Presentation to MAP regional workshop: May 9-11, 2005

Indicators for Sustainable Development Strategies and Policies in the Mediterranean Region

Strategic Knowledge and innovation

- The transformation of data into information is at the heart of environmental reporting.

- **Data are observations obtained by various measuring methods.**

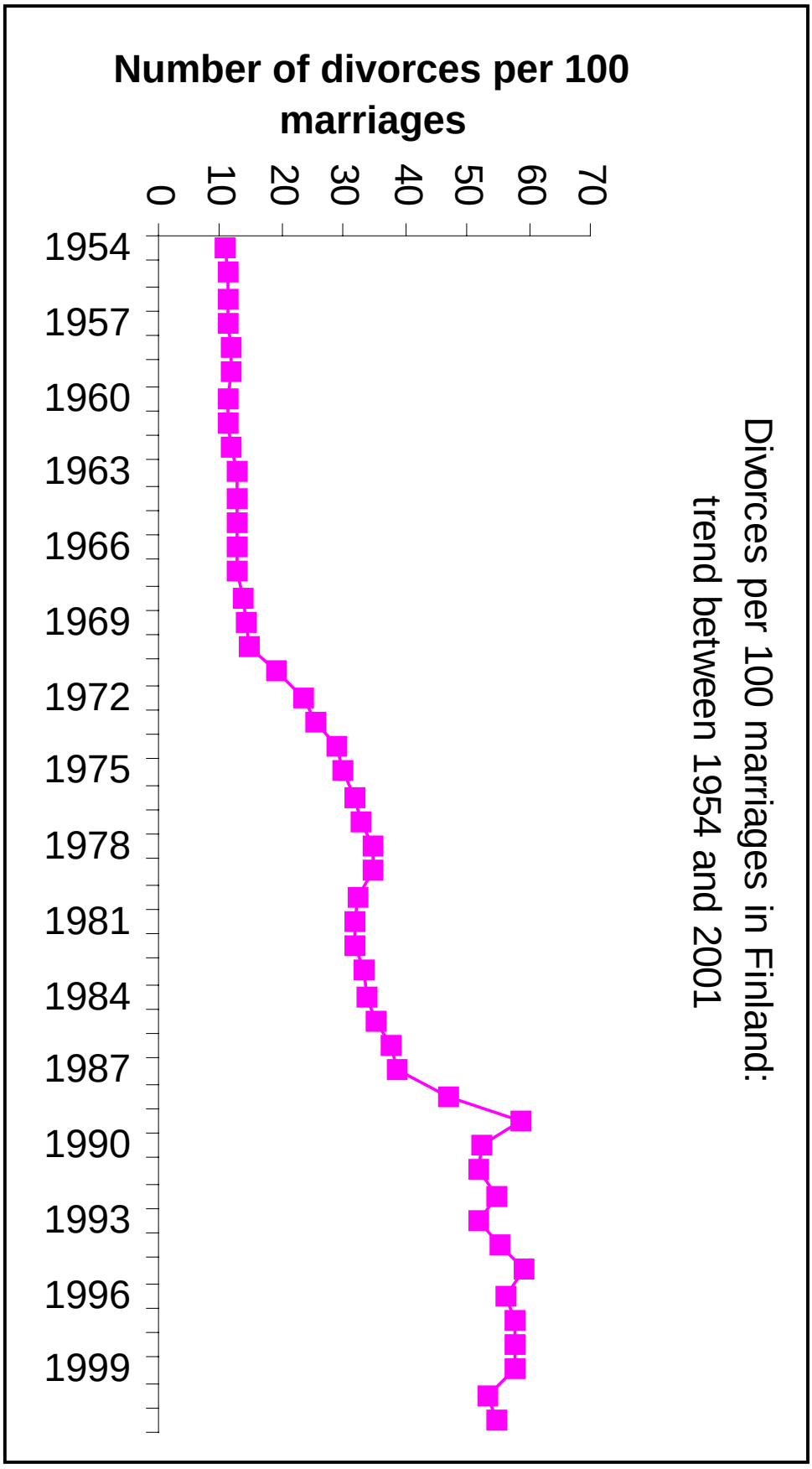
Populations of pink-footed geese (*Anser brachyrhynchus*) are increasing in Europe.

