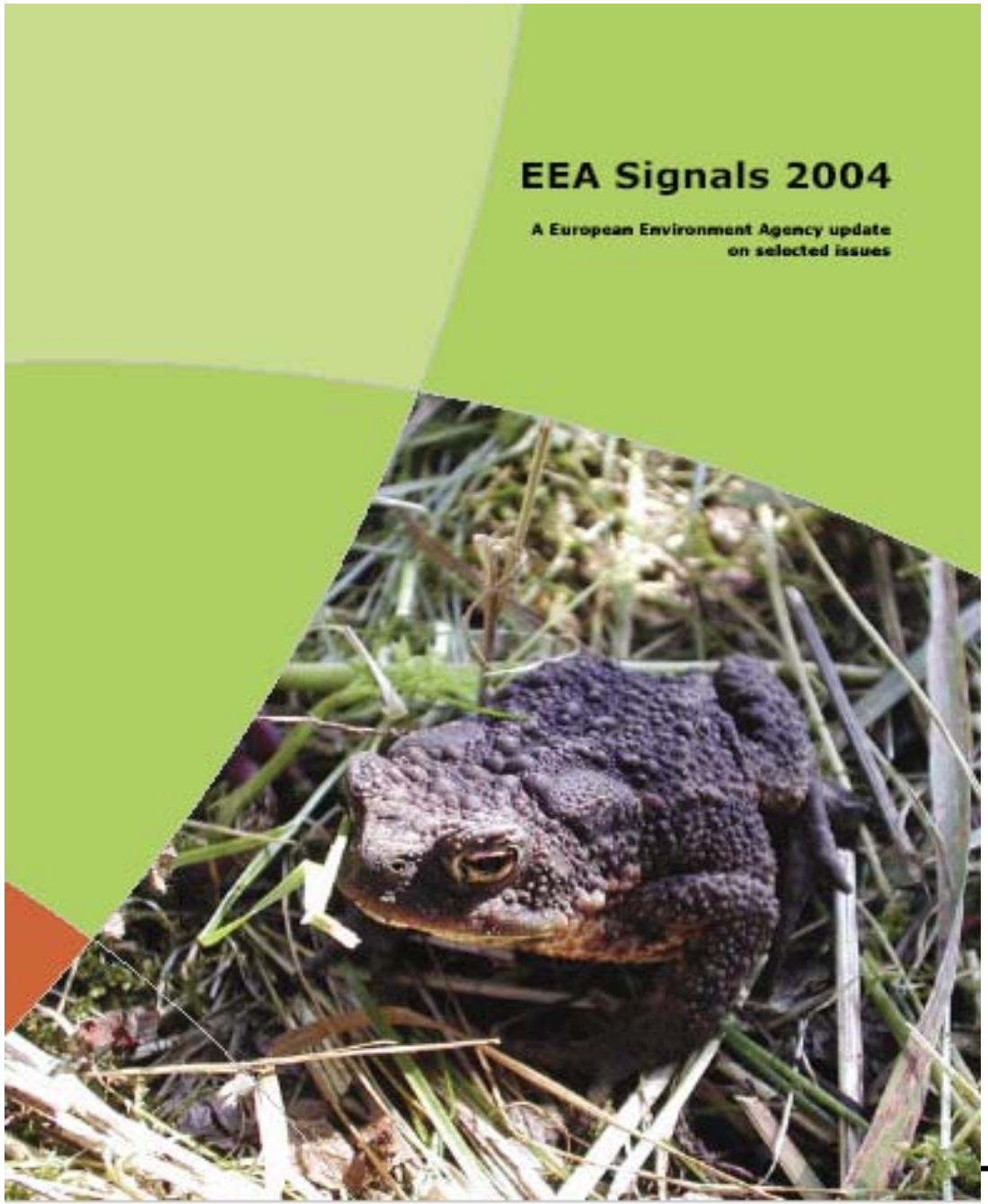


Signals 2004:
PowerPoint presentation

A presentation pack containing key graphs and messages for use by the general public. This presentation is in English. The translated versions of the graphs will become available during 2004. If you would like the graphs in another language please contact the EEA information centre.

Please reference all material as “Source: European Environment Agency, 2004”

Full reference: “EEA, 2004; Signals 2004, a European Environment Agency Update on selected issues, Copenhagen May 2004”

European Environment Agency

Europe's environment should be considered in the context of its socio-economic agendas.

