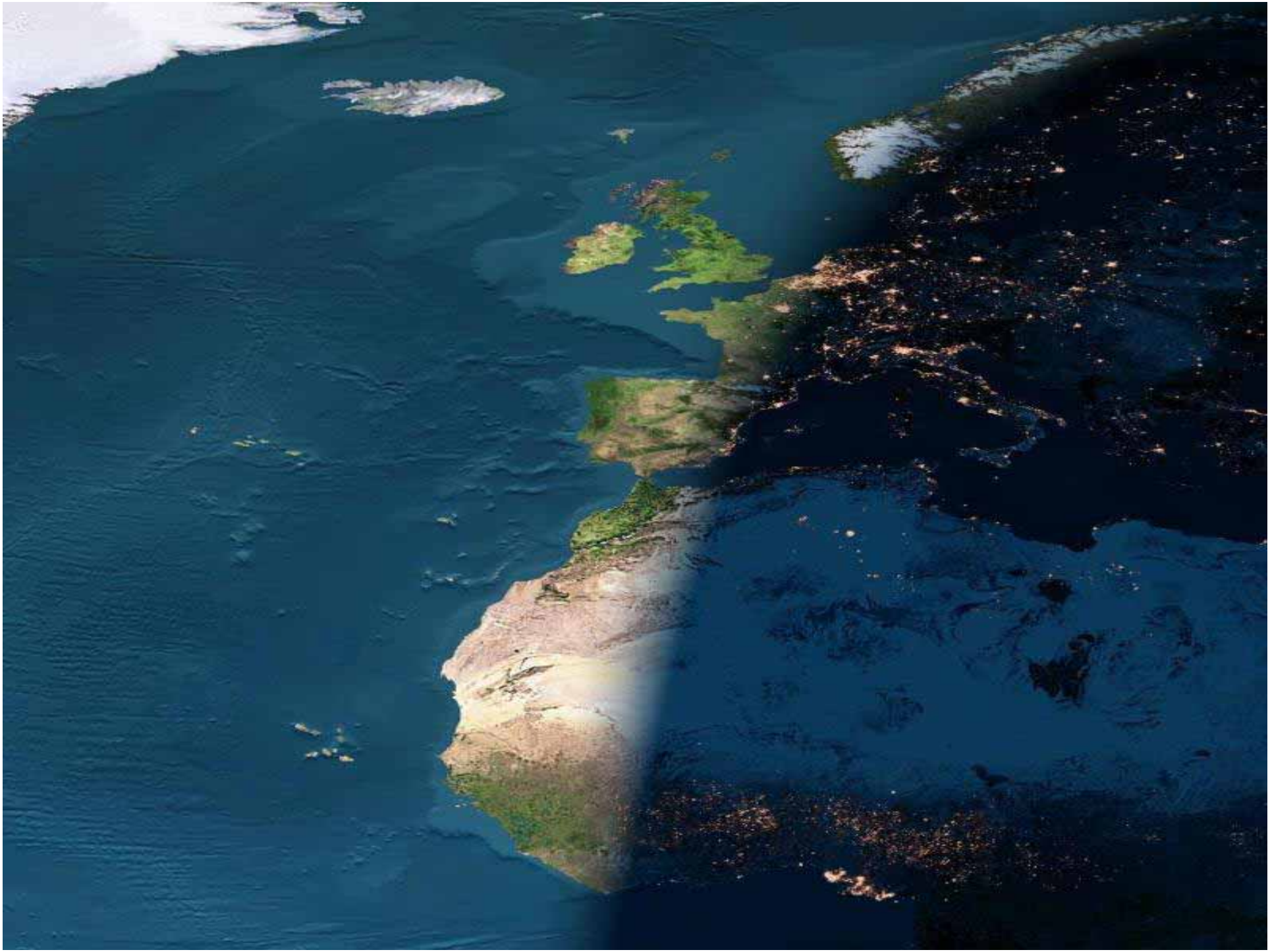
International Partnership for Energy Efficiency Cooperation

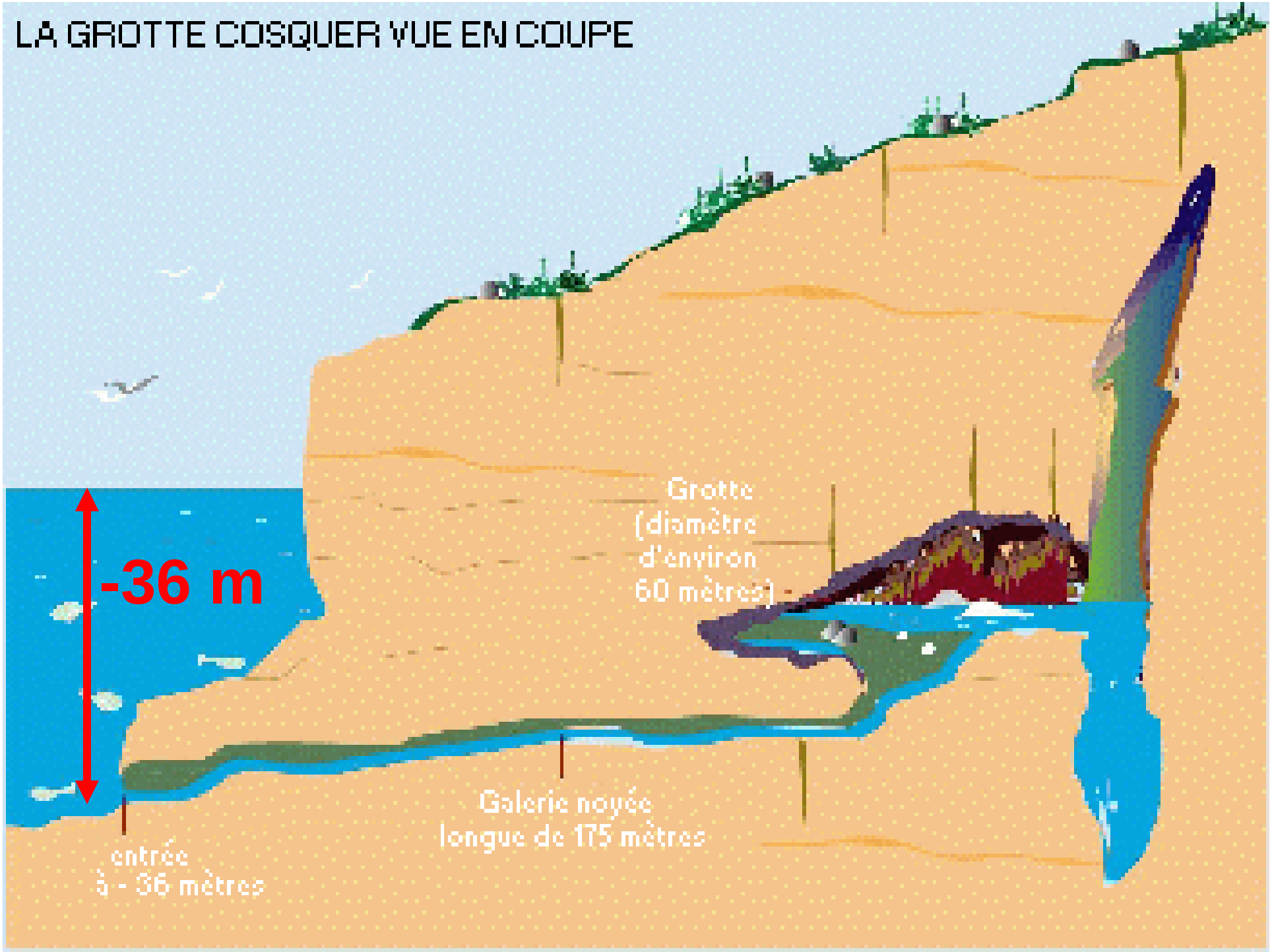
Role & Value of International Collaboration in promoting Energy Efficiency

Benoît Lebot,
Executive Director IPEEC

Capetown, DUE, March 31st, 2015




6 000 years ago, Sahara was green
Today it is a desert

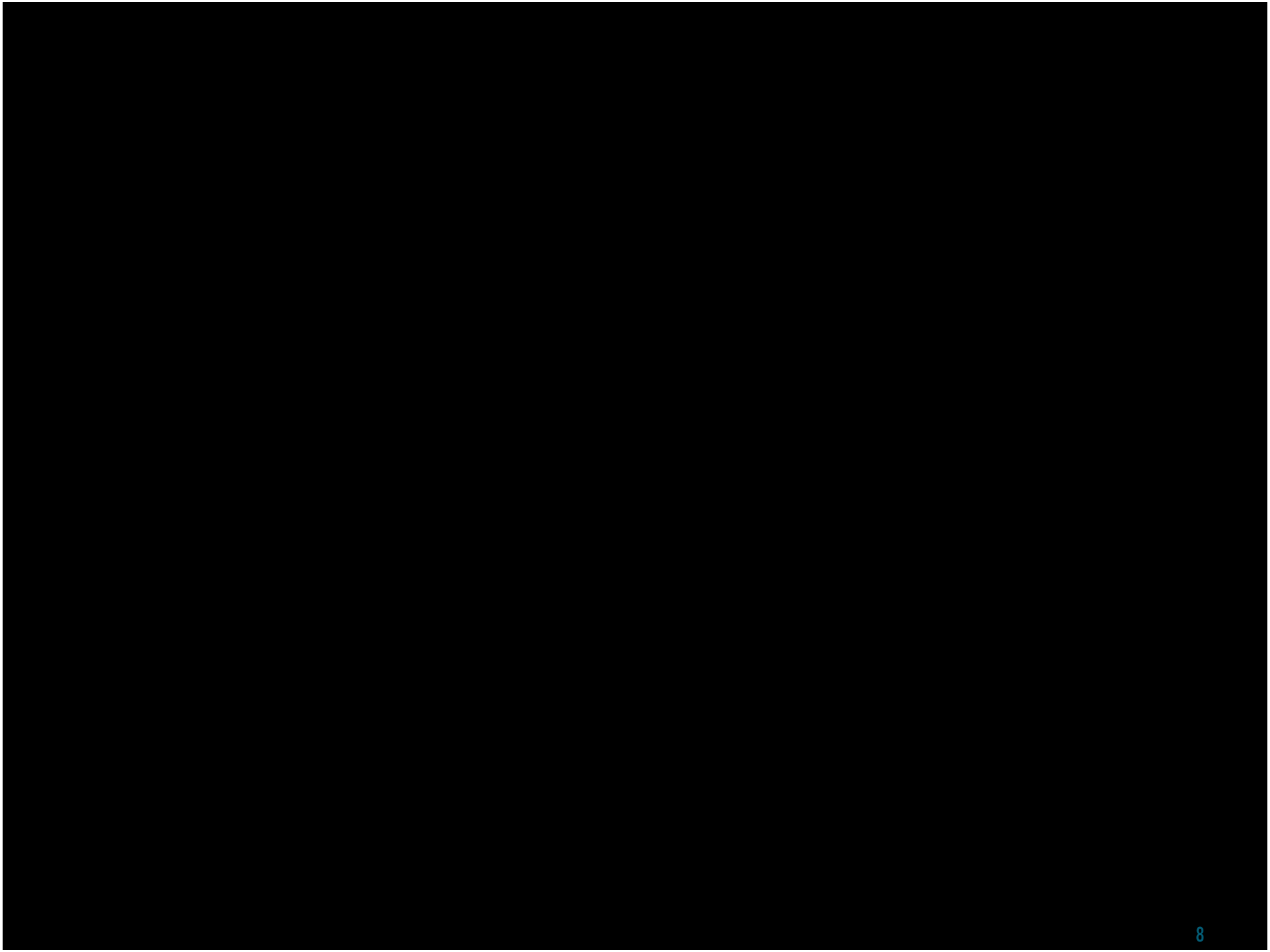

LA GROTTE COSQUER VUE EN COUPE
-36 m
Grotte
(diamètre
d'environ
60 mètres)
Galerie noyée
longue de 175 mètres
entrée
à - 36 mètres