Data only become information when they are put into context…

- Populations of pink-footed geese are increasing in Europe
- Some of the favourite wintering grounds of the pink footed goose are the eastern coastal areas of Belgium where they have been protected by a national shooting ban since 1981.
- There is now concern that increasing survival of the pink footed goose in the protected grasslands and fields of Belgium is leading to over-grazing of the Arctic tundra in the summer grounds of Svalbard.

… and information, not data, is the basis for action.

For policy and decision makers the 20 second rule holds – they are not really interested in data, just the **interpretation**…(but need to be assured data is available and of good quality etc. etc)


Number of divorces per 100 marriages
0
10
20
30
40
50
60
70
1954
1957
1960
1963
1966
1969
1972
1975
1978
1981
1984
1987
1990
1993
1996
1999
Divorces per 100 marriages in Finland: trend between 1954 and 2001

We live in a changing and complex world

- Increasingly complex
- Changing rapidly (globalisation, technology, individualism…)
- Difficult to manage and steer (multi-actor society)
- Problems are more persistent (complex, uncertain, high risks, multiple stakeholders)

Examples of persistent/important problems we face

Non-environmentally centred

- Poverty
- Aids
- Human health
- Ageing
- Terrorism

Environmentally centred

- Climate change
- Air pollution and human health
- Water quantity and quality
- Waste and material flows
- Chemicals in the environment