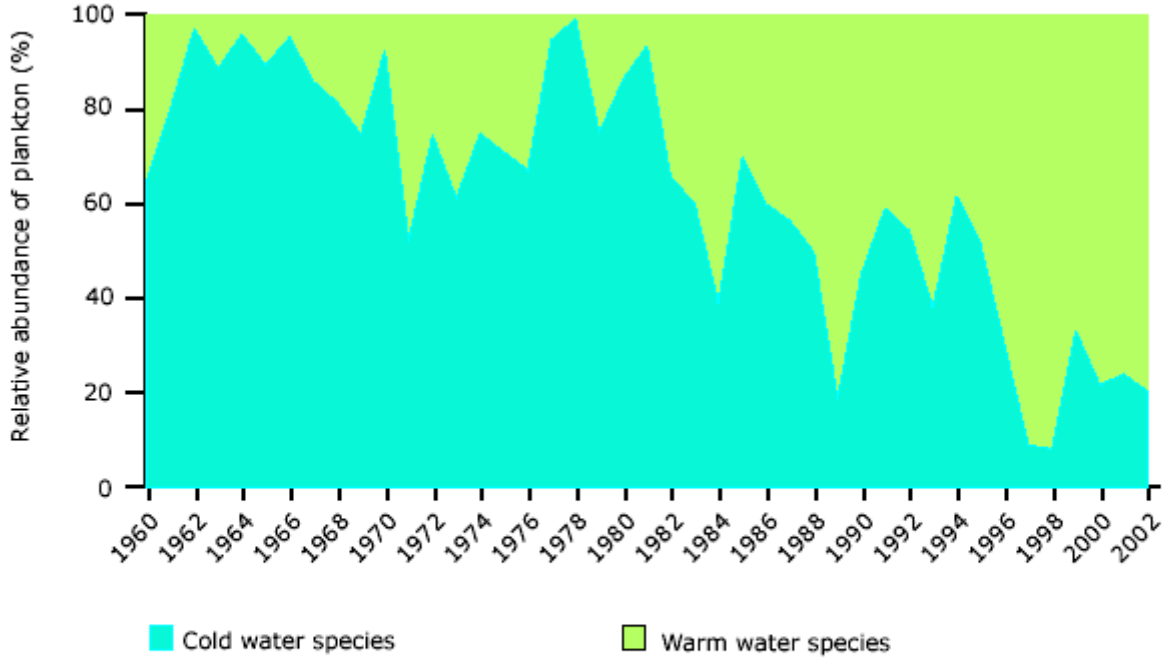
- The EU is the second largest economy behind the United States, with a vast array of assets and a lead part to play in global governance.
- Competitiveness and innovation are defining conditions for growth to deliver sustainable outcomes for Europe's economy, society and environment.
- There has been a relative decoupling of resource use from economic growth, driven in part by technological innovation.
- Research is key to maintaining this progress.
- Management of Europe's environment and natural capital are important to ensure the long-term viability of its economic and social capital.
- A very conservative estimate of the average annual bill of climate change impacts is about EUR 10 billion and rising.

Social changes in Europe are being driven by enlargement, demographic changes and globalisation. These also affect the environment.

- The enlarged union has 20% more population and 25% more territory.
- Over 80% of Europeans are are expected to live in urban areas by 2020.
- There will be a marked increase in older persons (aged 65 and over)
- The consumption patterns of older people tend to shift towards services such as social and leisure activities, including tourism with consequent environmental impacts.
- The number of households will increase at a more rapid rate.
- Smaller households tend to be less efficient, requiring more resources per capita than larger households.
- Europe's rural population, in turn, is declining, and this long-observed trend is expected to continue.