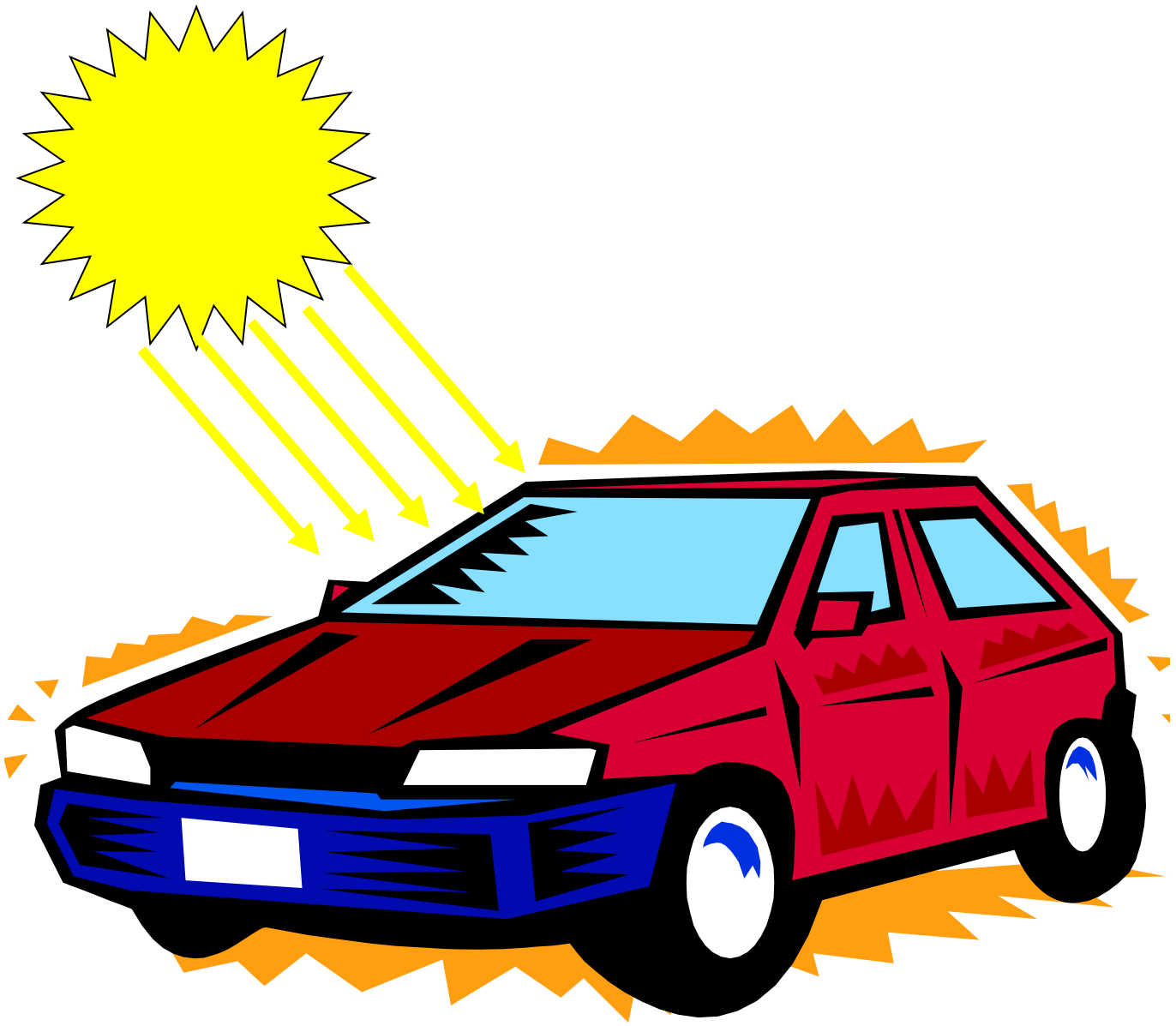
The Mediterranean 2015

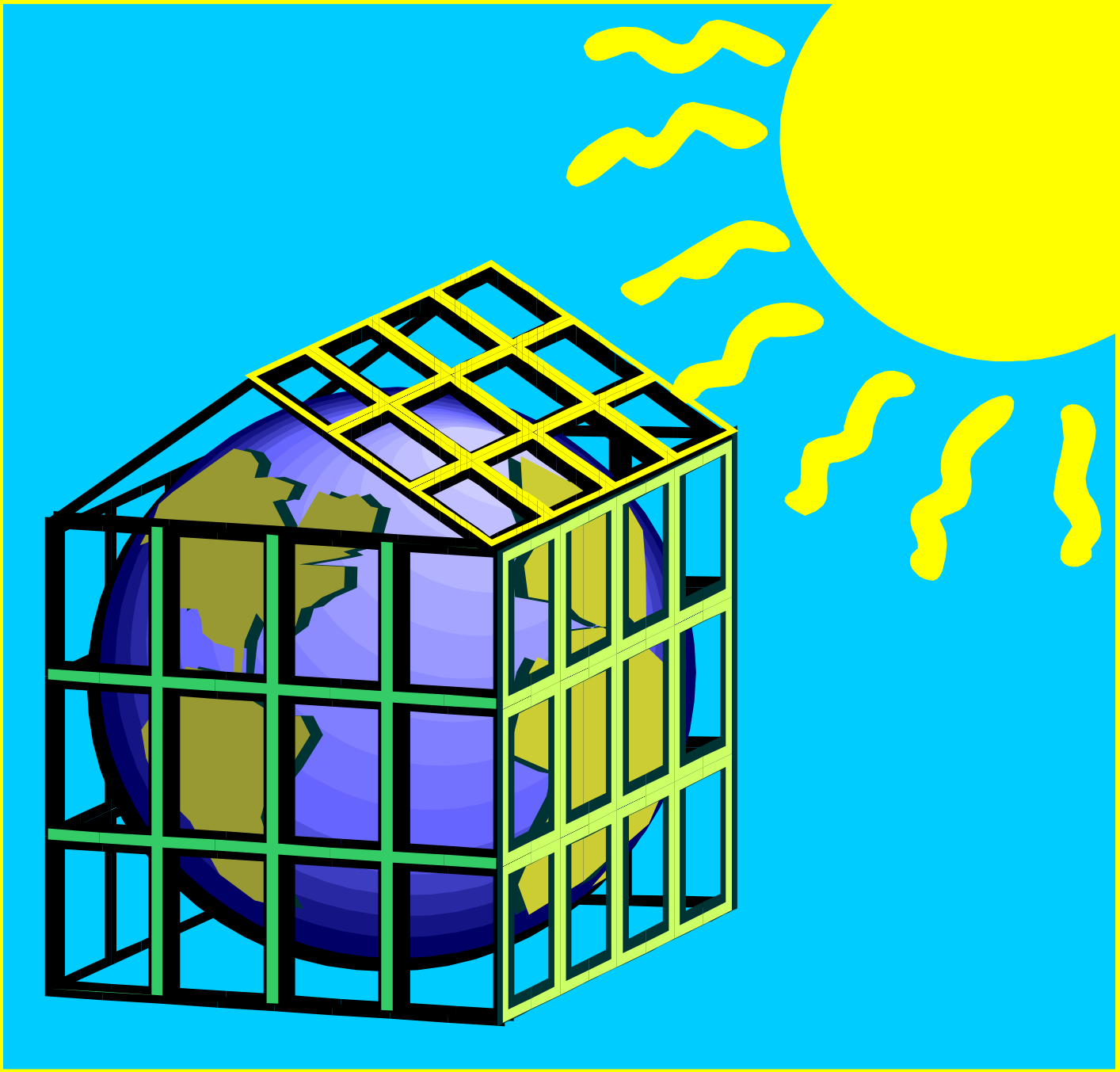
Source: GoogleEarth

The Mediterranean see 15 000 years ago

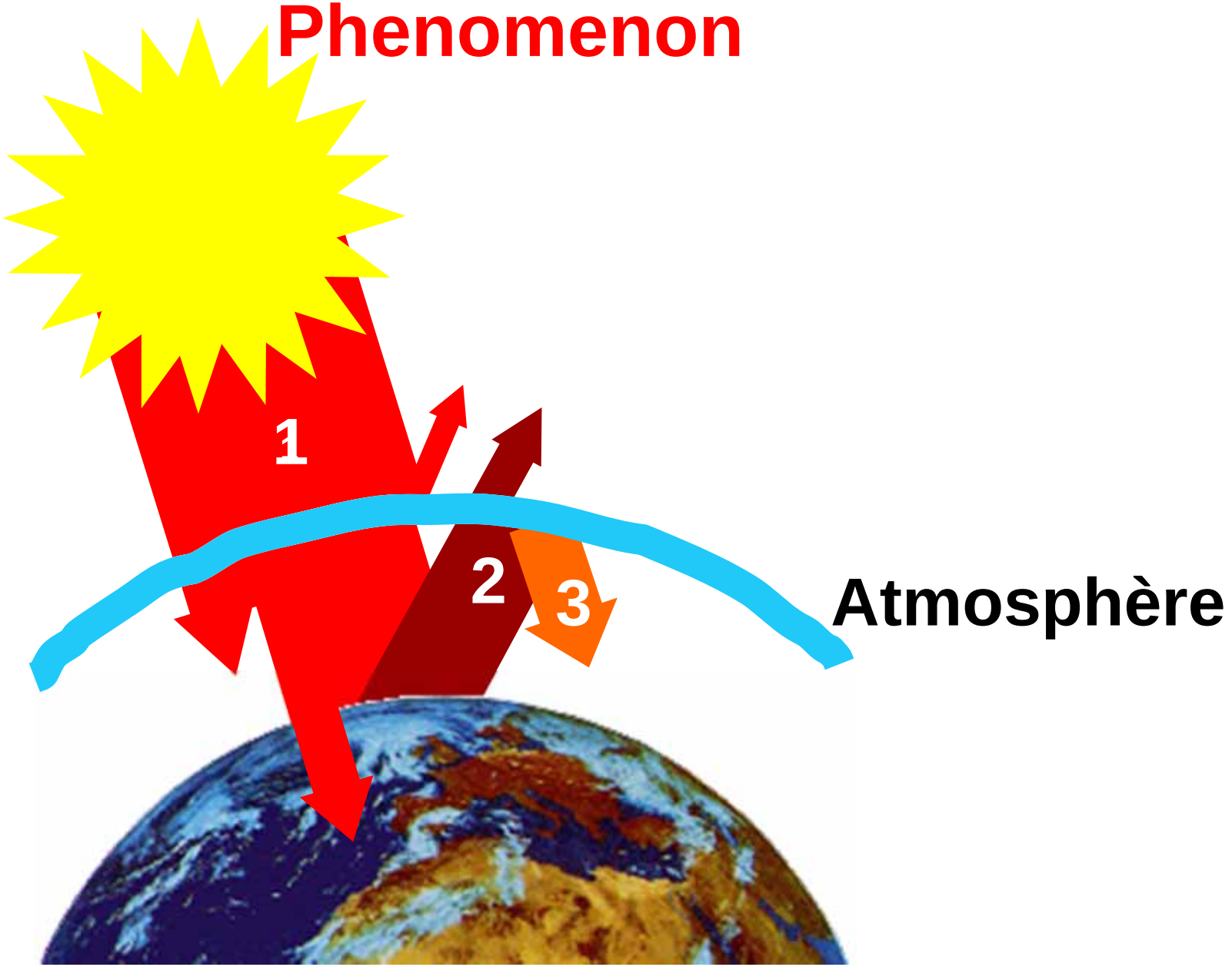
Source: France 2 Malaterre

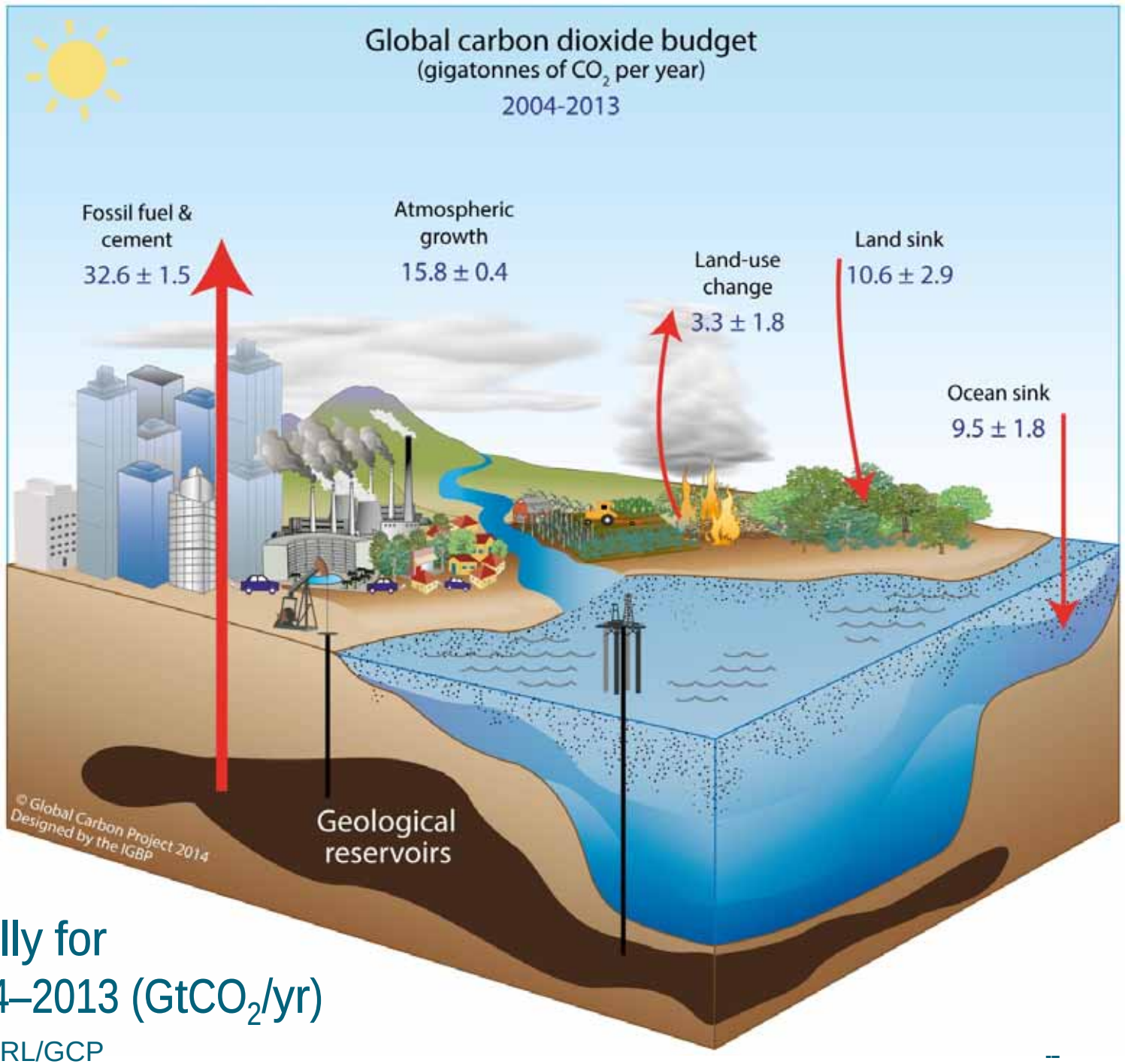






Greenhouse Effect: A Natural Phenomenon





Averaged globally for the decade 2004–2013 ($GtCO_2$/yr)

