

Climate change in EU

The European Dream. A vision of Europe in Times of change and Challenge

Comenius Conference Frederikshavn - 19th-24th April, 2015

Instituto de Educación Secundaria: Lucía de Medrano



Human Causes of climate change

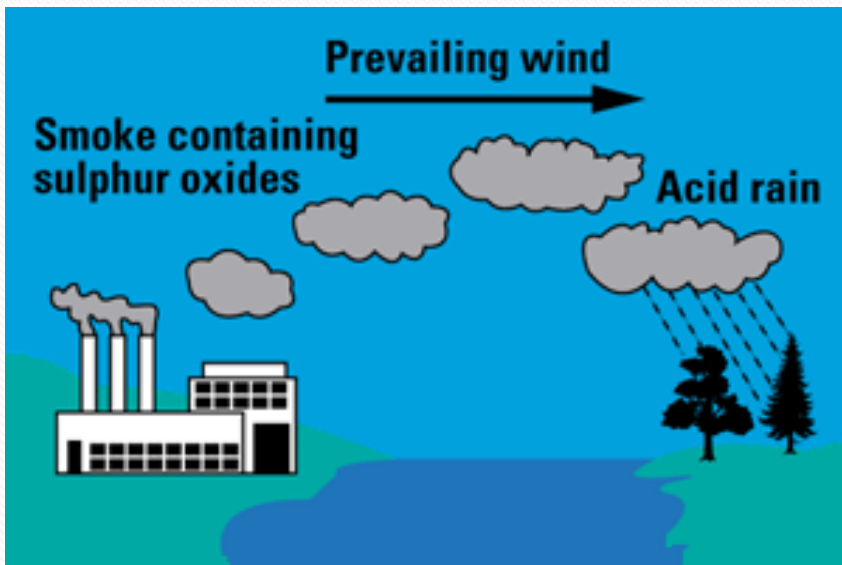
- Use of fossil fuels
- Deforestation
- Toxic wastes