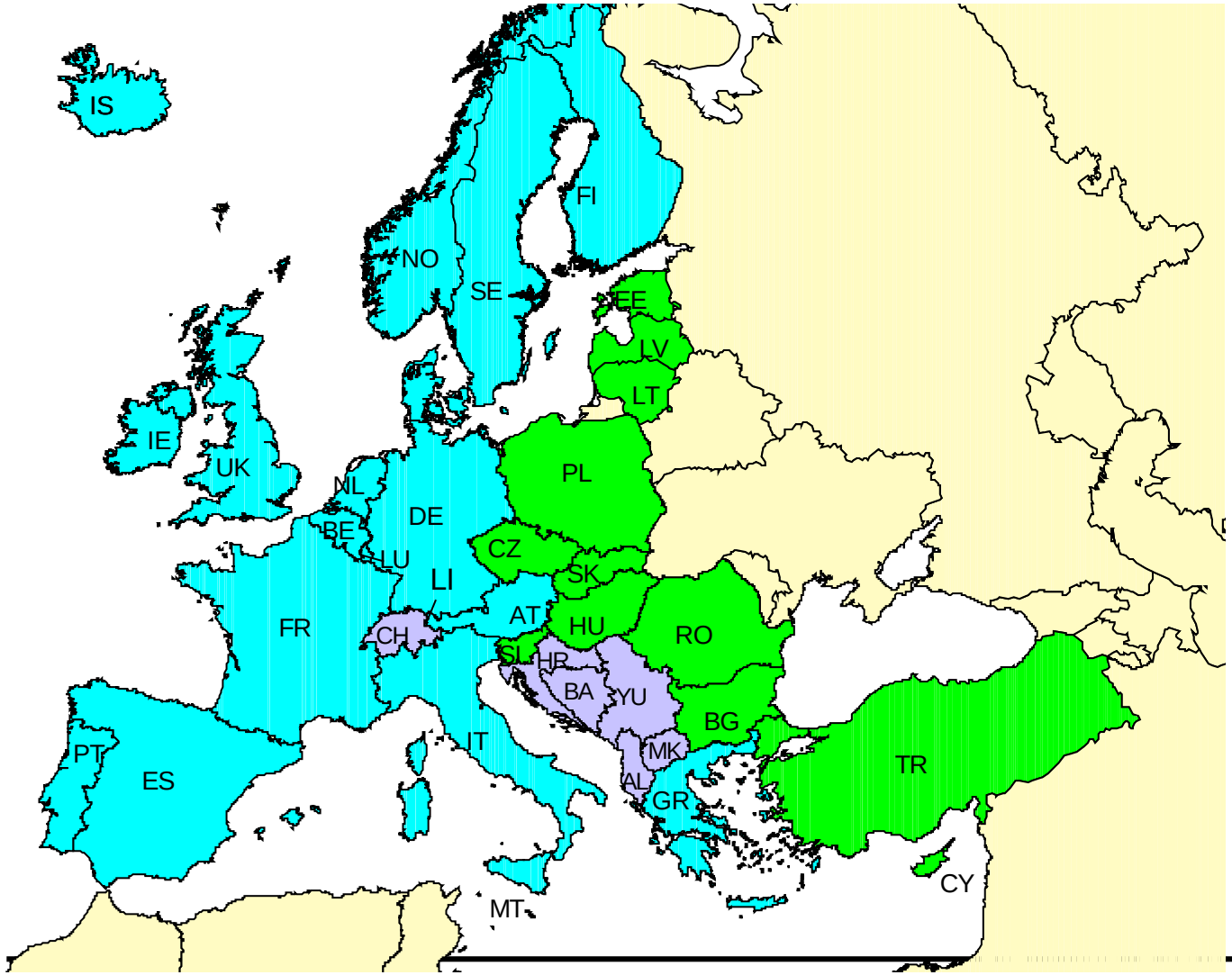
SMART Reporting

PROVIDING SOUND, INDEPENDENT INFORMATION ON THE ENVIRONMENT

Strategic Knowledge and innovation

Environmental reporting at the EEA (i): geographical scope

EEA Member and Participating Countries

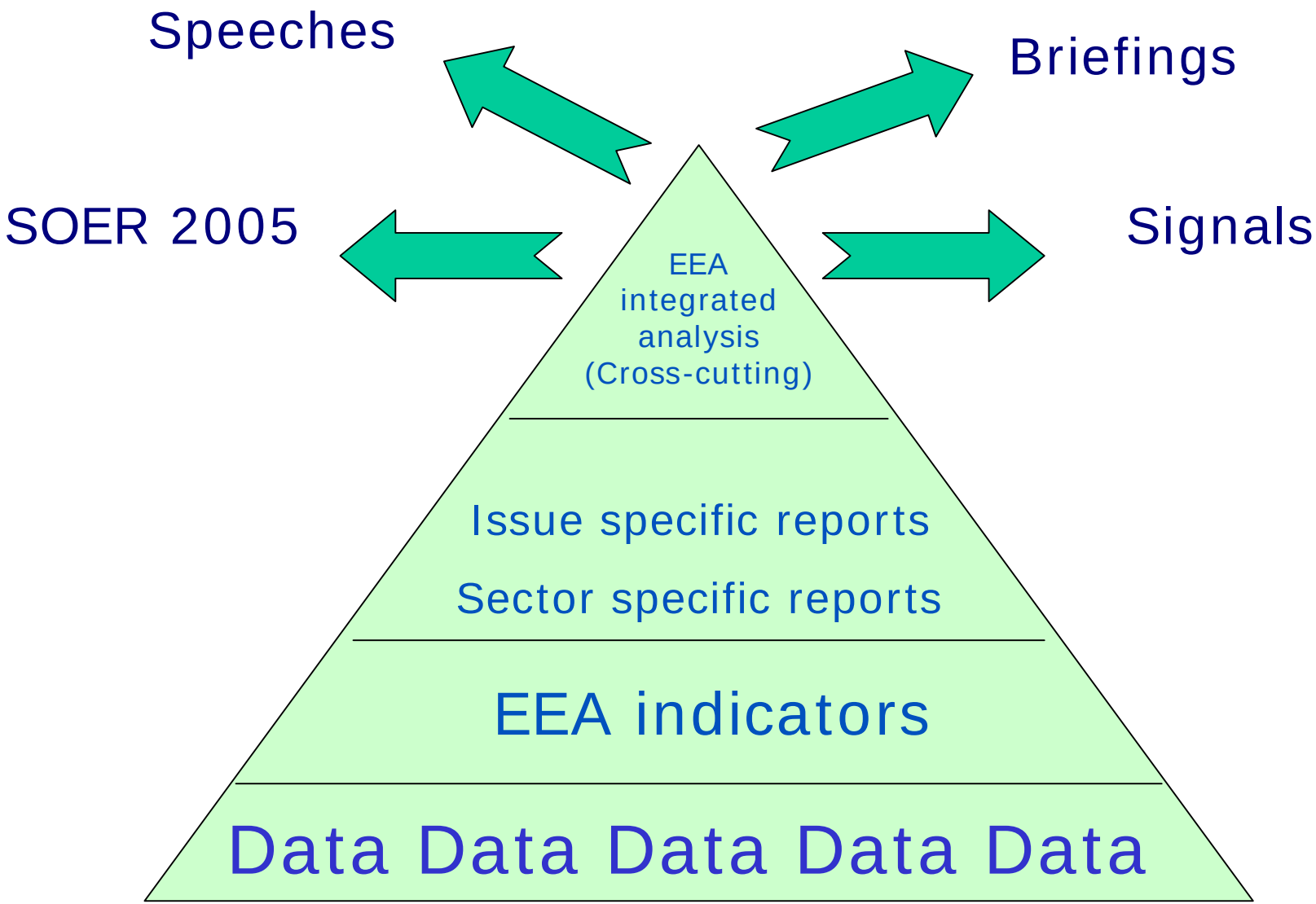


Strategic Knowledge and innovation

European Environment Agency