Data: CDIAC/NOAA-ESRL/GCP

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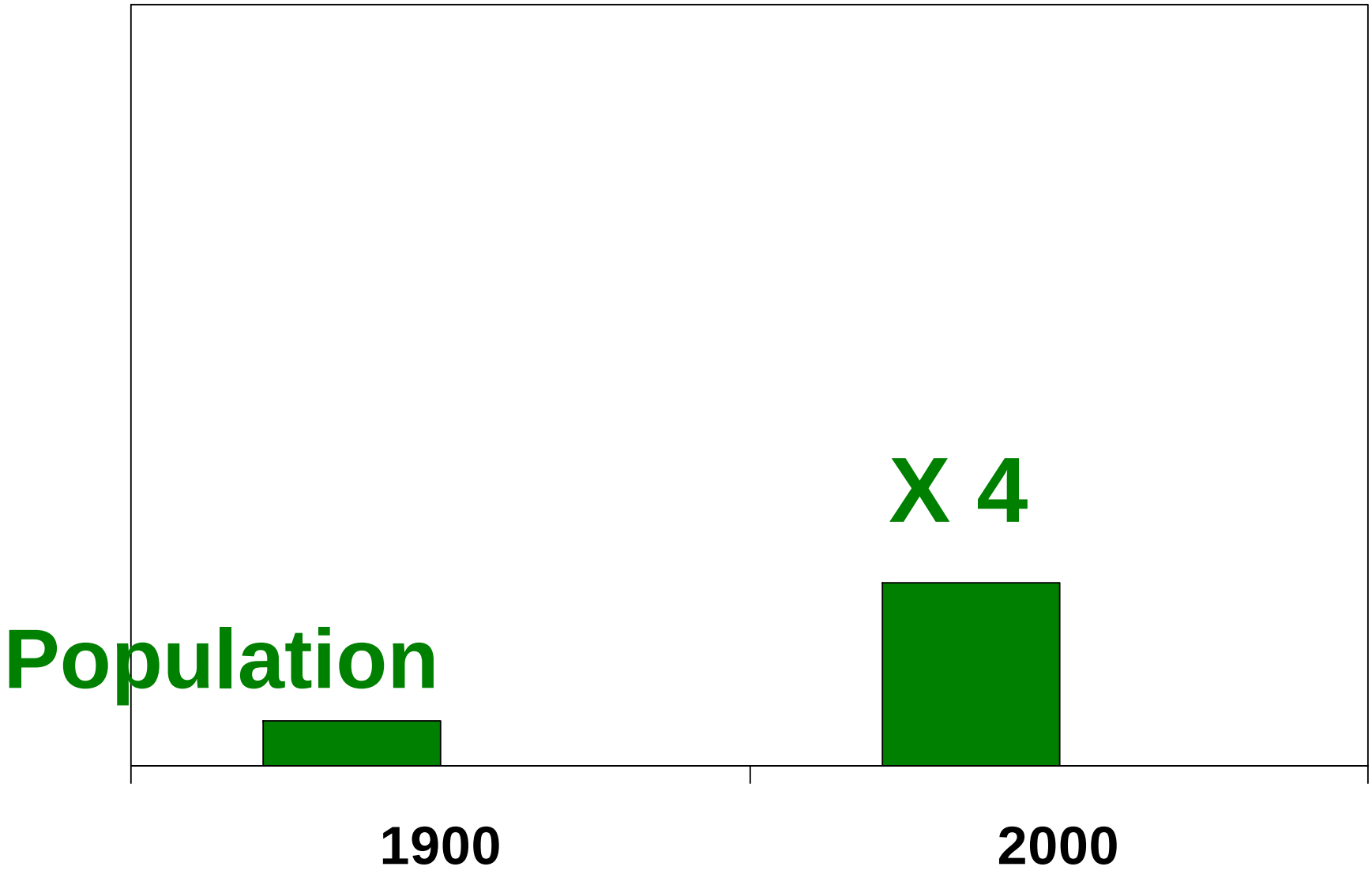
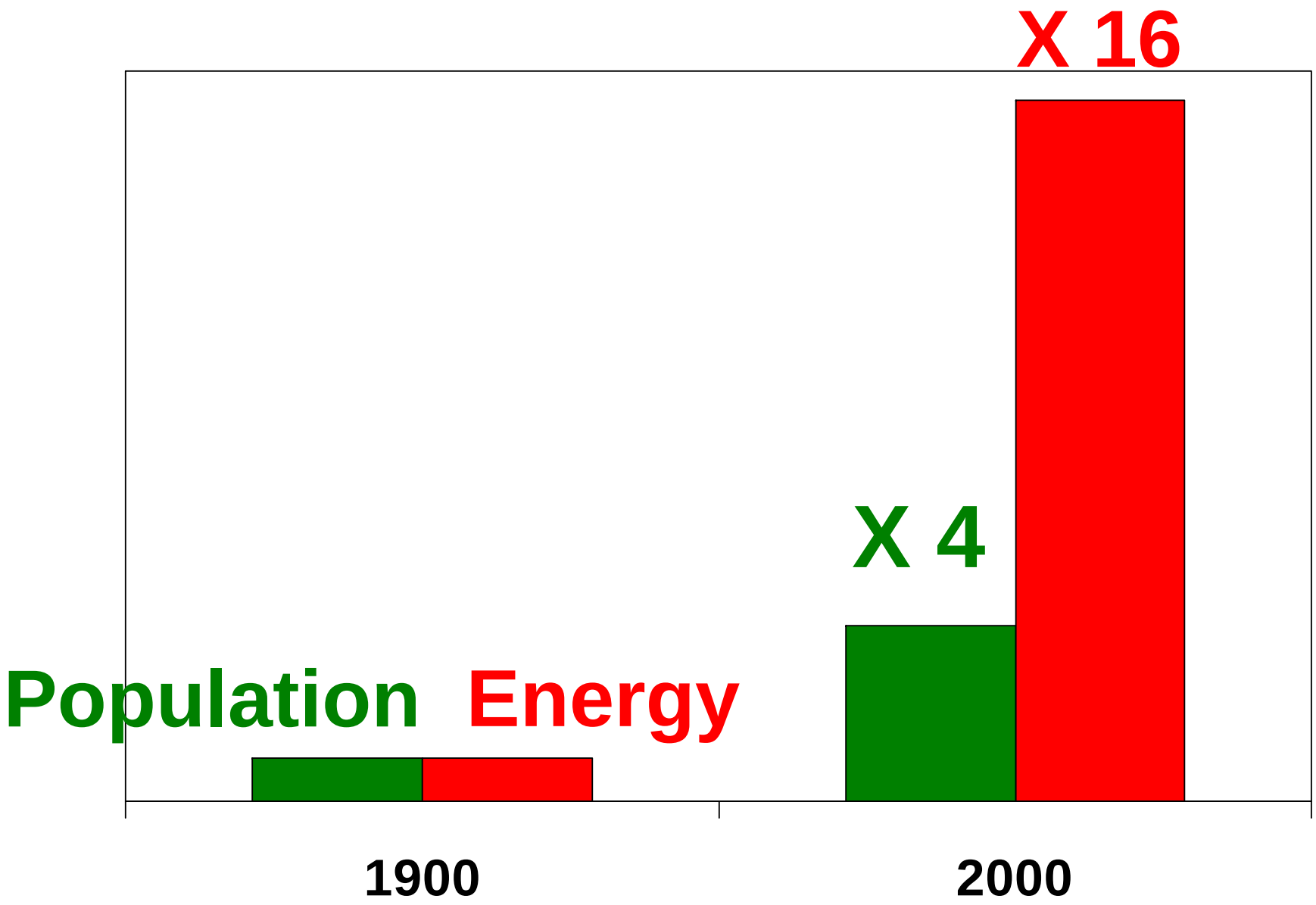
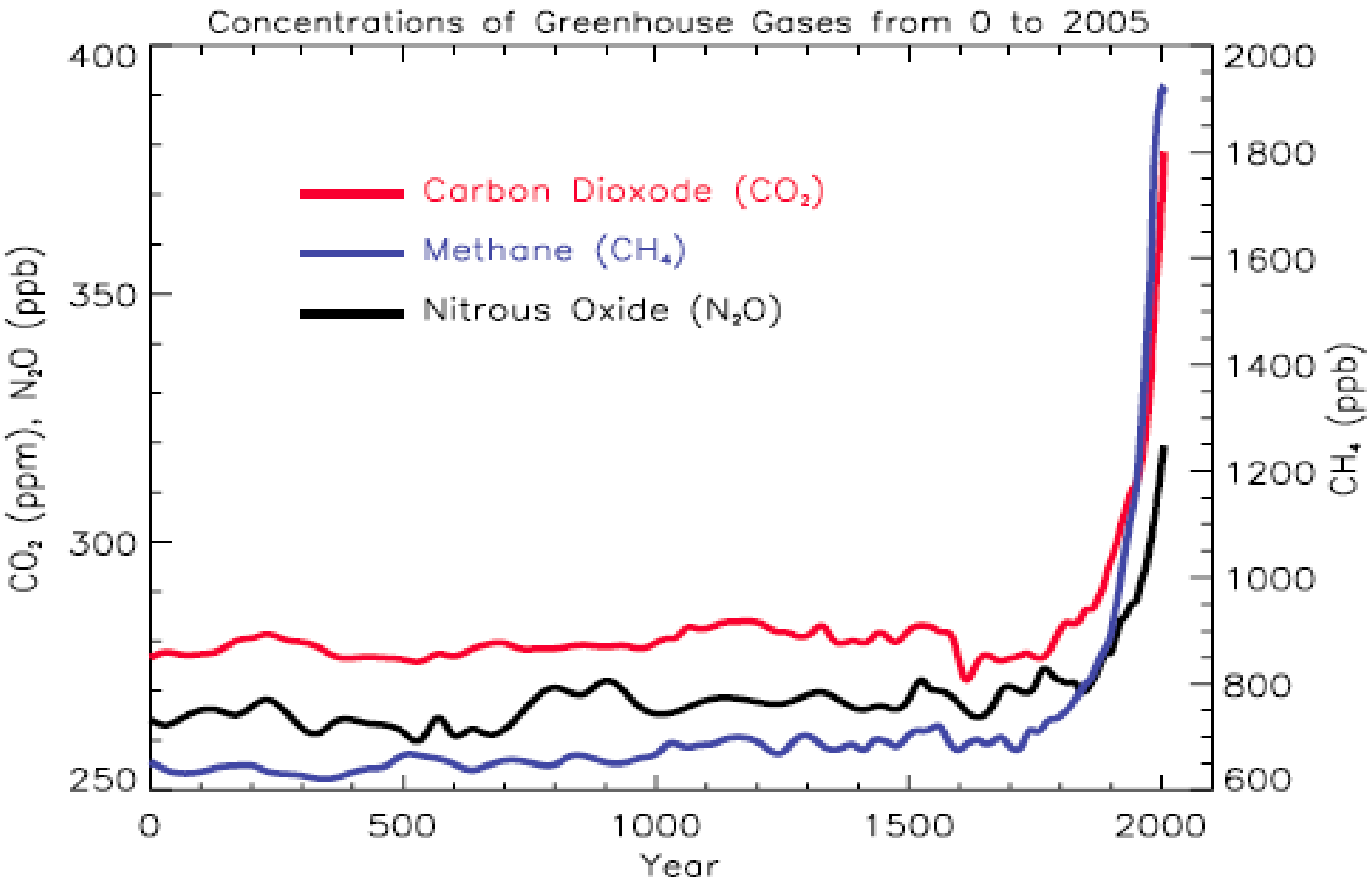