Use of fossil fuels

Use of fossil fuels has two principal outcomes

Acid rain

Greenhouse gases

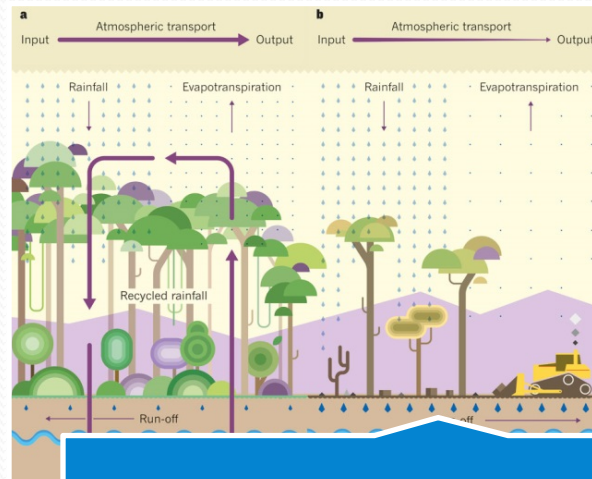


Deforestation

Deforestation has 3 main outcomes



Atmospheric

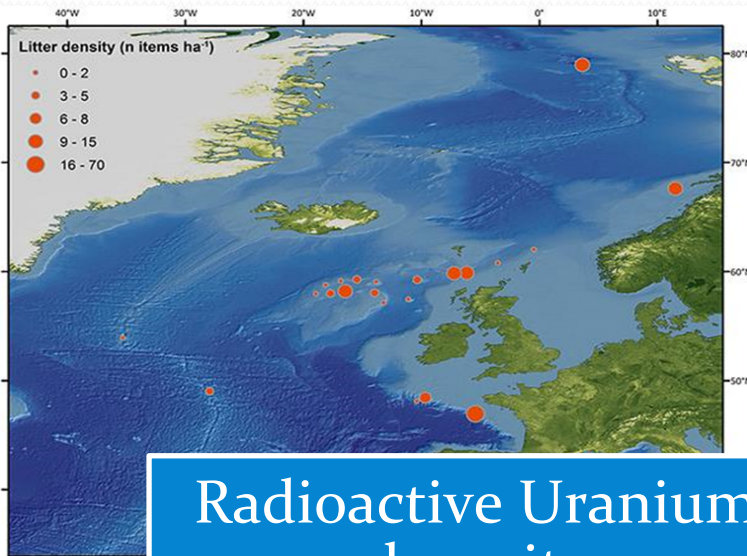


Hydrological



Biodiversity loss

Toxic wastes



Radioactive Uranium deposits



Chemical products spill

Problems caused by climate change

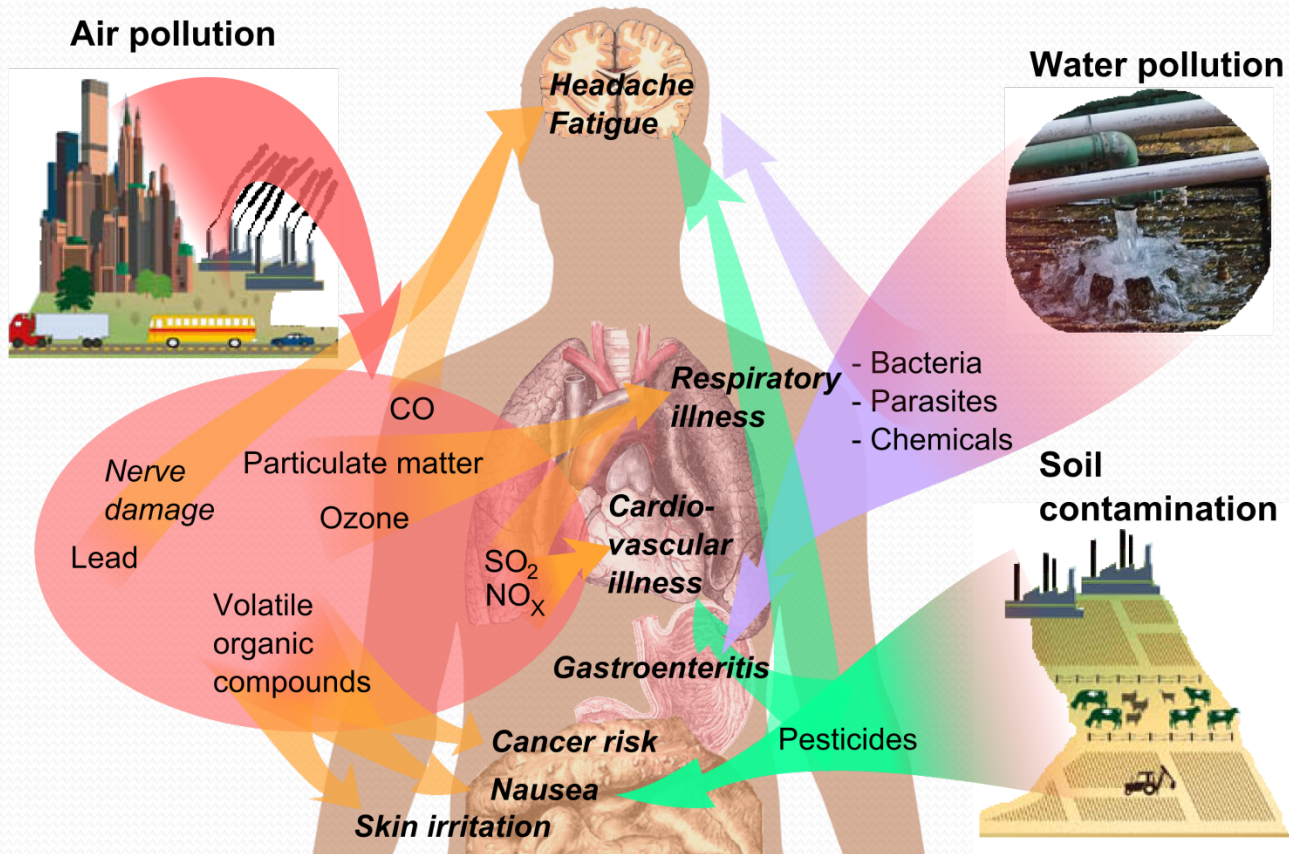
- Sea-level rise
- Public health problems
- Ozone layer's hole

