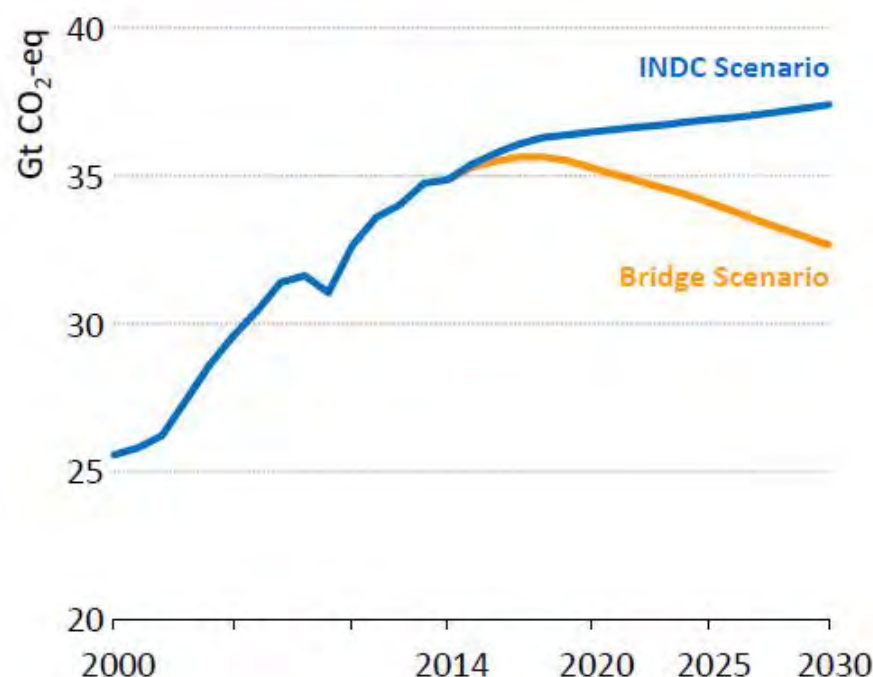
CO <sub>2</sub> abatement	2020	2035
Activity	2%	2%
End-use efficiency	18%	13%
Power plant efficiency	3%	2%
Electricity savings	50%	27%
Fuel and technology switching in end-uses	2%	3%
Renewables	15%	23%
Biofuels	2%	4%
Nuclear	5%	8%
CCS	4%	17%
<b>Total (Gt CO<sub>2</sub>)</b>	<b>3.1</b>	<b>15.0</b>

Source: IEA World Energy Outlook 2012

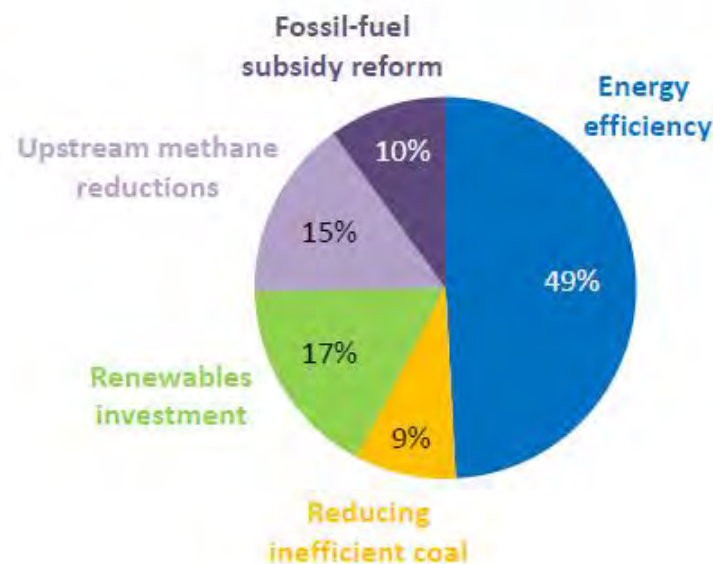
# 1. Peak in emissions: IEA strategy to raise climate ambition