X 4
Population
1900
2000


X 16
X 4
Population
Energy
1900
2000



Source: IPCC (2007)

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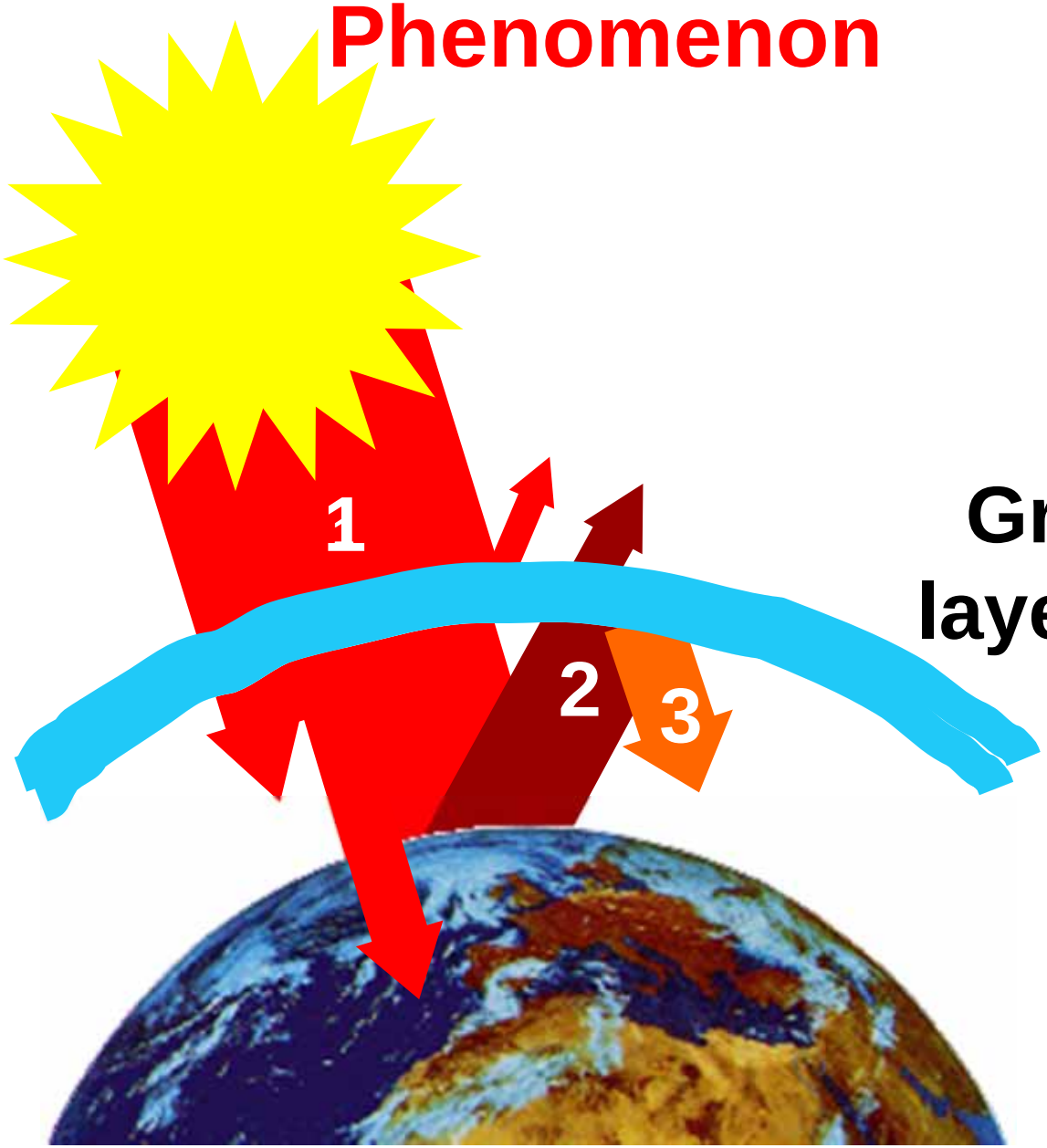

The Greenhouse layer is getting thicker

Ranking of the Warmest Years observed since 1880 (Ranked from the hottest record)

1	2014	11	2004
2	2010	12	2012
3	2005	13	2011
3	1998	14	2006
5	2013	15	2001
6	2003	16	2008
7	2002	17	1997
8	2006	18	1990
9	2009	19	1995
10	2007	20	2000

Source l'***Union of Concerned Scientists*** (1) http://www.ucsusa.org/global_warming/science/recordtemp2005.html

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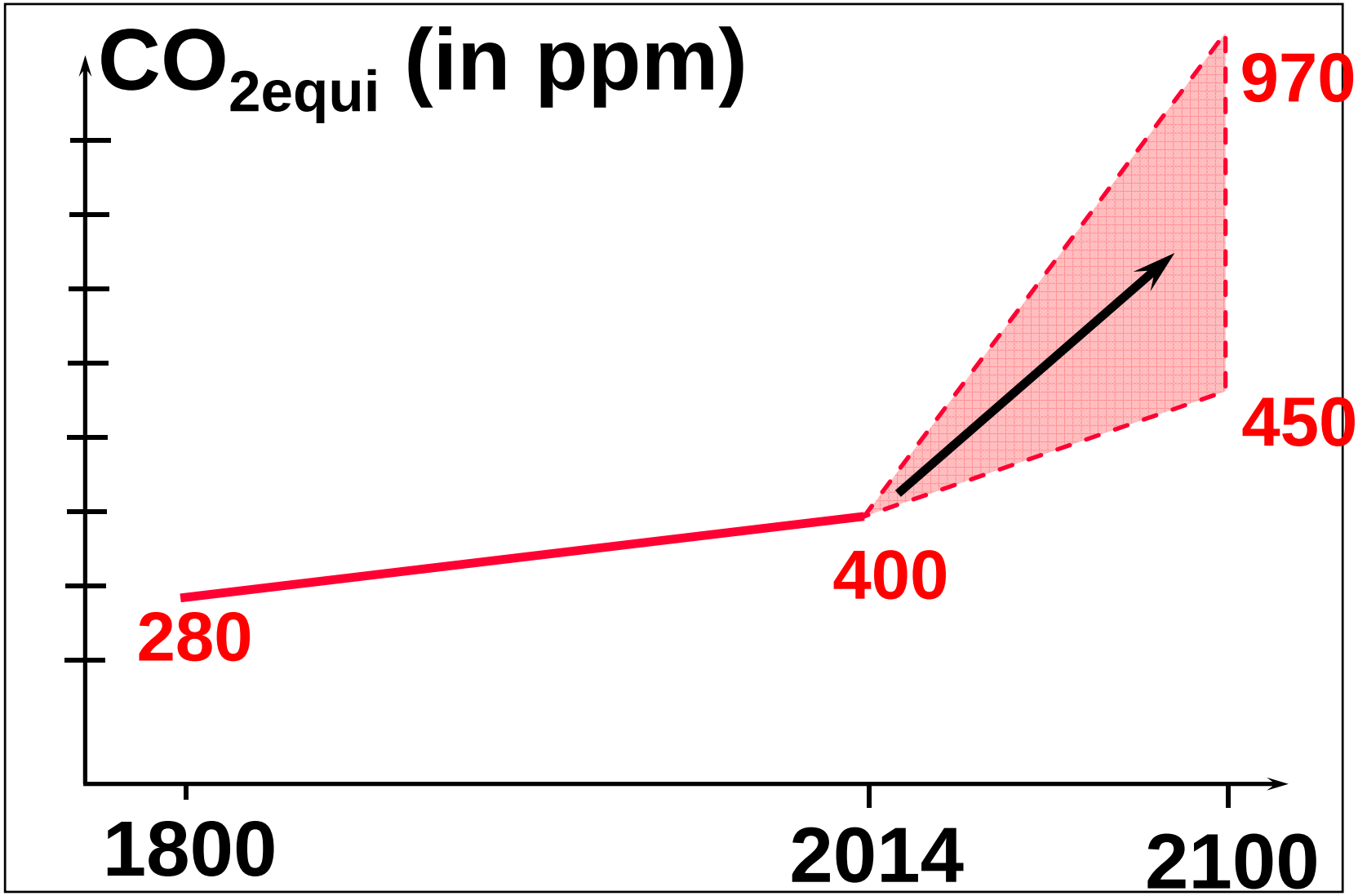
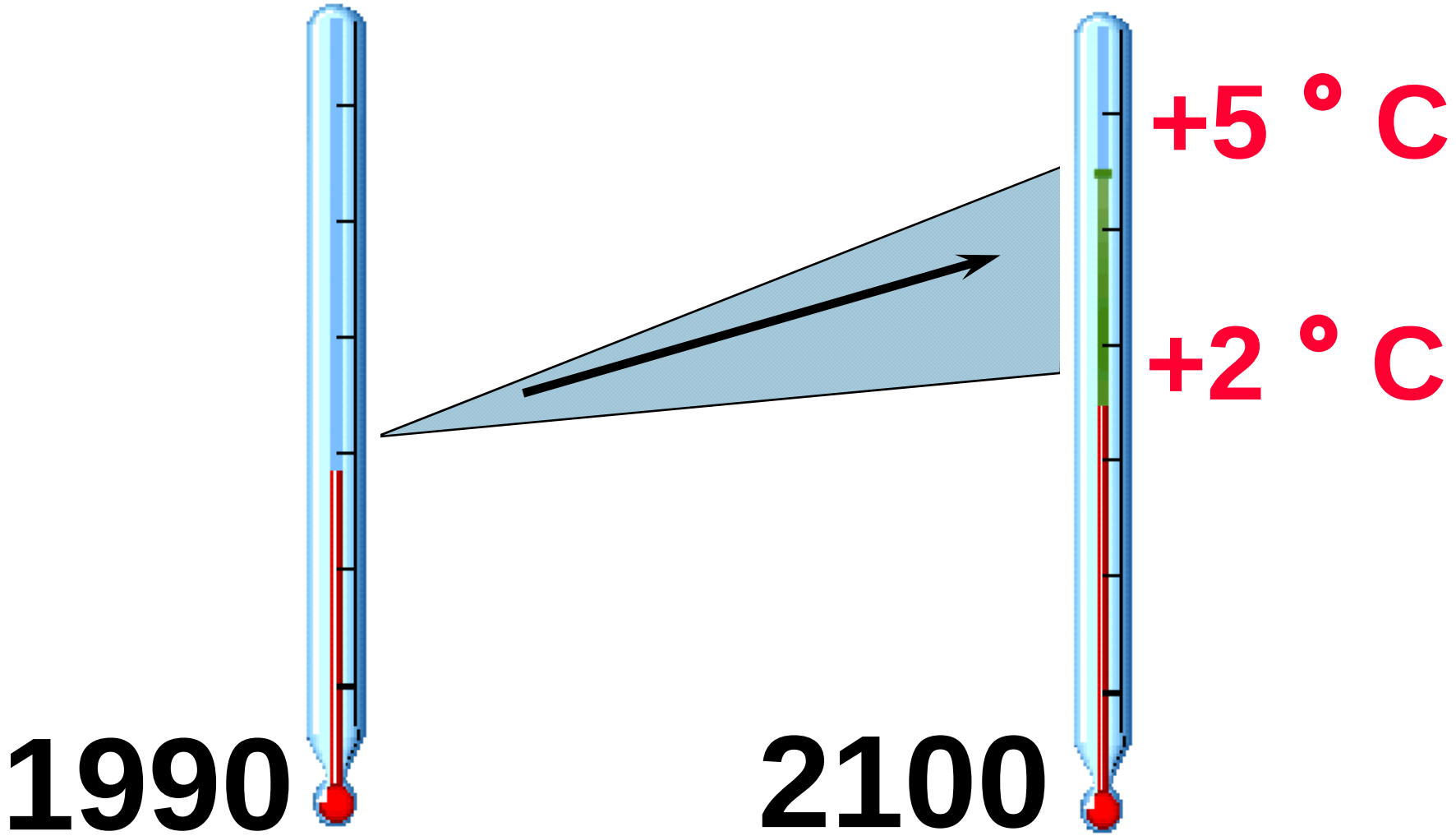
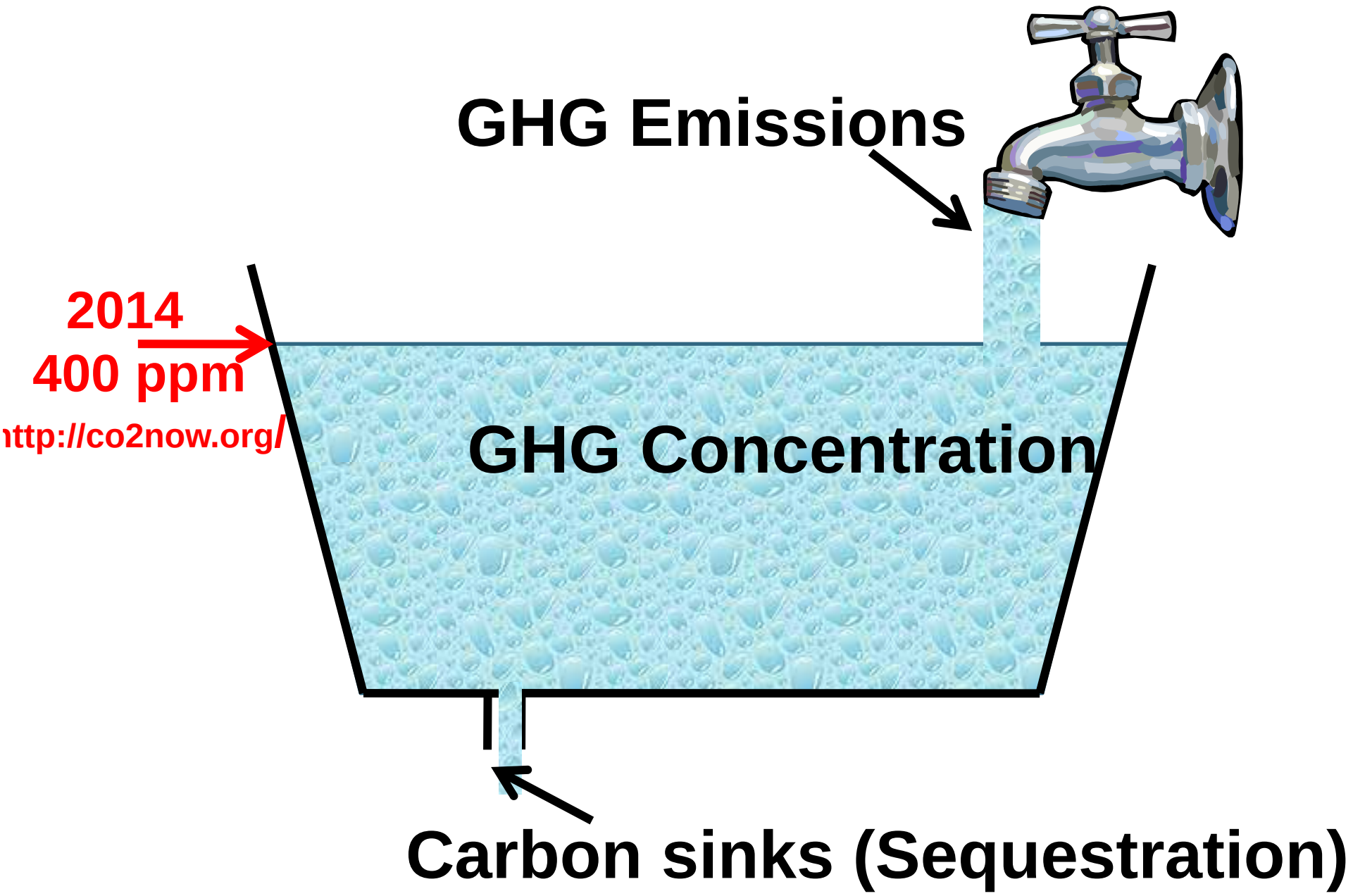
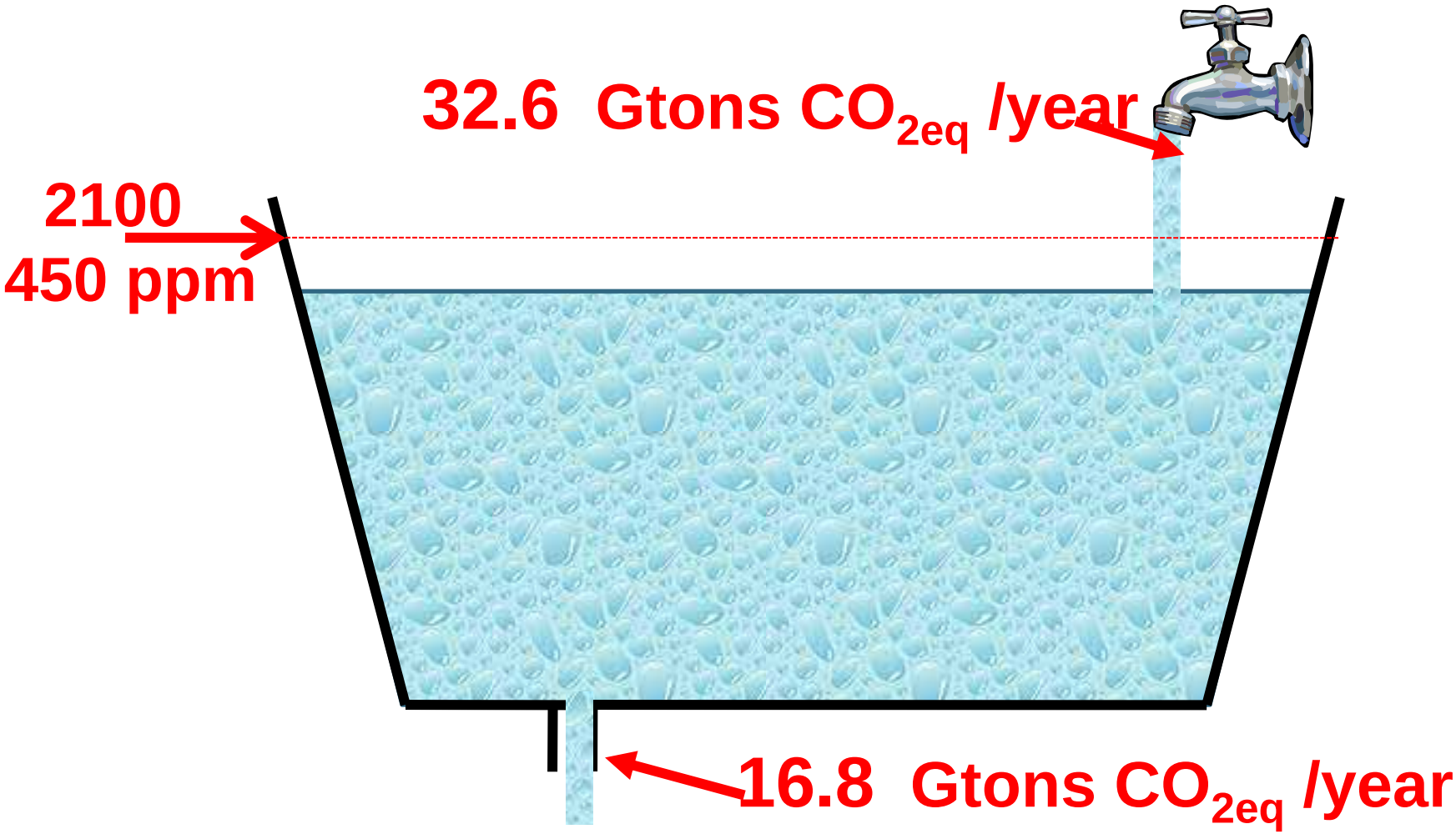
Projected Evolution of GHG concentration