Sea-level rise



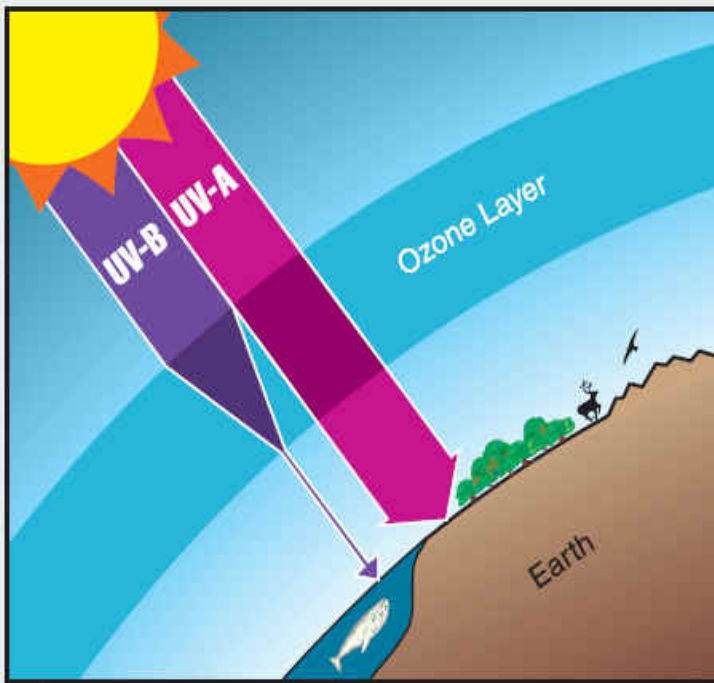
Public health problems

Health effects of pollution



Ozone layer's hole

UV Protection by the Ozone Layer



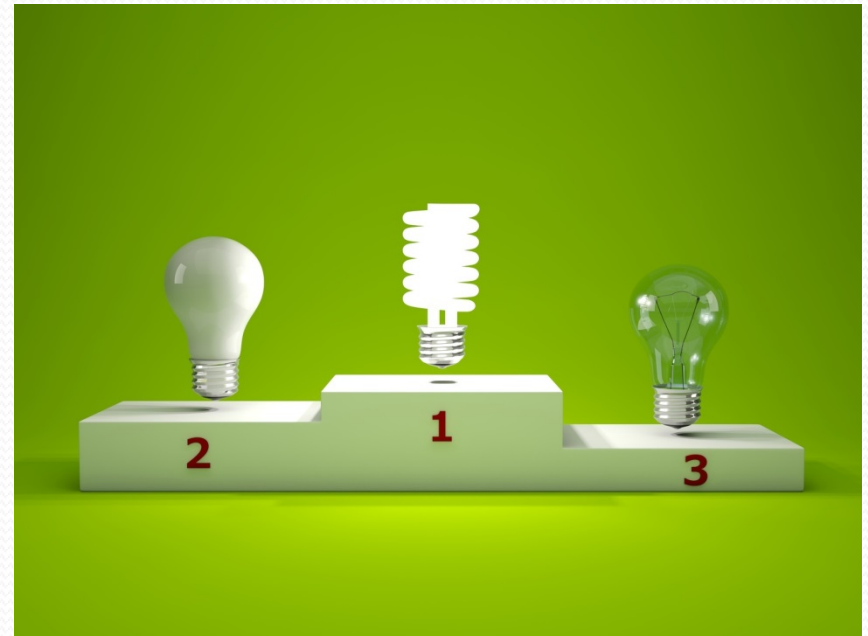
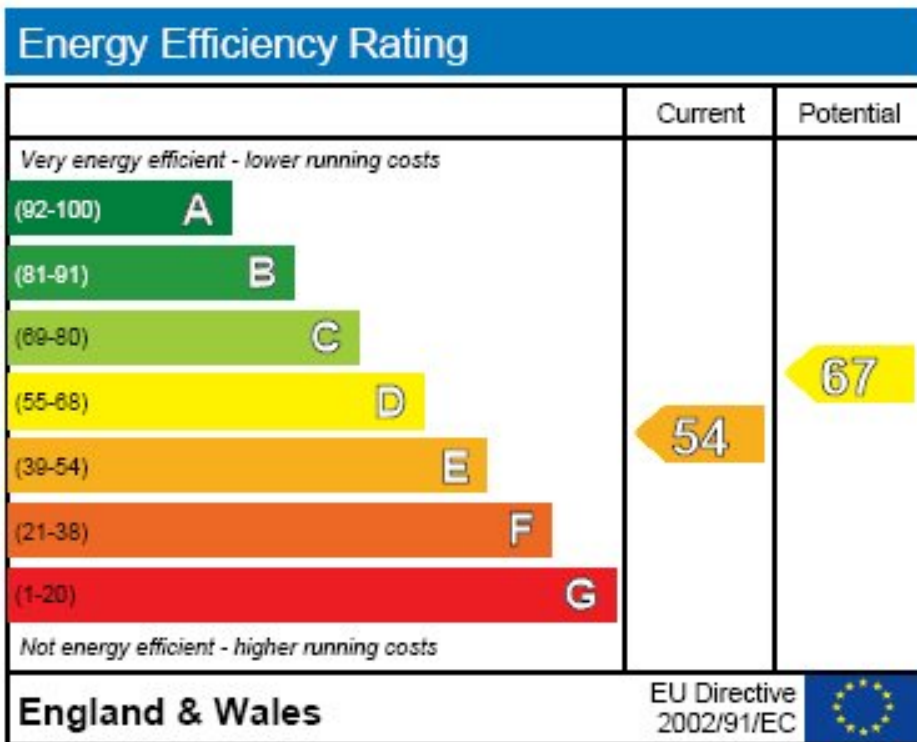
EU initiatives against contamination problems