Environmental reporting at the EEA (ii): more topics covered….

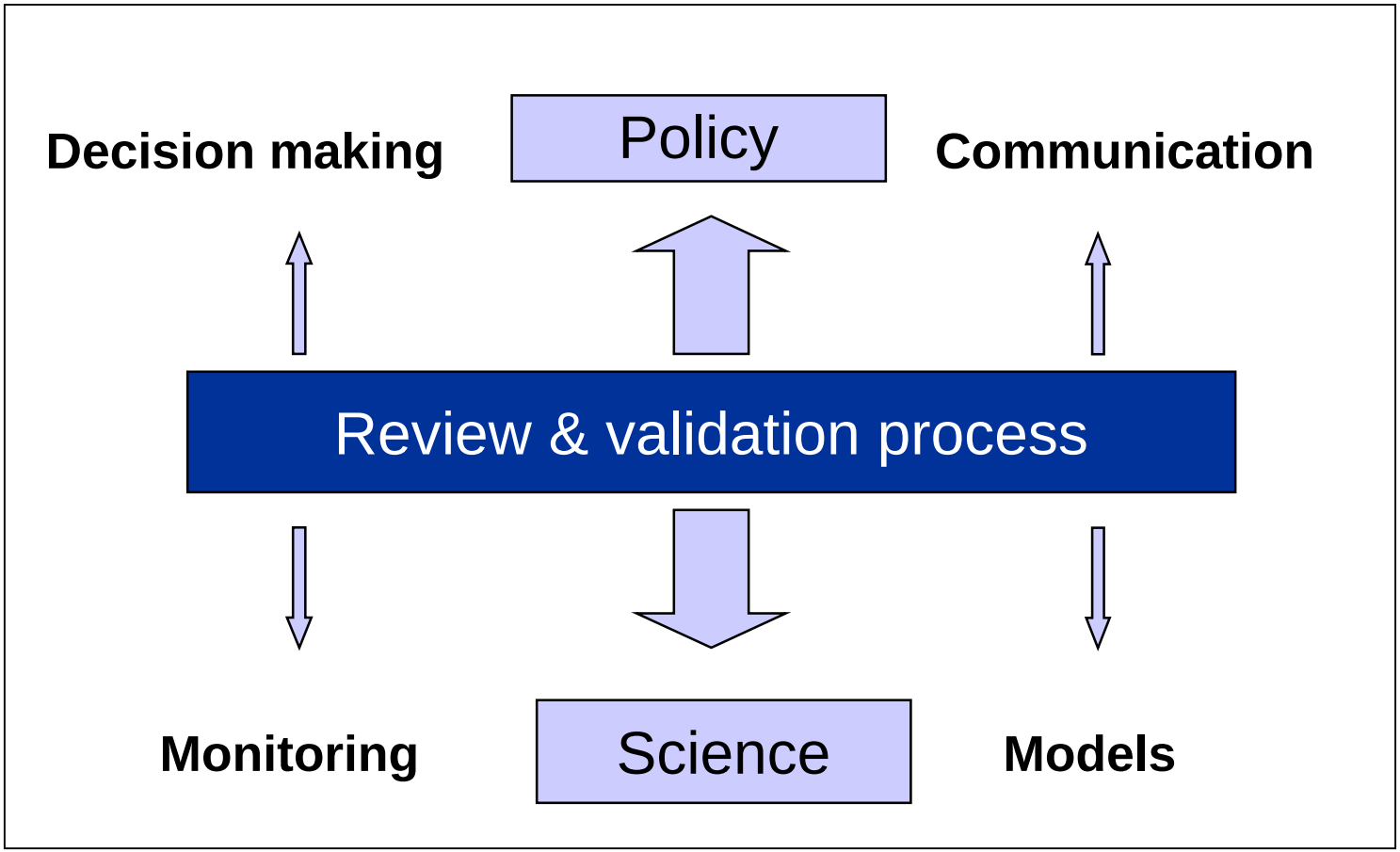
Themes	Sectors
• **Water**	• Energy
• **Air pollution**	• Transport
• **Climate change**	• Agriculture
• **Biodiversity**	• Fisheries & aquaculture
• **Land use**	• Forestry
• Environment & Health	• Industry
• Chemicals	• Material flows
• Waste	• …….
• ……	