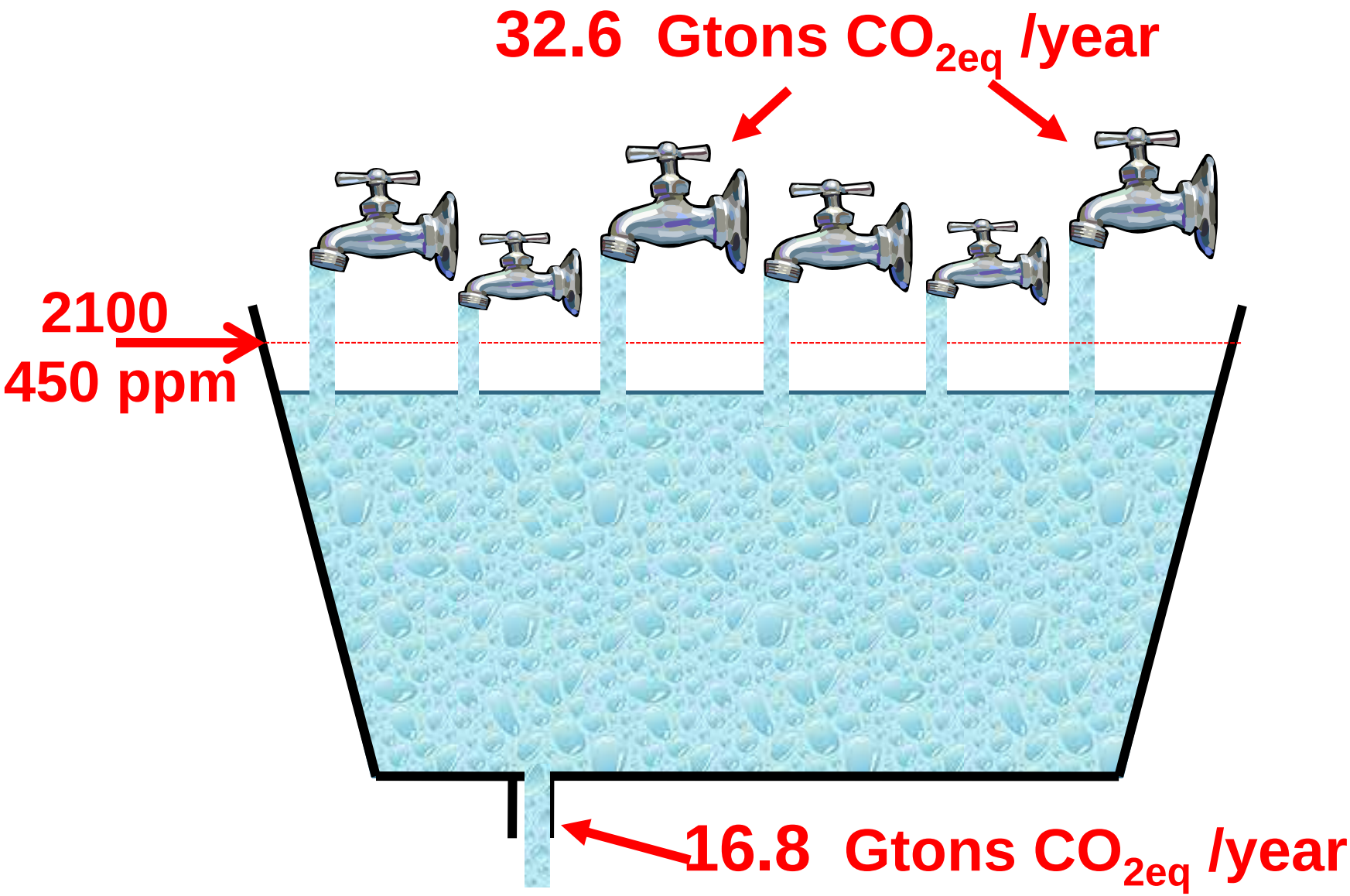


Possible Evolution of Earth Average Temperature over the next century




GHG Emissions
2014
400 ppm
ttp://co2now.org/
GHG Concentration
Carbon sinks (Sequestration)