Climate change

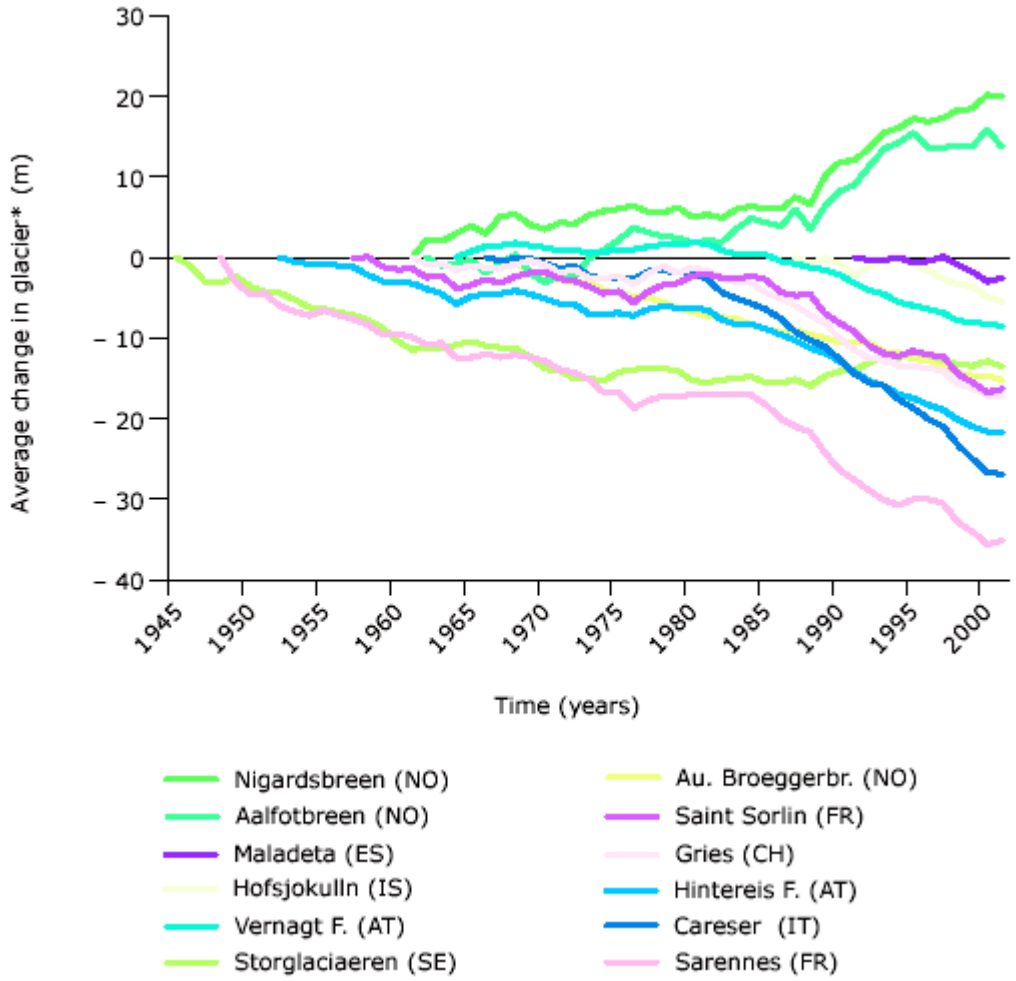
The past decade has seen a marked change in the relative abundance of zooplankton in the North Sea. The warm-water copepod *Calanus helgolandicus* has become more than twice as abundant as the cold-water species *Calanus finmarchicus*. These data are illustrative of a general trend for zooplankton populations to shift northwards in response to changing climatic conditions.



Data on two species of Copepod found in the Central North Sea
warm water: *Calanus helgolandicus*
and cold water: *Calanus finmarchicus*

Climate change

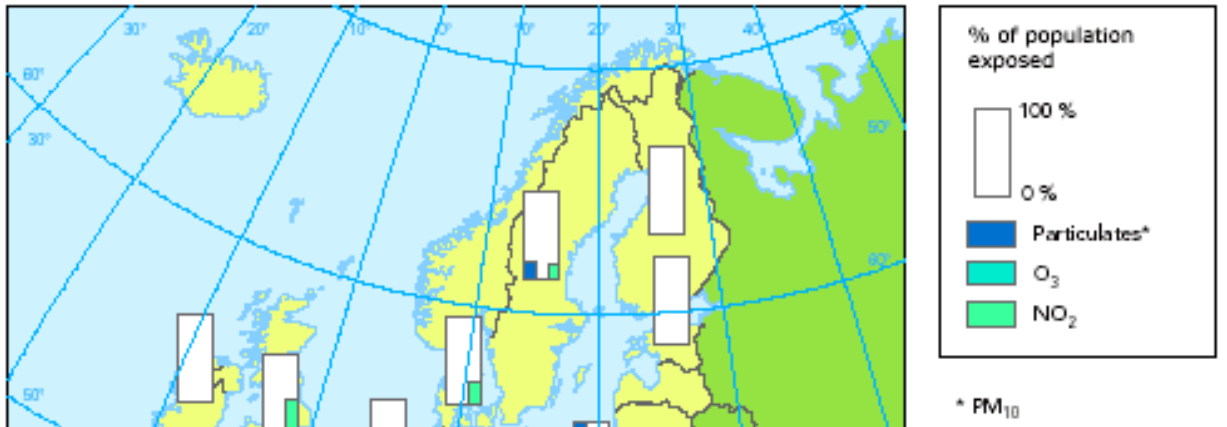
Glaciers in all European glacial regions except for Norway are in retreat, consistent with the global trend. Current glacier retreat is now reaching levels exceeding those of the last 10,000 years. It is very likely that glacier retreat will continue.