Strategic Knowledge and innovation

The EEA information pyramid

Bridging the gap between science and policy...



Source: GSE Coastwatch

Means organising the information flow...

Geophysical parameters:
- Water quality mapping
- Coastal land cover mapping
- Wave and wind mapping

Marine surveillance

From **Data** ...

Indicators :
- Coastal erosion
- Pressure on protected areas
- Oil spill

… to **Information** ...

Decision-support info. :
- Integrated GIS
- Integrated spatial assessment
- Strategic planning
- Forecast & alert

.. to **Recommendations**

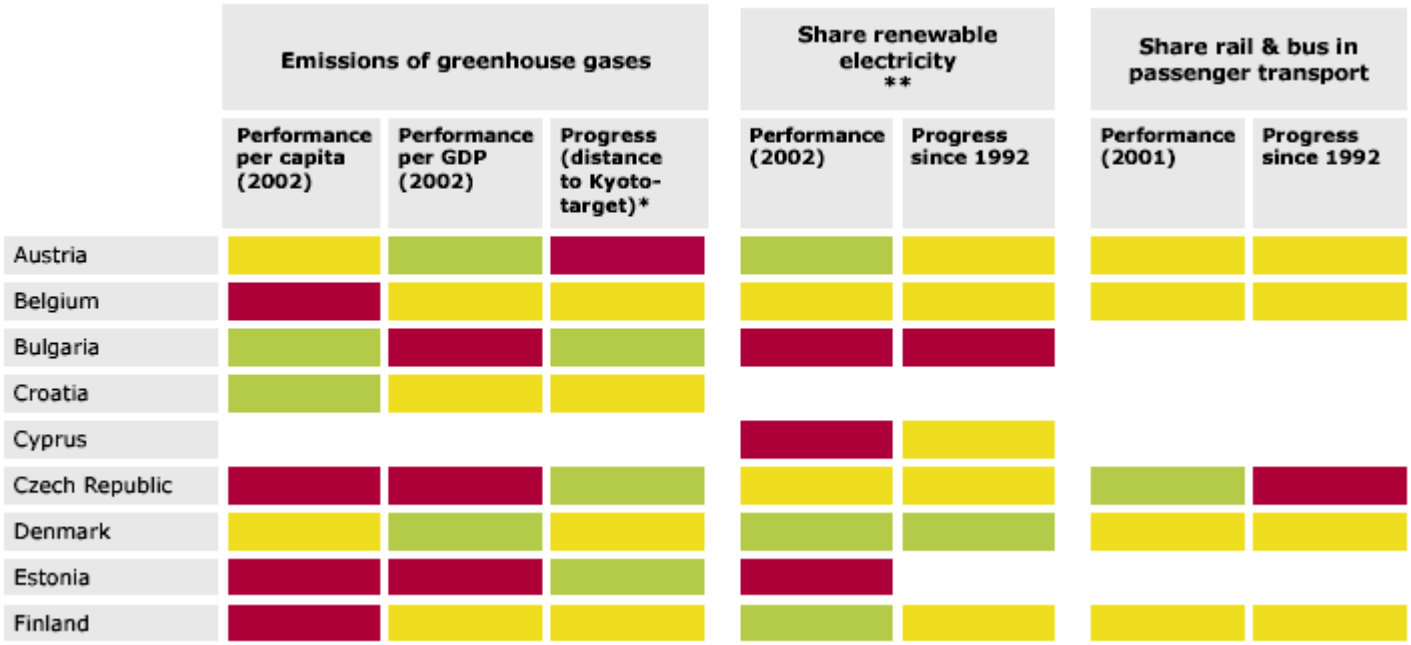
...into something that can support decision-making

Source: GSE Coastwatch

Knowledge-base perspectives for decision making?