WEO Special  
Report on  
**Energy &  
Climate  
Change**

Global energy-related GHG emissions

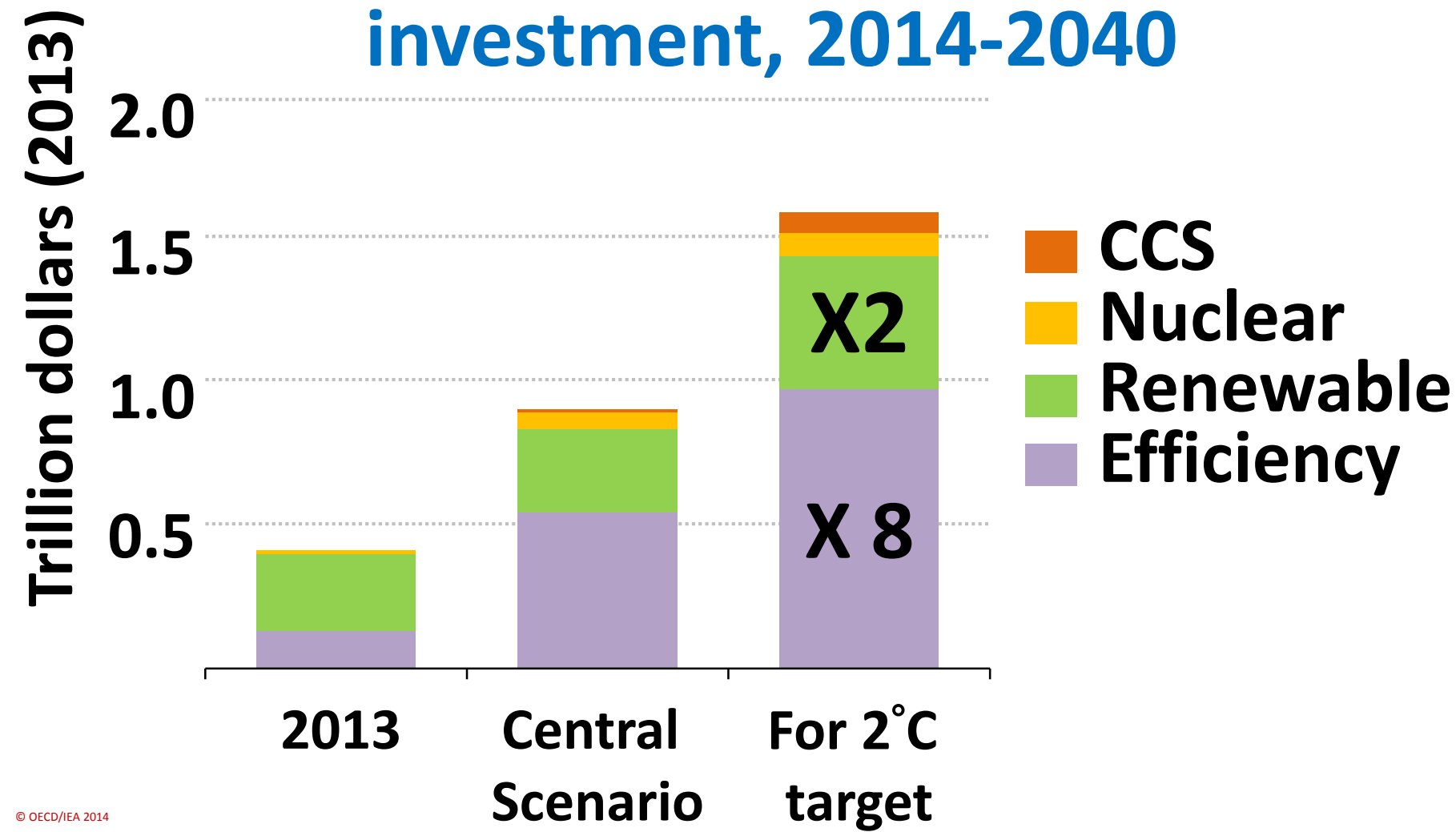


Savings by measure, 2030



**Five measures – shown in a “Bridge Scenario” – achieve a peak in emissions around 2020, using only proven technologies & without harming economic growth**