Air pollution and health

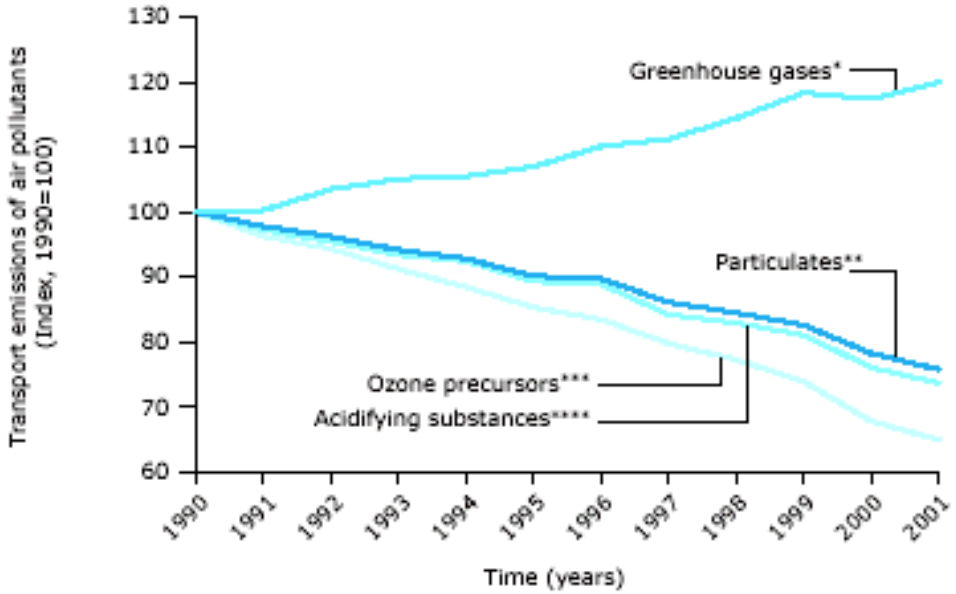
Between 1996 and 2001, 25-45 % of the urban population was exposed to particulate concentrations in excess of the EU limit value and 20-30% to ozone concentrations above the EU target value for ozone.

The exposure of urban populations to pollutant concentrations above limit and target values is strongly influenced by climatic conditions and is not evenly distributed throughout Europe



Transport Emissions

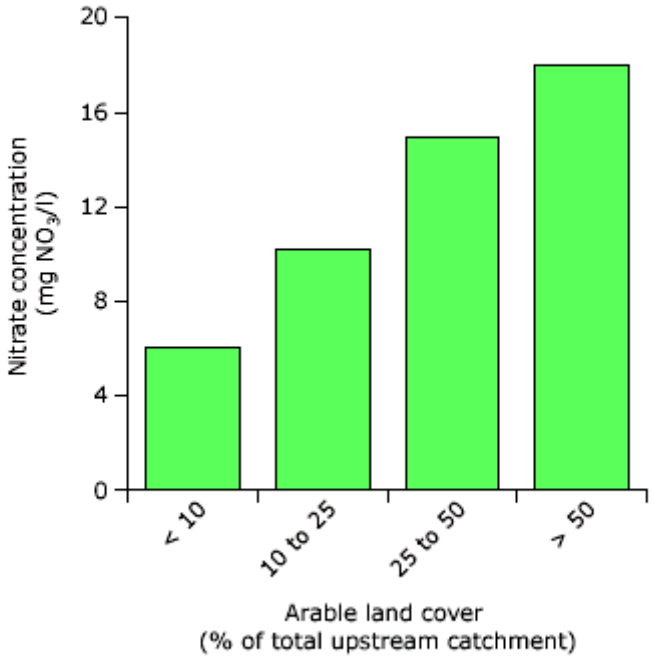
Carbon dioxide emissions continue to rise as transport demand outstrips improvements in energy related emissions. Reductions for particulates (24%), carbon monoxide (46%), nitrogen oxides (24%), volatile organic compounds (47%) and lead (100%) come partly from innovations in exhaust gas treatment technology and partly from changes in fuel composition