32.6 Gtons CO_{2eq} /year
2100
450 ppm
16.8 Gtons CO_{2eq} /year


32.6 Gtons CO_{2eq} /year
2100
450 ppm
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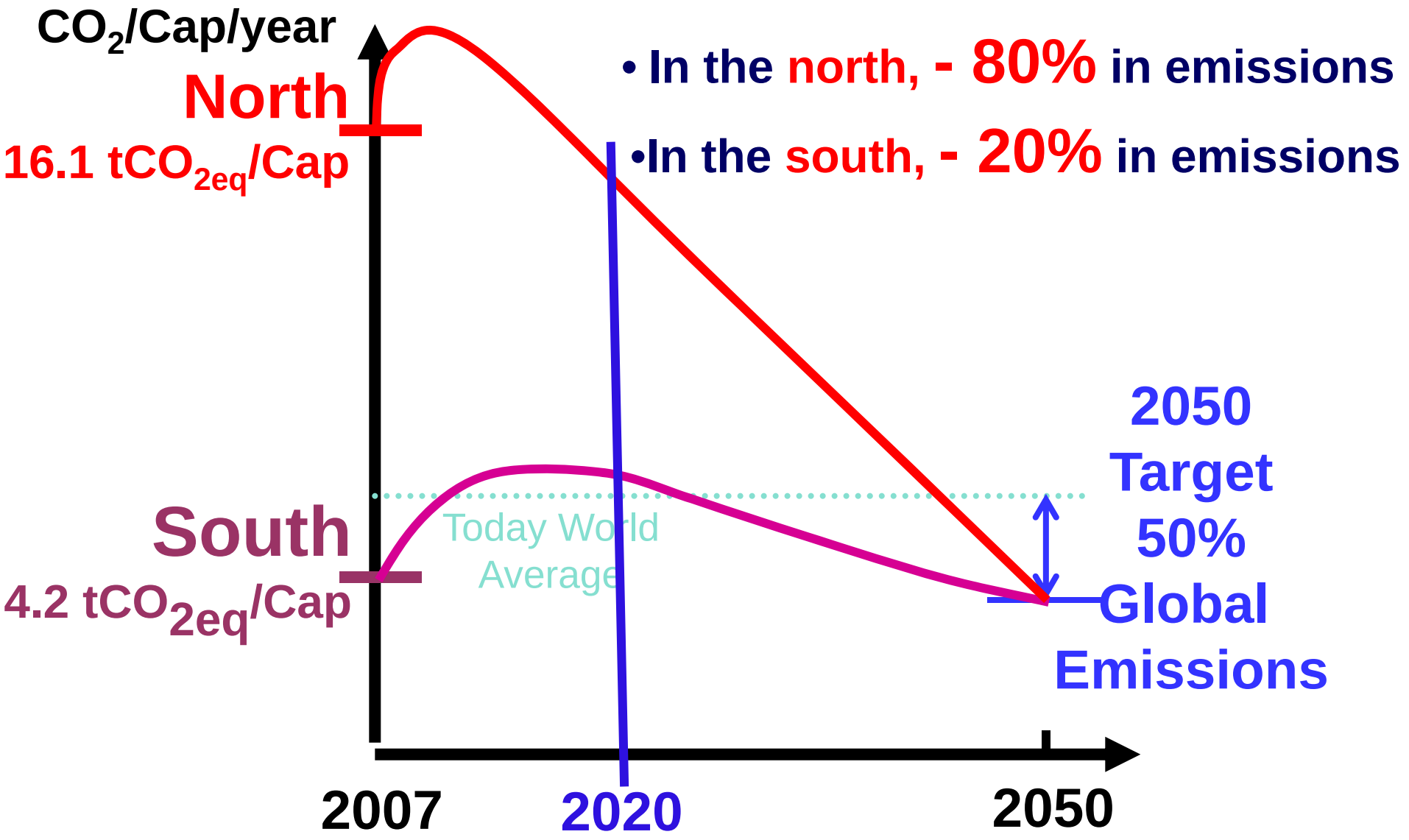
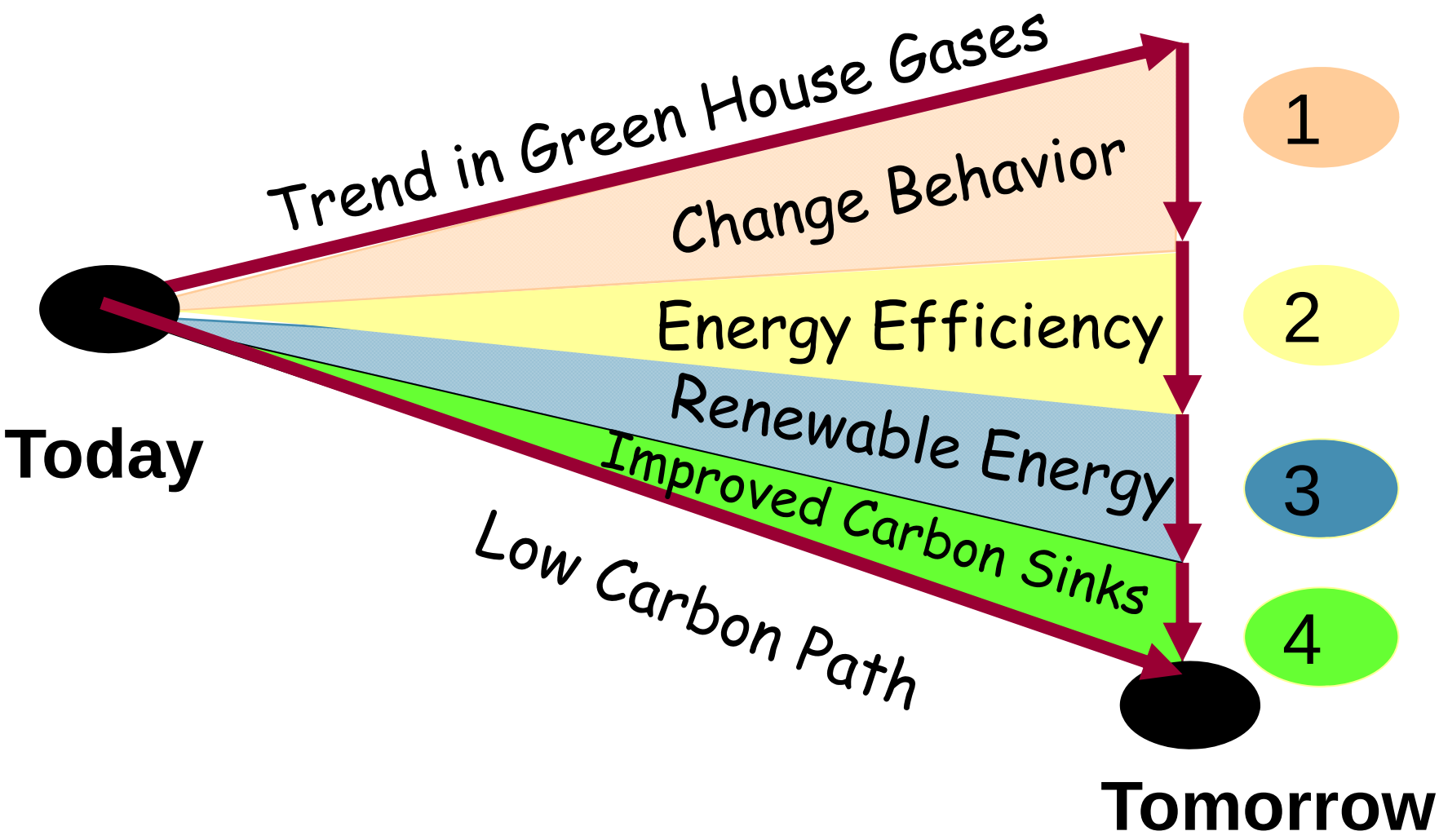
Pathway towards a 2 ° C Global Warming



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

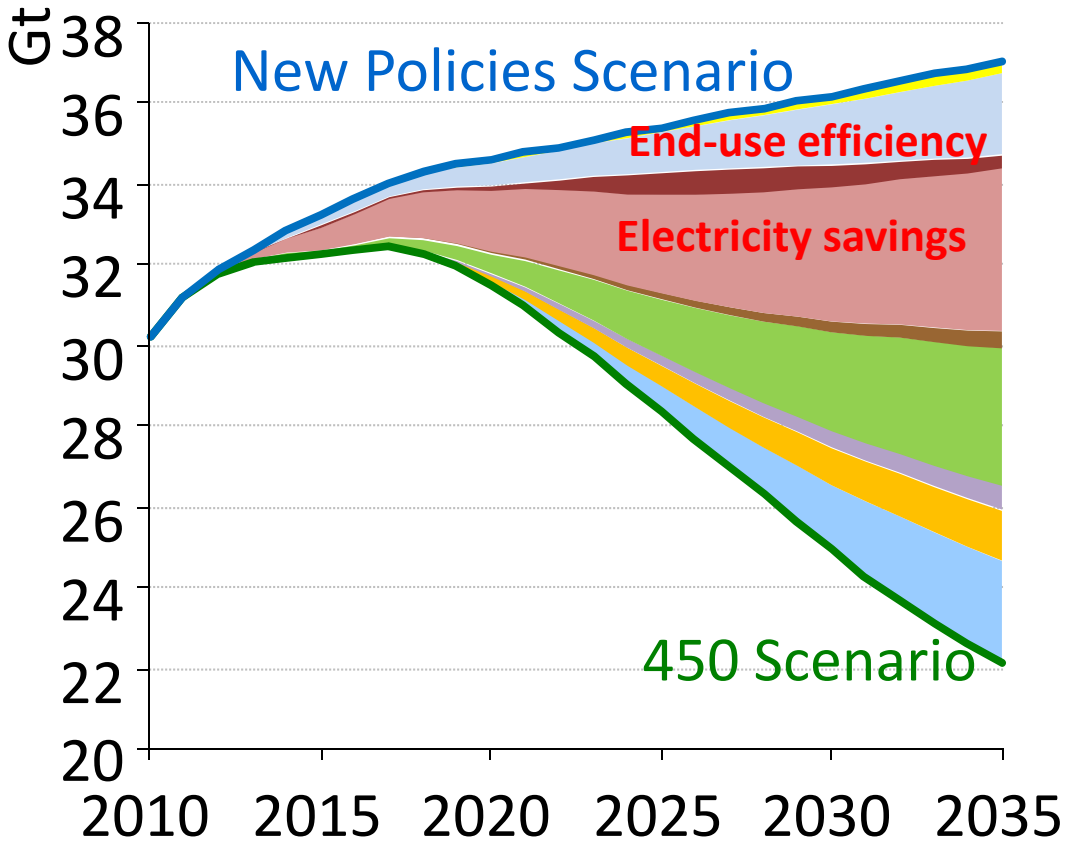
Improved carbon sinks

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

Lifestyle and behavioural changes

AR5 WGIII SPM

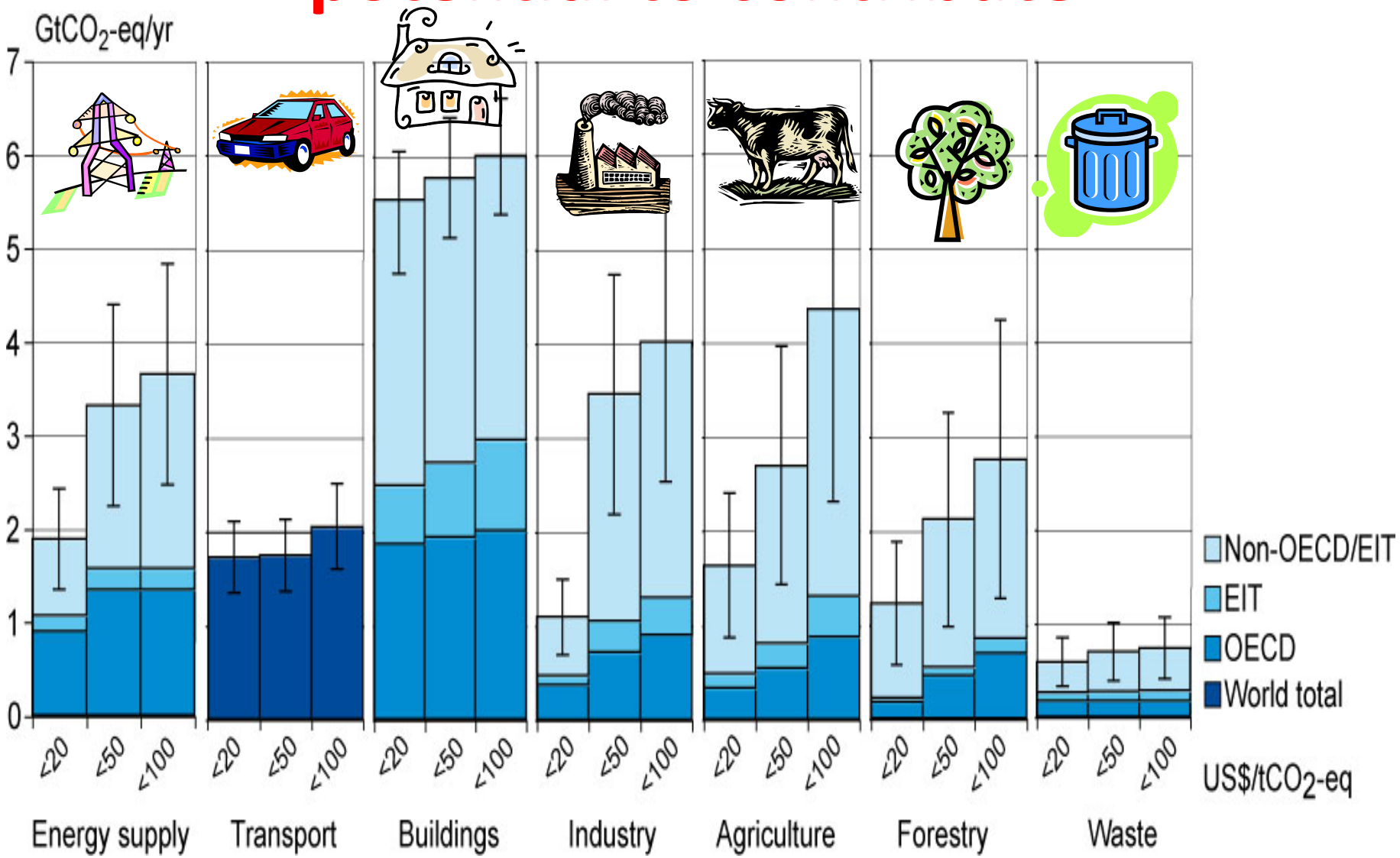
Global energy-related CO_2 emissions abatement in the 450 Scenario