## Average annual low-carbon investment, 2014-2040



**Energy Efficiency is no  
longer an option**



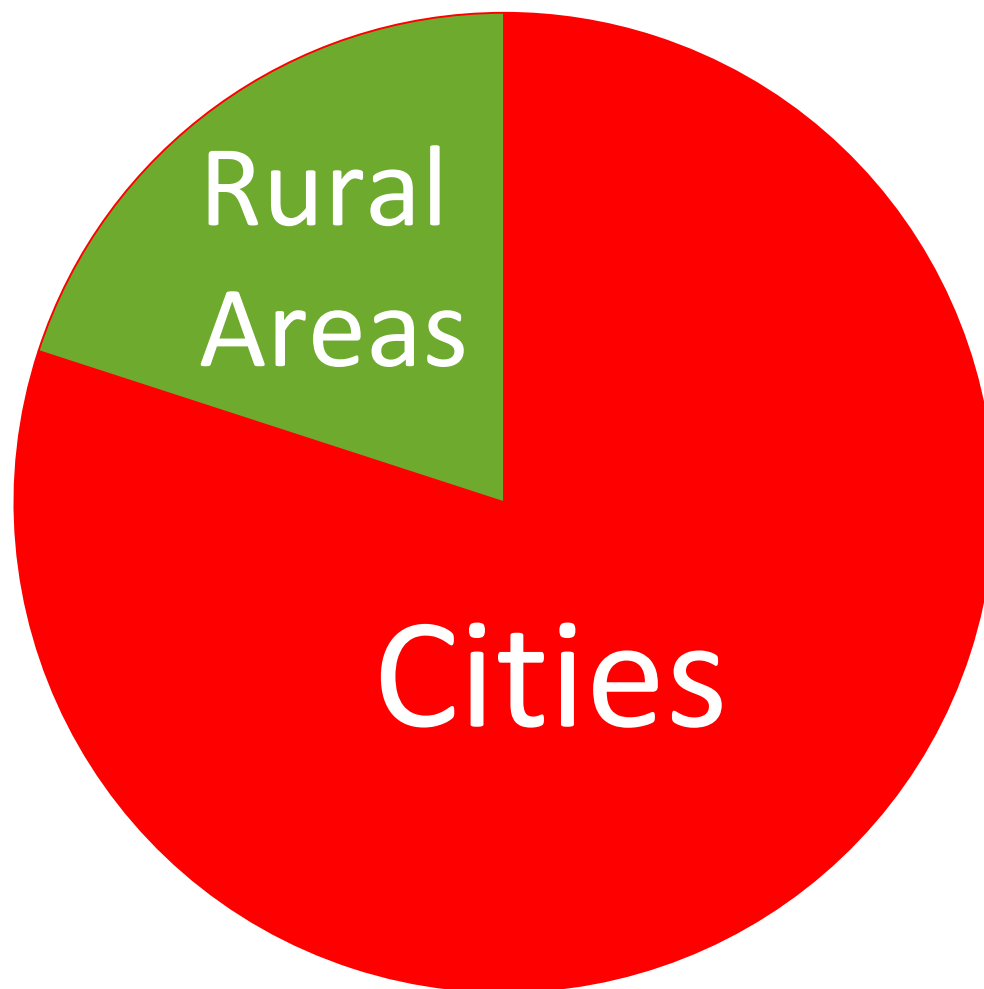
**Cities are keys to move all  
economies on a low carbon &  
clean energy path.**