- Ratifying the Kyoto Protocol
- Improving the energy efficiency
- Supporting use of renewable energy sources
- Supporting CCS technologies

Kyoto protocol

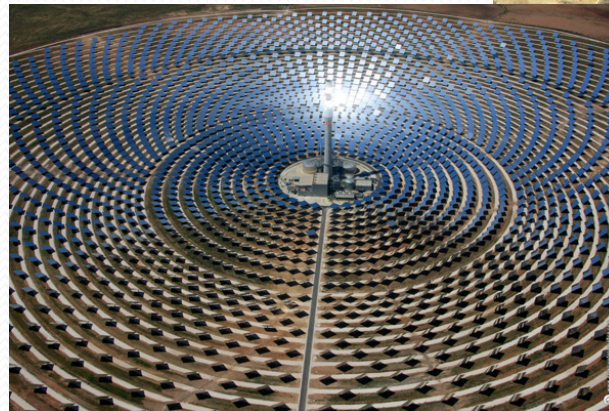


Energy efficiency improvement



Renewable sources increase

Member State	2005 RES share	2010 RES share	1 st interim target	2020 RES target
Austria	23.3%	30.1%	25.4%	34%
Belgium	2.2%	5.4%	4.4%	13%
Bulgaria	9.4%	13.8%	10.7%	16%
Cyprus	2.9%	5.7%	4.9%	13%
Czech Republic	6.1%	9.4%	7.5%	13%
Germany	5.8%	11.0%	8.2%	18%
Denmark	17%	22.2%	19.6%	30%
Estonia	18%	24.3%	19.4%	25%
Greece	6.9%	9.7%	9.1%	18%
Spain	8.7%	13.8%	10.9%	20%
Finland	28.5%	33%	30.4%	38%
France	10.3%	13.5%	12.8%	23%
Hungary	4.3%	8.8%	6.0%	13%
Ireland	3.1%	5.8%	5.7%	16%
Italy	5.2%	10.4%	7.6%	17%
Lithuania	15%	19.7%	16.6%	23%
Luxembourg	0.9%	3%	2.9%	11%
Latvia	32.6%	32.6%	34.0%	40%
Malta	0%	0.4%	2.0%	10%
Netherlands	2.4%	3.8%	4.7%	14%
Poland	7.2%	9.5%	8.8%	15%
Portugal	20.5%	24.6%	22.6%	31%
Romania	17.8%	23.6%	19.0%	24%
Sweden	39.8%	49.1%	41.6%	49%
Slovenia	16.0%	19.9%	17.8%	25%
Slovakia	6.7%	9.8%	8.2%	14%
UK	1.3%	3.3%	4.0%	15%
EU	8.5%	12.7%	10.7%	20%



CCS technologies

Capturing carbon

Technology and theory

Carbon dioxide can be absorbed in **coal beds**, allowing storage to be effective at shallower depths; also can enhance methane recovery

Governments are urged to step up research of a process called carbon capture and sequestration (CCS) – capturing carbon dioxide and storing it underground or underwater.

Captured and transported to CCS locations from major emission sources

Dissolved into ocean water below 3,300 ft. through a fixed pipeline or ship

Released via offshore platform to form a "lake" on the ocean floor

Injected into salt formations or depleted oil and gas reserves at depths below 2,600 ft.

Caprock formations create a seal, preventing gasses from migrating to the surface

SOURCE: Intergovernmental Panel on Climate Change

AP