* O, CO_2, N_2O, CH_4 (95% CO_2)
** PM_{10}
*** NO_X, NMVOCs
**** SO_X, NO_X, NH_3

Water pollution

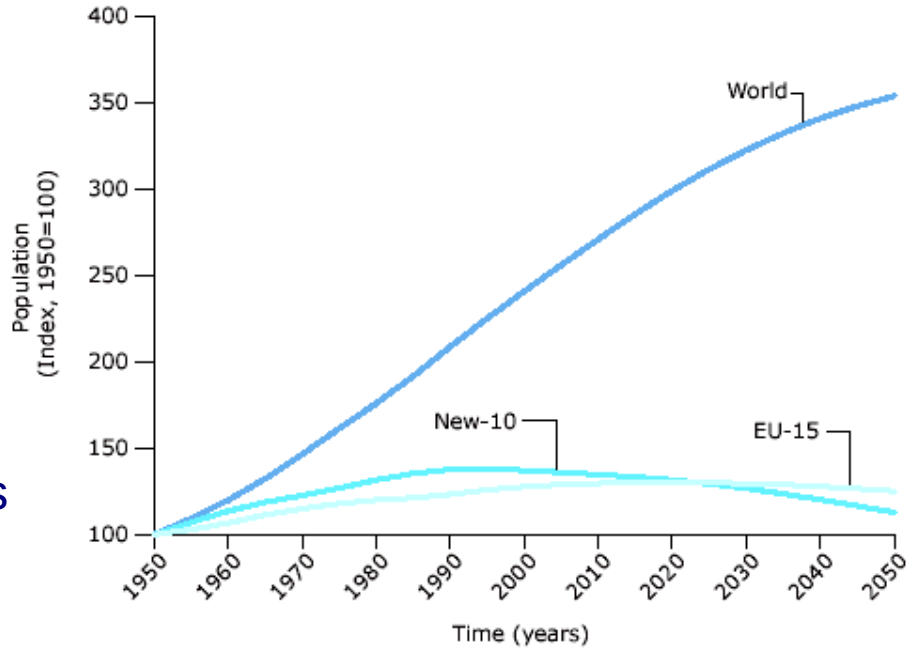
Nitrate concentrations in rivers are linked to the proportion of arable land in the upstream catchment: highest levels occur where large amounts of nitrogenous fertilisers and animal manure are used. In 2001, nitrate levels in rivers where arable land covers more than 50% of the upstream catchment area were three times higher than in catchments with arable land cover of less than 10%.



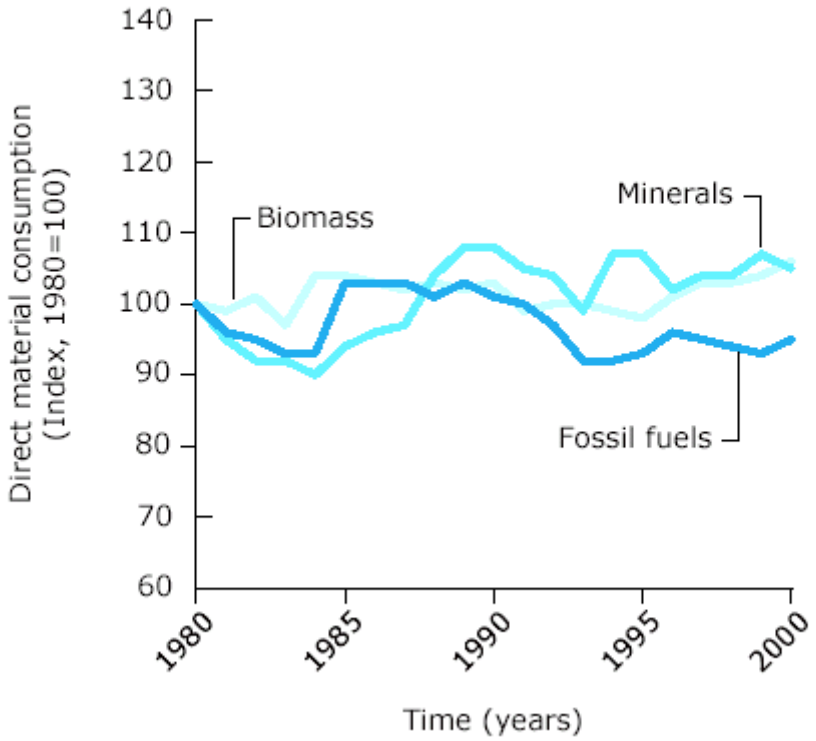
Changing driving forces

Europe's population is growing more slowly and ageing. The new-10 countries will follow this trend; their population is expected to decline more rapidly than the EU-15 after 2025. Many countries are expected to have declining populations by 2020.