# World Urban Population

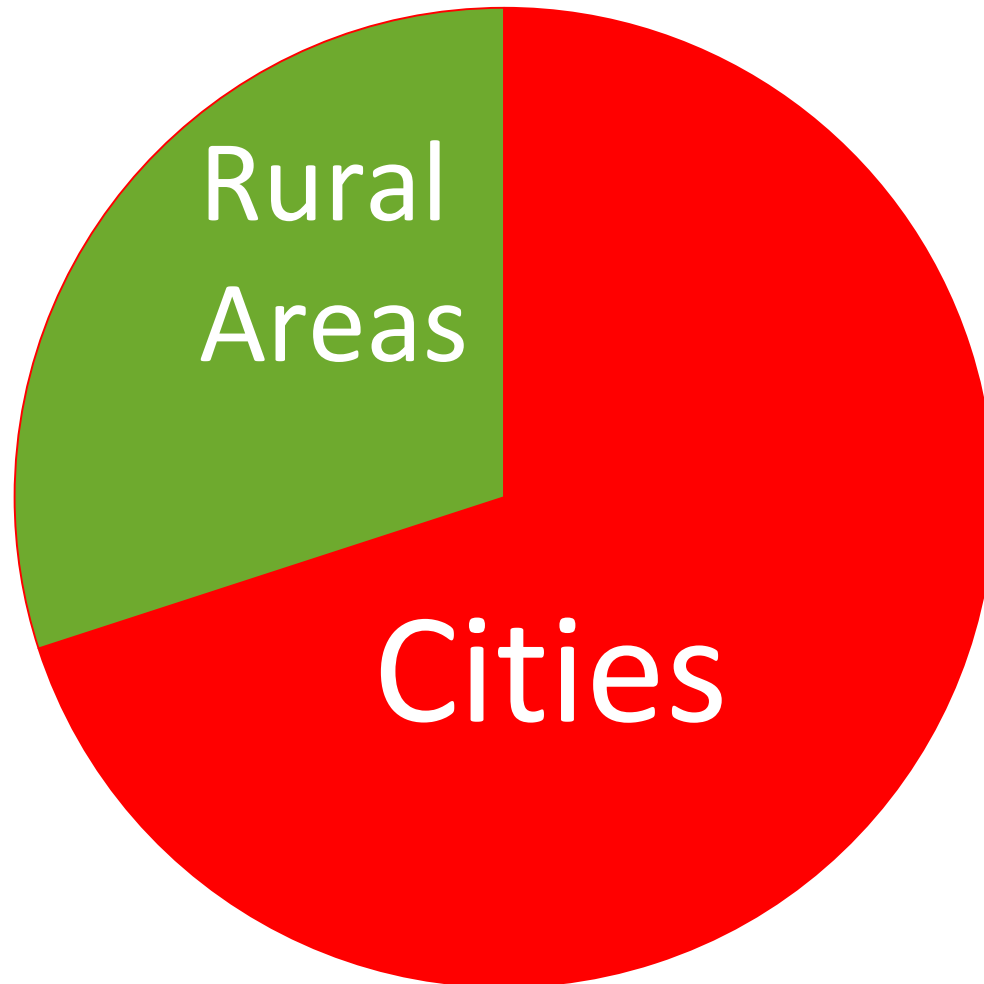
2014      54%

2050      66%

# Urban Areas account for 80% of Total Energy Consumption

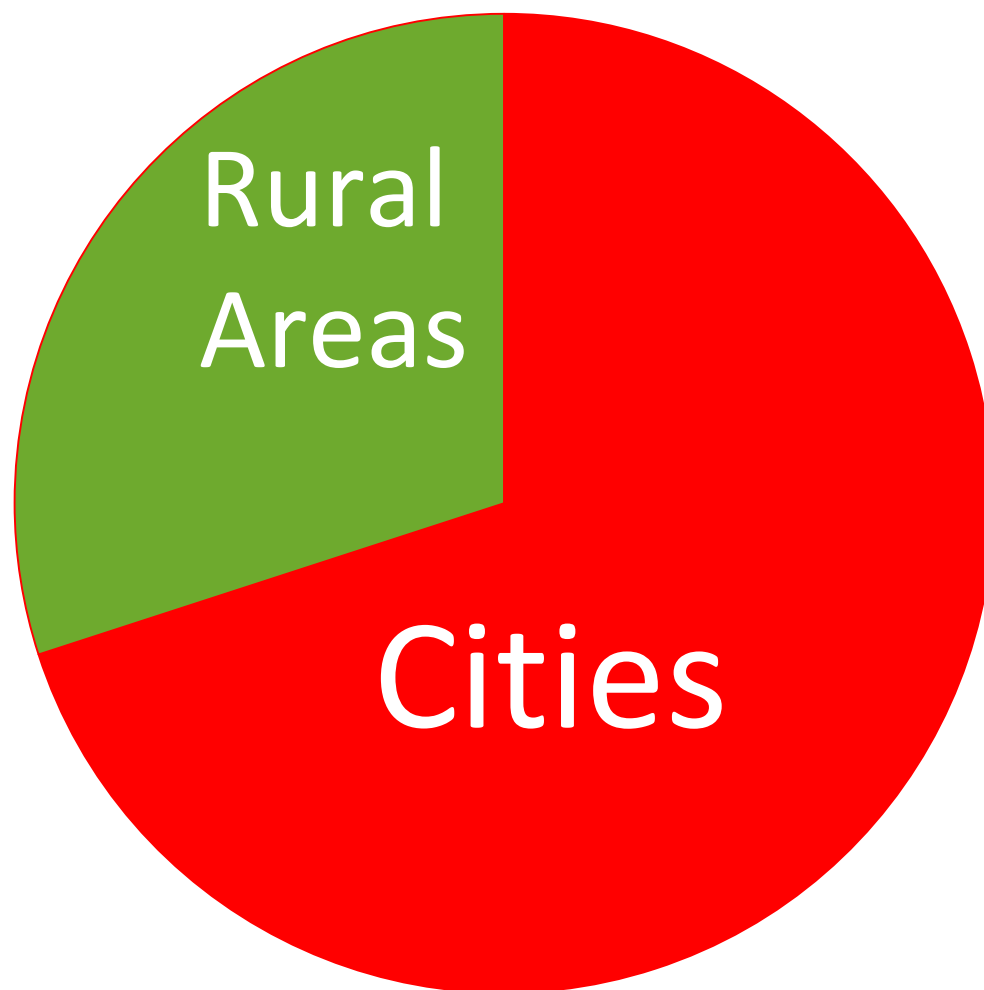


# Urban Areas account for 70% of Total GHG Emissions





# Urban Areas account for 70% of Total Resources Consumption



- 1. Cities as energy consumer/buyer**
- 2. Cities as energy producer/distributor**