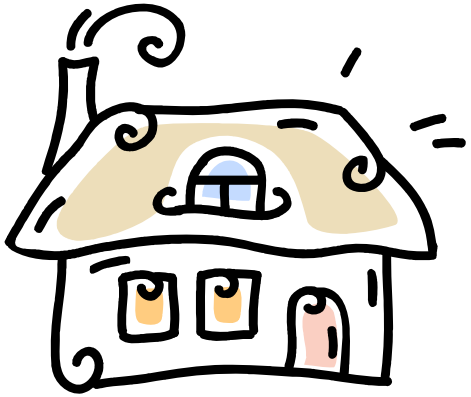
CO_2 abatement	2020	2035
Activity	2%	2%
End-use efficiency	18%	13%
Power plant efficiency	3%	2%
Electricity savings	50%	27%
Fuel and technology switching in end-uses	2%	3%
Renewables	15%	23%
Biofuels	2%	4%
Nuclear	5%	8%
CCS	4%	17%
Total (Gt CO_2)	**3.1**	**15.0**

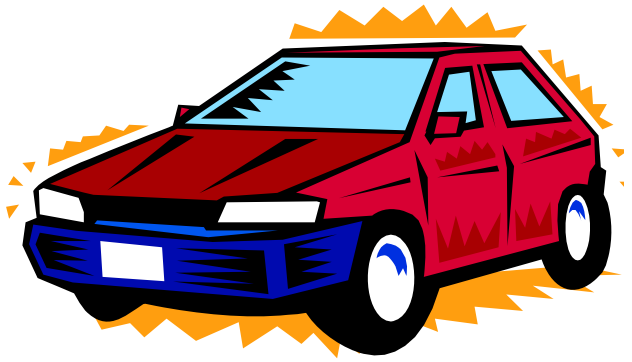
Source: IEA World Energy Outlook 2012

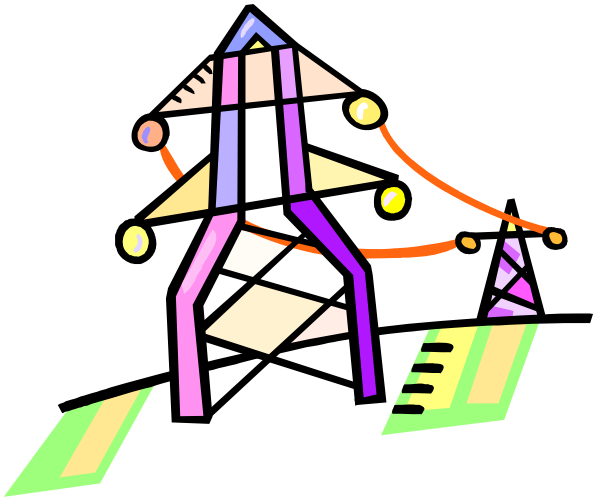
All sectors and all regions have the potential to contribute

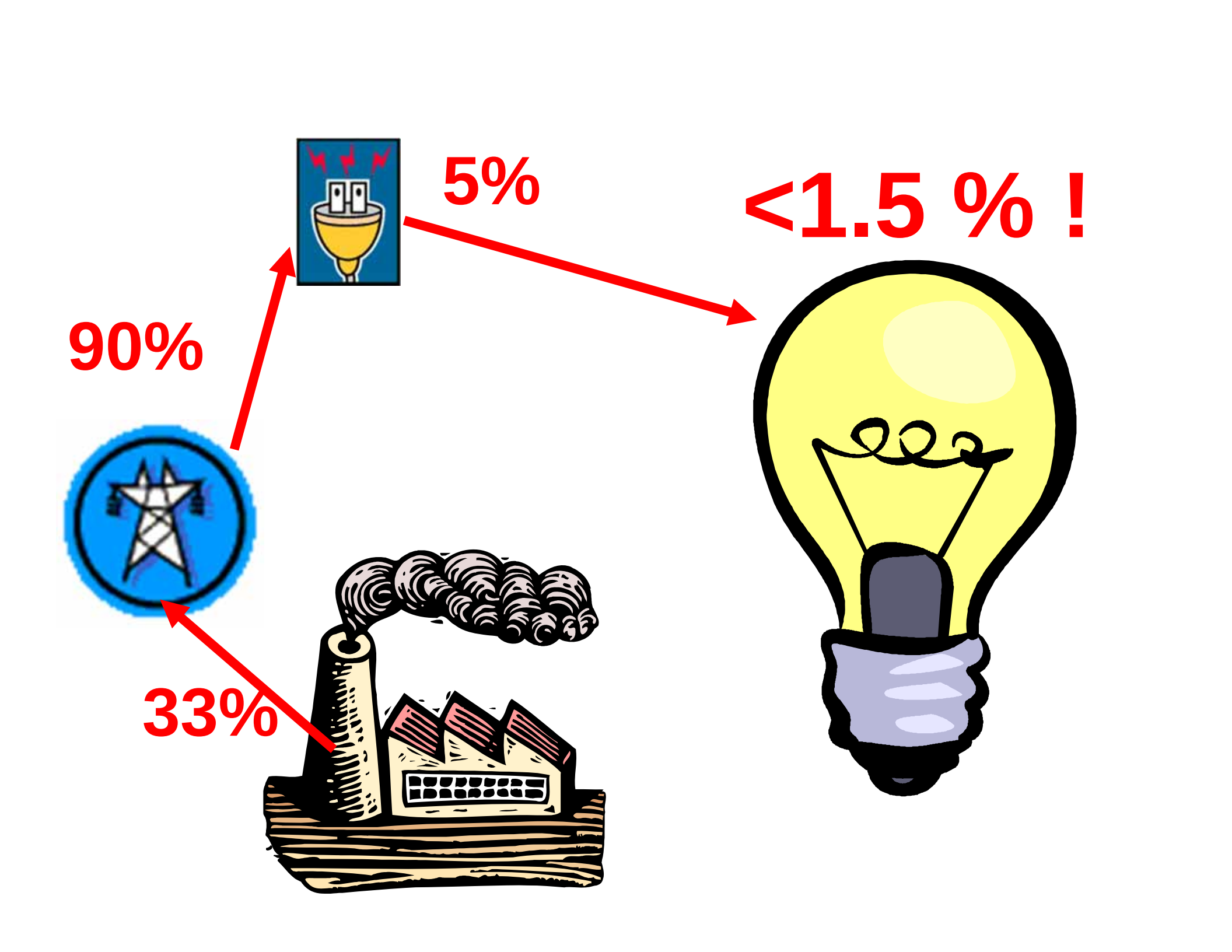


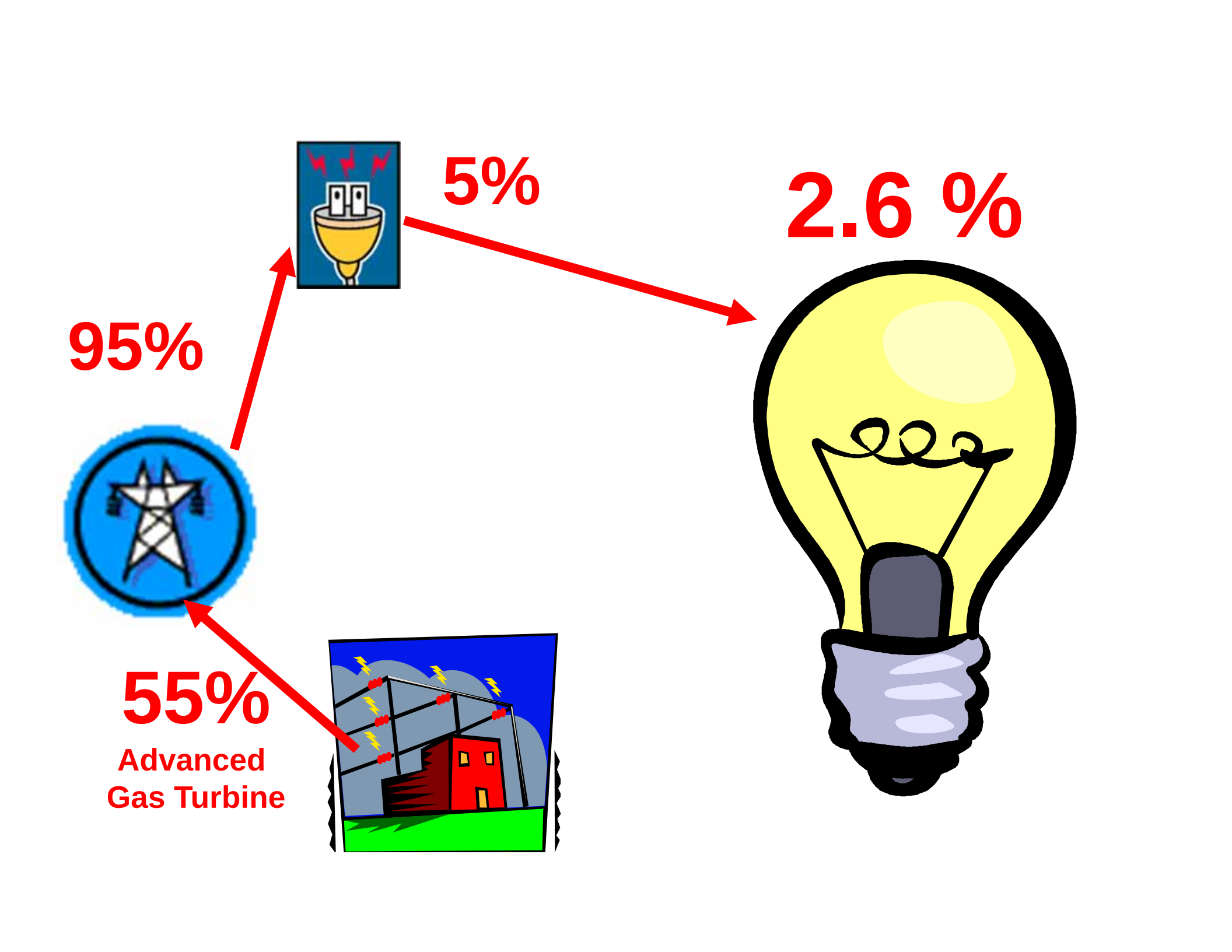
Note: estimates don't include non-technical options such as lifestyle changes








5%
<1.5 % !
90%
33%


5%
2.6 %
95%
55%
Advanced
Gas Turbine

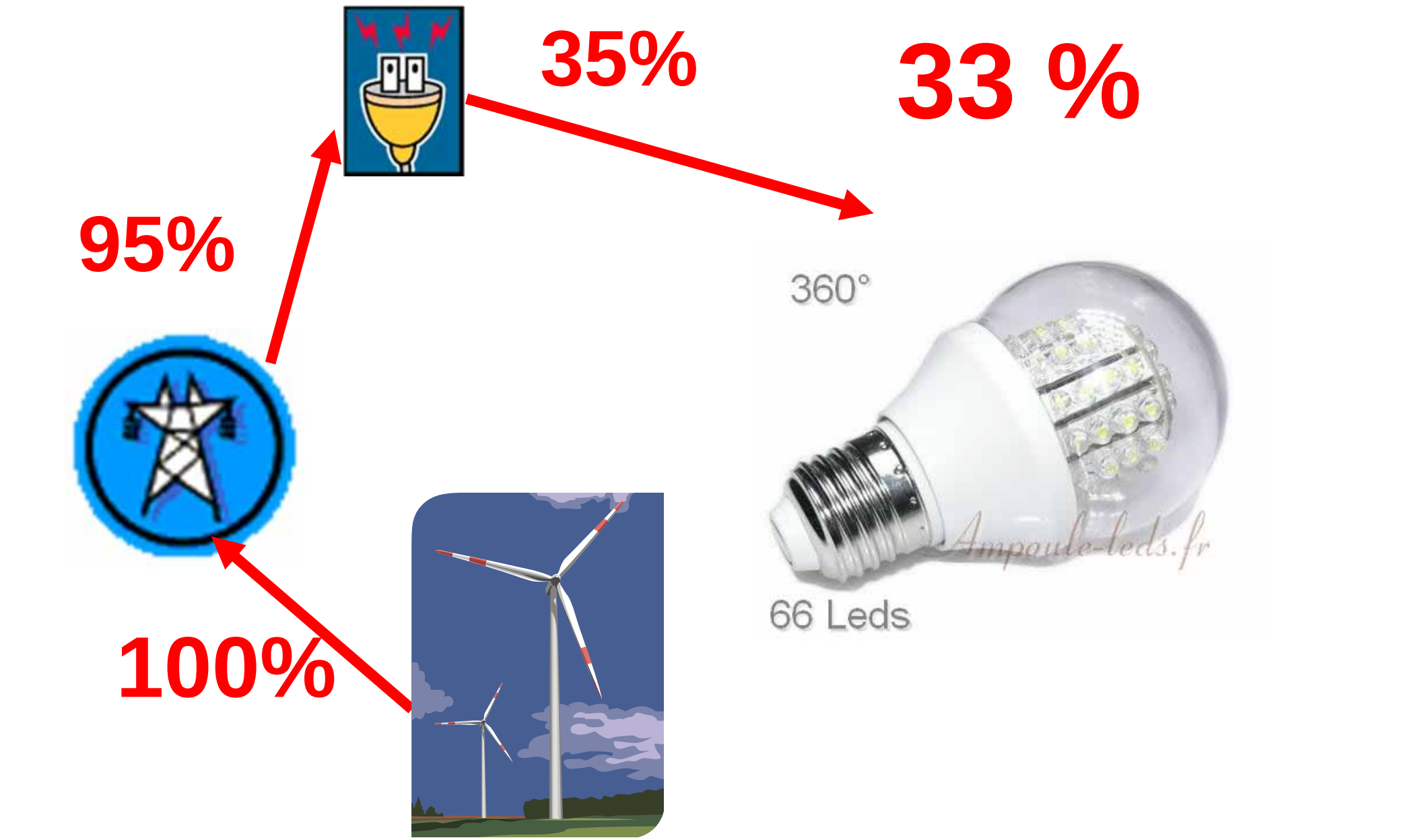
25%

13 %

95%

55%

Advanced
Gas Turbine


35%
33 %
95%
360°
Ampoule-leds.fr
66 Leds
100%

Banning incandescent bulbs has <u>increased</u> choice & variety of better products


12:03
NETJRY

What International Collaboration can do to promote energy efficiency?