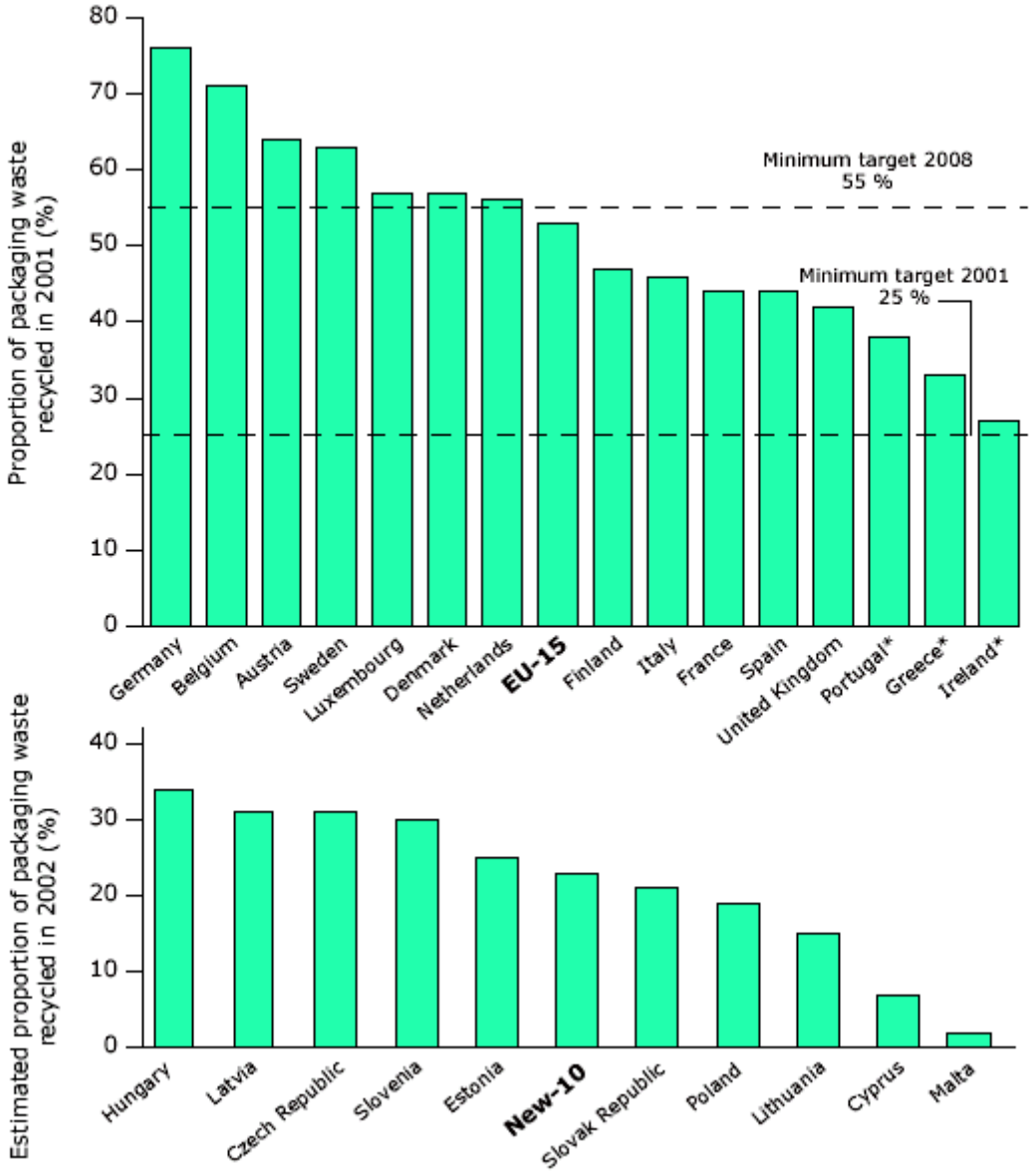
The consumption demand patterns of older people tend to shift towards services such as social and leisure activities,including tourism, with consequent environmental impacts.



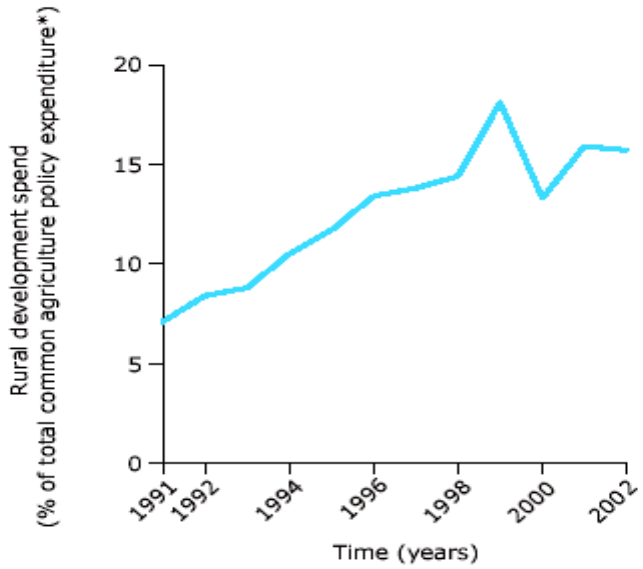
Direct material consumption (DMC) is a measure of the materials used by the economy. DMC increased slightly compared with early 1980 levels, to around six billion tonnes in 2000. It remained more or less constant at around 16 tonnes per capita during the second half of the 1990s.