- 3. Cities as planner/investor**
- 4. Cities as a motivator/catalyse**

# Cities & Energy:

## Four major responsibilities

1. Cities as energy consumer/buyer
2. Cities as energy producer/distributor
3. Cities as planner/investor
4. Cities as a motivator/catalysor

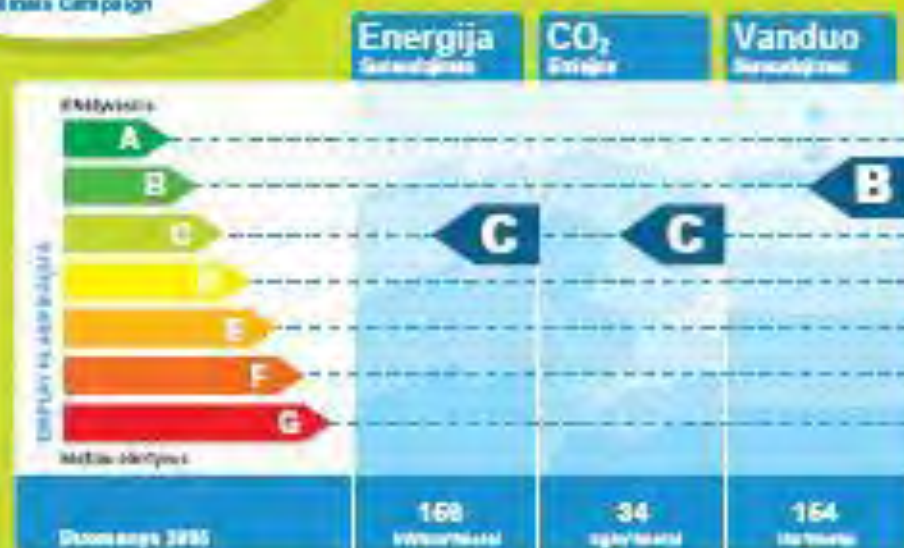
**National policies can provide support for each dimension.**