Universal Benefits of energy efficiency

- Lower the energy bills (consumers, communities and societies)
- Reduced the Environmental footprint (local air pollution and climate change are the most challenging);
- Local and long lasting jobs creation (deep building renovation)
- In energy importing countries, EE enhance energy security;
- In energy exporting countries, domestic EE enhances export opportunities over time, increasing national revenues.

A favorable global policy context for energy efficiency

- EE on numerous local agenda (cities, regions).
- UNFCCC works on EE (TEC, COP21)
- IPEEC !
- UN Sustainable Energy for All (SE4All).
- Major Economies Forum (MEF).
- Clean Energy Ministerial (CEM).
- G20

http://www.se4all.org/

http://www.cleanenergyministerial.com/

MAJOR ECONOMIES FORUM
ON ENERGY AND CLIMATE

Search

ABOUT | MEETINGS

Announcements

Major Economies Forum

The Major Economies Forum on Energy and Climate (MEF) was launched on March 28, 2009. The MEF is intended to facilitate a candid dialogue among major developed and developing economies, help generate the political leadership necessary to achieve a successful outcome at the annual UN climate negotiations and advance the exploration of concrete initiatives and joint ventures that increase the supply of clean energy while

http://www.majoreconomiesforum.org/

IPEEC's Vision

A world where key national policy makers view energy efficiency (EE) as a resource and implement cost effective policies to promote it.

International Partnership for **Energy Efficiency** Cooperation

IPEEC is an Autonomous Entity

Members account for over 75% of world GDP

IPEEC Secretariat is located in Paris, France

IPEEC's Mission

Accelerating the adoption of EE policies and practices through international cooperation and information sharing on policy analysis, programs, tools, and proven practices.

http://www.ipeec.org/

G20 ENERGY EFFICIENCY ACTION PLAN

VOLUNTARY COLLABORATION ON ENERGY EFFICIENCY

16 NOVEMBER 2014

The G20 2015 Turkey EE Action Plan

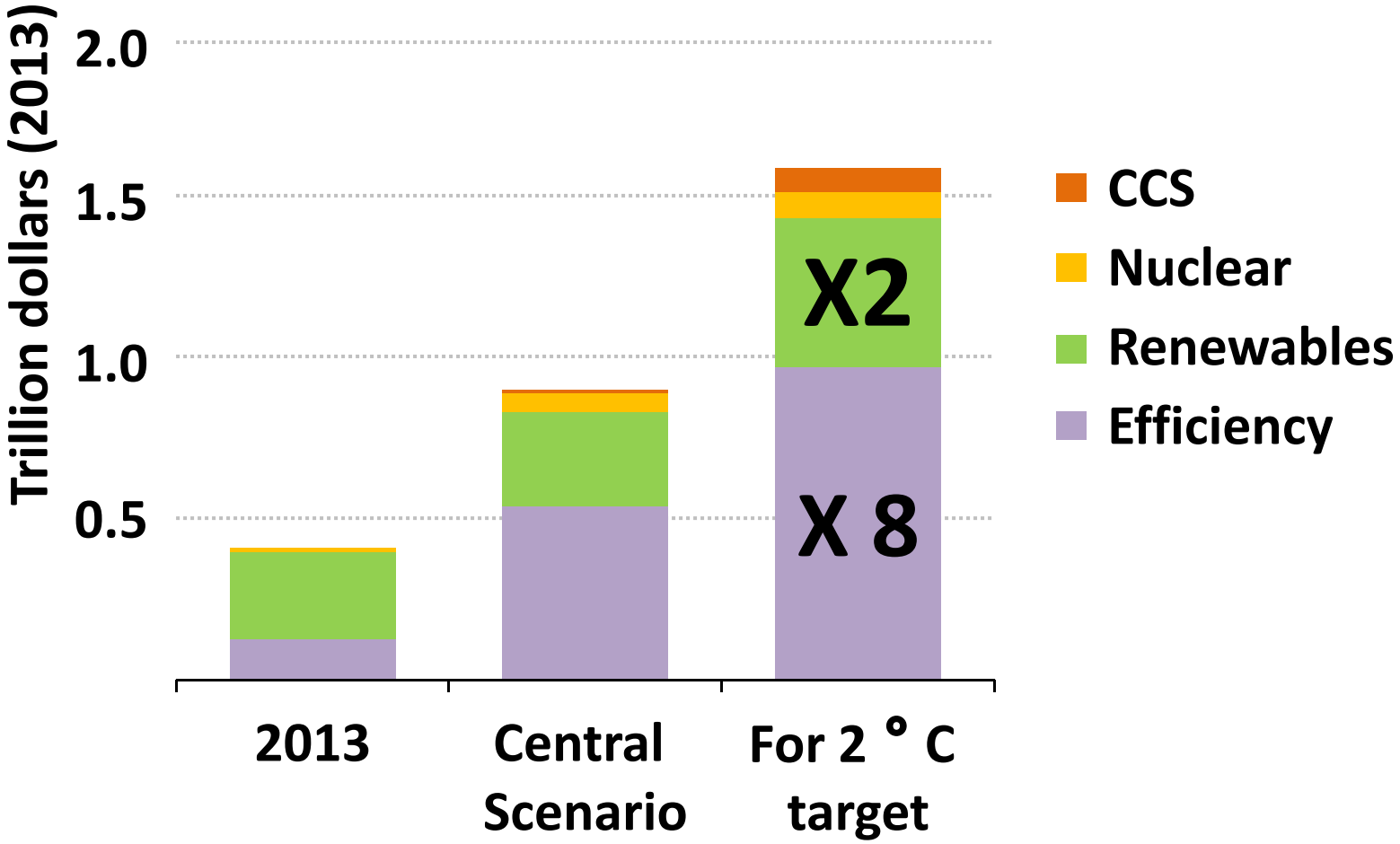
3 New Areas of Collaboration:

- Transport: Heavy Duty Vehicles

- EE Finance: Enhancing Capital Flows

- EE in networked devices

Average annual low-carbon investment, 2014-2040

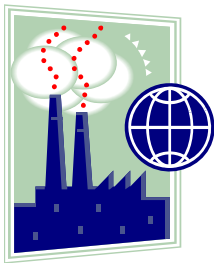


The G20 EE Action Plan

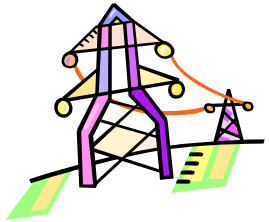
Accelerating 3 Existing Collaborations:

- EE in Buildings: Improving Metrics and Performance

- Industrial Energy Management



- EE in Electricity Generation



International Energy Efficiency Standards contribute to

- Greater Market Transparency
- Reduced Costs for Product Testing & Design
- Set common metrics
- Enhanced Prospects for Trade & Technology Transfer
- Reduced Cost for developing Government & Industry Program

Ingredients for a successful EE policy (1):

- Policy Framework (a national law).
- Dedicated human resources (institutions or existing departments).
- Dedicated financial resources.
- Lots of patience…

Ingredients for a successful EE policy (2):

- Dedicated statistics with **significant investments** in data collection.
- Multiple complementary tools & instruments:
  - → technical standards PLUS
  - → financial/fiscal measures PLUS
  - → communication PLUS… etc

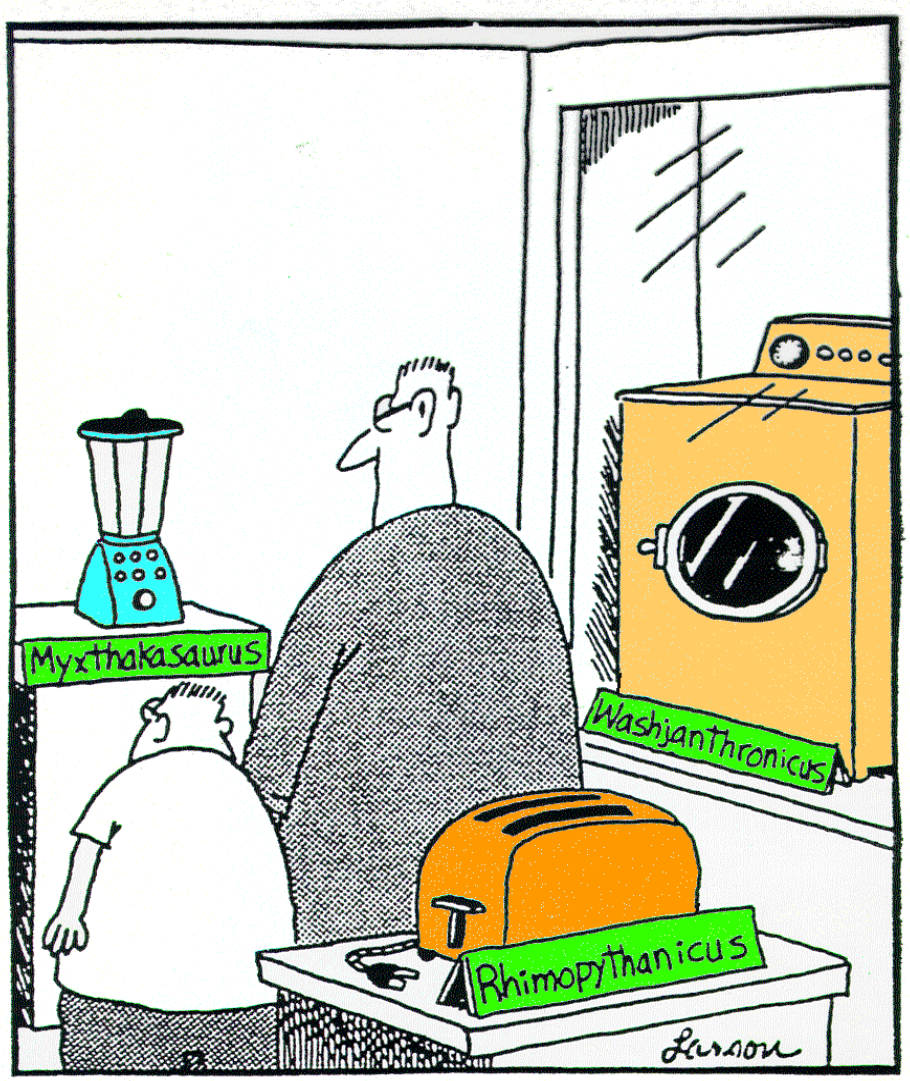
Ingredients for a successful EE policy (3):

- Good balance between National & Local implementation.
- When appropriate, line up with international or regional dynamics.

Conclusion

- Energy Efficiency is a key component of the necessary energy transition, in all economies.
- Pathways for greater Energy Efficiency:
  - → Build Capacity & institutions for EE;
  - → Put in place relevant policy framework (EE Standards, Codes, Ratings) & set targets;
  - → Mobilize financial sector.
- International Cooperation can enhance the deployment of Energy Efficiency.

Energy Inefficient Products & Systems to Museum



All over the World!

International Partnership for **Energy Efficiency** Cooperation

Thank you

www.ipeec.org

benoit.lebot@ipeec.org

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