Packaging waste:
Between 1997 and 2001 total packaging waste increased by 7 % in the EU-15.
All Member States met the target of recycling at least 25% of all packaging waste by 2001 (Greece, Ireland and Portugal were given lower targets and longer timeframes). The revised directive raises the target for recycling to at least 55% of all packaging wastes. Several countries, in particular the new-10, are still a long way from meeting this.

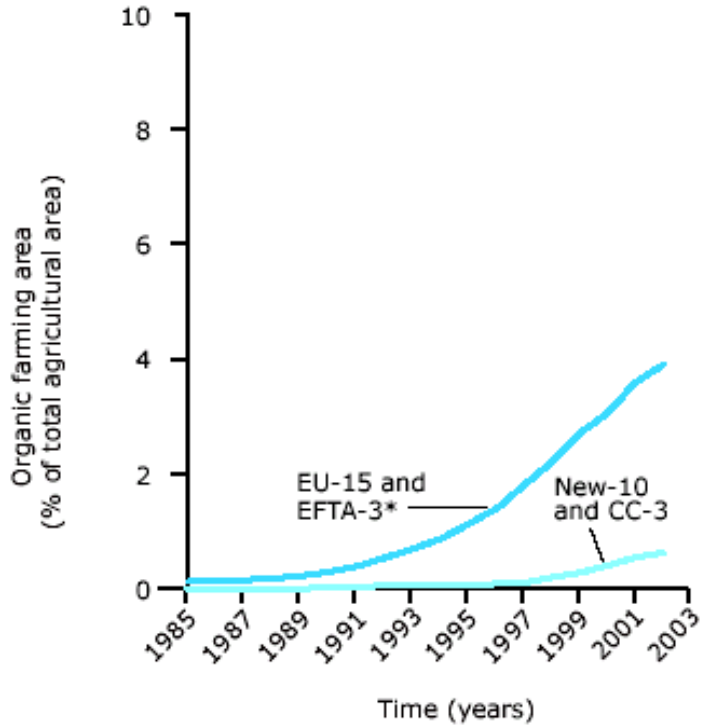


Agriculture: The share of the rural development budget in total common agricultural policy (CAP) spending has risen slowly since 1991: for EU-15 it averaged 9 % (EUR 22 per hectare) between 1991 and 1993, rising to 13% (EUR 53 per hectare) in 2000-2002. Some 30-40% of rural development funding is used for agri-environment schemes but levels of spending vary widely between countries



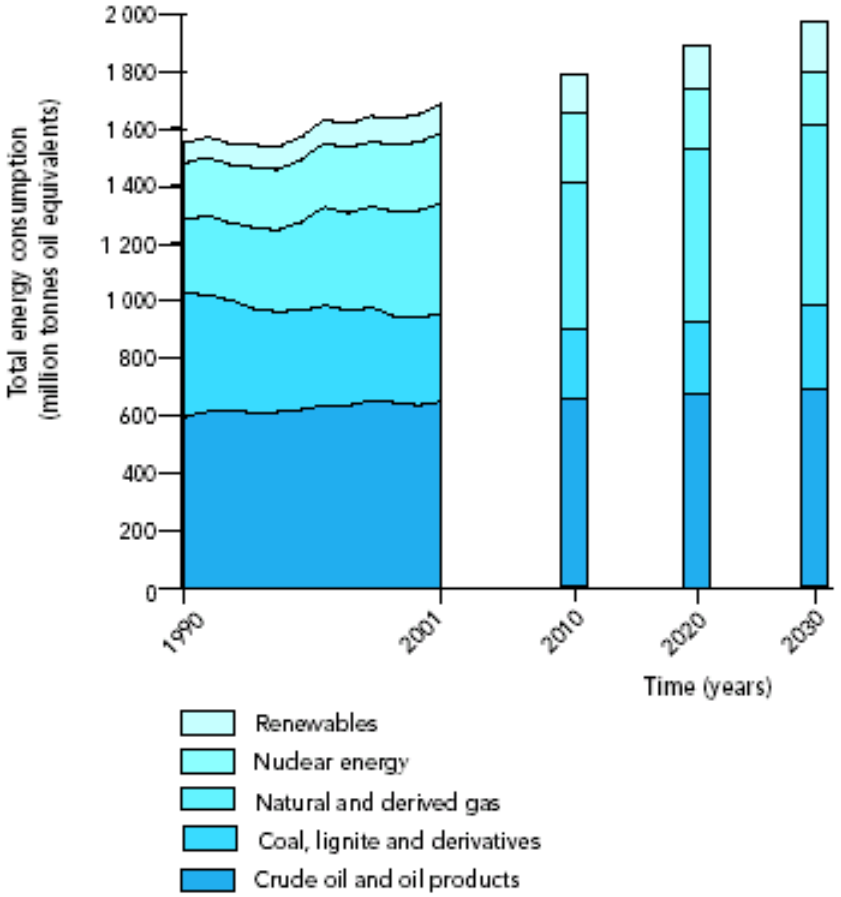
* European Agricultural Guarantee and Guidance Fund including Member State Cofinancing