# **1. Cities as energy consumer/buyer**



# Kauno K. Griniaus pagrindinė mokykla

Pastato palyginimo rezultatai



## Šiklos A klasės lygtis

### D - Reikšmingi rodikliai

Šis šiklos A klasės lygtis rodo, kad šiklos A klasės lygtis yra geriausia, o šiklos G klasės lygtis yra blogiausia. Šis šiklos A klasės lygtis rodo, kad šiklos A klasės lygtis yra geriausia, o šiklos G klasės lygtis yra blogiausia. Šis šiklos A klasės lygtis rodo, kad šiklos A klasės lygtis yra geriausia, o šiklos G klasės lygtis yra blogiausia.

## Energijos šaltiniai (kuriai)



## Energijos šaltiniai (kuriai)

Šilumos energija	Šilumos energija	Šilumos energija
11.7	12.3	12.910
Šilumos energija	Šilumos energija	Šilumos energija

## **2. Cities as energy producer/distributor**



# **3. Cities as planner/investor**

**Smart planning before smart grids.**

## **4. Cities as a motivator/catalysor**

- **Access information**
- **Access clean technologies**
- **Access know how**
- **Access finance**





# G20 ENERGY EFFICIENCY ACTION PLAN

VOLUNTARY COLLABORATION ON ENERGY EFFICIENCY

16 NOVEMBER 2014

**Energy Efficiency can become  
the first fuel...**

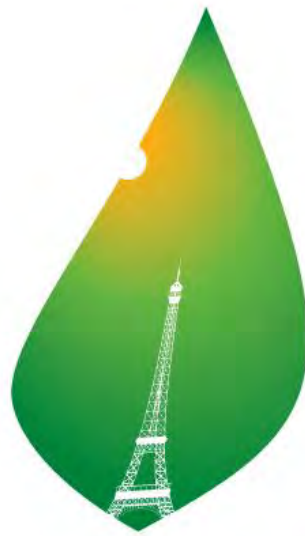
**...if it is fuelled first.**

# **Energy Efficiency is more than an energy policy**

- 1. Energy Savings is just one of the multiple benefits of energy efficiency**
- 2. Energy Efficiency to be integrated in sectoral policies: Industry, Transport, Building, City Plannning, Finance,...**

**Energy Efficiency needs  
support & governance at both  
national & local level.**

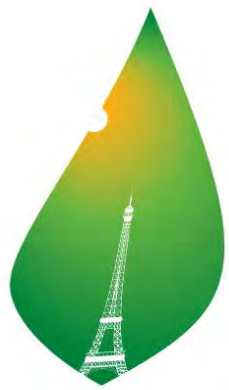
**International collaboration  
can facilitate, enhance &  
accelerate national EE policies**



**PARIS2015**  
UN CLIMATE CHANGE CONFERENCE  
**COP21·CMP11**

**One day event :**

**TOWARDS A BUILDING CLIMATE ALLIANCE**  
**“Putting the building & Construction sector**  
**on a 2°C path”**



**PARIS2015**  
UN CLIMATE CHANGE CONFERENCE  
COP21•CMP11

# **Road to Paris:**

## **Work together in 2015 to organise a building day" for COP21 and set up an "Alliance" over the long term**

- 1. Together acknowledge the importance of all the issues and share a common vision**
- 2. Put in motion a massive movement of commitments to concrete actions**
- 3. Means of action for implementing engagements and commitments**





International  
Partnership for  
**Energy Efficiency**  
Cooperation

# Thank you

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