Agriculture: The share of organic land remains far below 1 % in most of the new-10 and the CC-3 due to little or no state support and low consumer demand for organic products. Across the EEA-31 as a whole, however, organic farming area increased by around four fifths between 1997 and 2000, to 4.4 million hectares from 2.4 million.



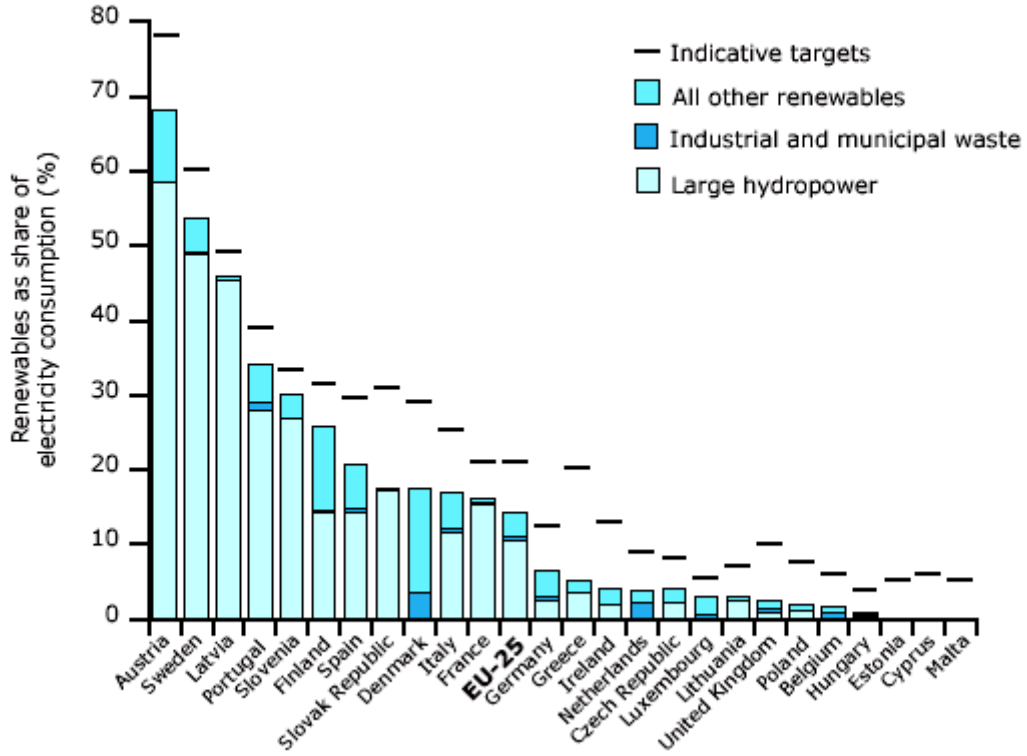
* EFTA-4 without Switzerland

Total energy consumption in the EU-25 has been rising since the mid-1990s and this trend is projected to continue. Fossil fuels currently dominate the fuel mix with an 80% share; this proportion is expected to increase slightly over the next 30 years. Despite some growth in absolute terms, renewable energy is not expected to raise its share significantly, while the contribution of nuclear power is projected to decline.



The share of renewable electricity in EU-25 gross electricity consumption grew from 12 % in 1990 to 14 % in 2001. A substantial further increase is needed to meet the EU indicative target of 21 % by 2010.

Future growth in renewable electricity needs to come from other renewable energy sources, such as wind, biomass, solar and small-scale hydropower.



Transport: There has been no success in decoupling transport demand from economic growth, either for freight or passenger transport.