- **Time perspective**: past and future trends, models, scenarios, visions
- **Spatial perspective**: commonalities and differences between situations (regions, river basins, areas…), comparisons
- **Governance perspective**: policy elaboration, policy implementation, policy assessment
- **Citizen perspective**: responsibility, equity, solidarity

Exploring new ways of presenting lots of information to readers....



The sustainable use of natural resources and management of wastes				
	1992 index	**2002 index**	**2010 target index**	**Assessment**
Reduce the consumption of natural resources	100	103 (2001)	No target	 EU-15
Reduce the generation of municipal waste	100 (1995)	114 (2001)	No updated target	 EU-25
	100 (1995)	107	No target	 BG, CH, IS, NO, RO, TR
Reduce the generation of biodegradable waste (e)	Insufficient data			
Reduce the generation of packaging waste	100 (1997)	108 (2001)	No quantitative target	 EU-15
Recycle more packaging waste	100 (46 %) (1997)	115 (53 %) (2001)	119 (55 %) (2008)	 EU-15

(e) A reduction of the amounts going to landfill to 35 % of the 1995 level by 2016. Data only exist for a few countries (1996–98). New data are expected by spring 2005.

Accounting for Stocks & Flows

DO GAINS COMPENSATE LOSSES?
DOES QUALITY OF STOCK CARRIED OVER CHANGE?
WHICH ARE THE PROCESSES IN QUESTION?

- Accounts can be compiled in monetary OR in physical units
- Changes in structure, patterns or quality are included in accounts
- Indicators can be easily derived from accounts

EEA reporting and Sustainable reporting

PROVIDING SOUND, INDEPENDENT INFORMATION ON THE ENVIRONMENT

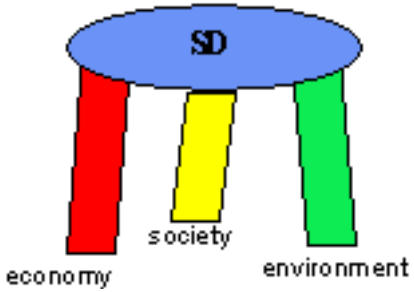
Strategic Knowledge and innovation

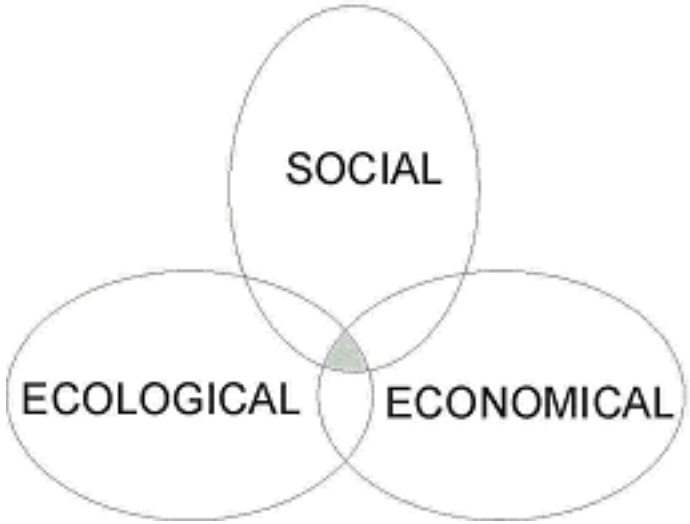
Our role…

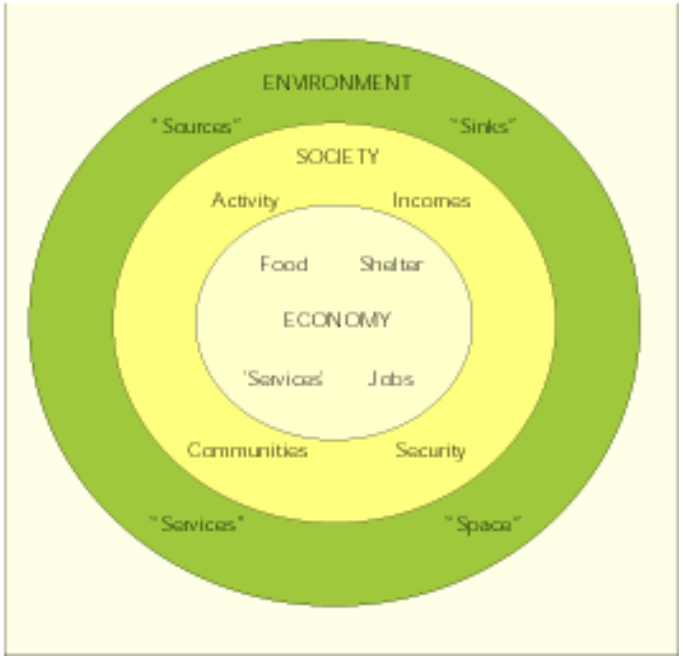
At the EEA, we feel we have a role to play in the debate on Sustainable Development:

in highlighting the environmental dimension, and to supplement the existing discussions with our expertise; environmental information and knowledge.

"Environmental reporting in the context of sustainable development"


SD
economy
society
environment


SOCIAL
ECOLOGICAL
ECONOMICAL

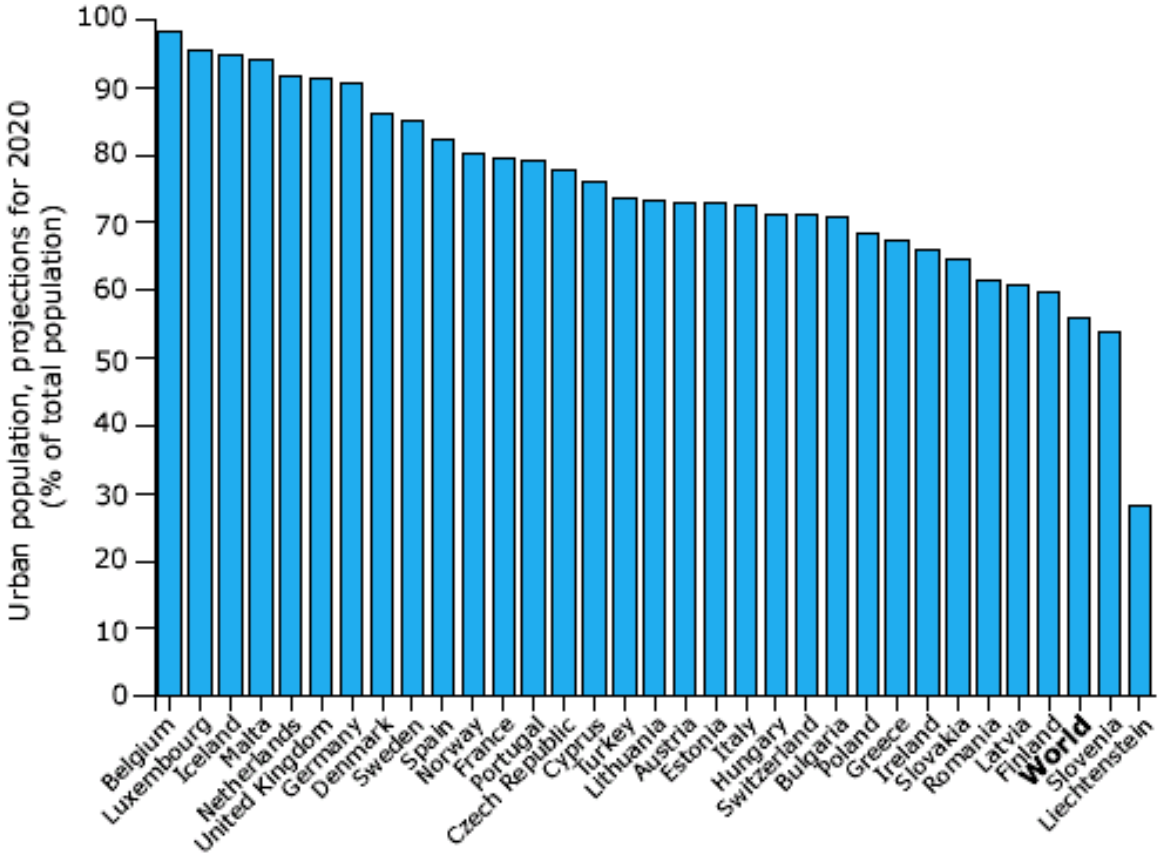

ENVIRONMENT
"Sources"
"Sinks"
SOCIETY
Activity
Incomes
Food
Shelter
ECONOMY
'Services'
Jobs
Communities
Security
"Services"
"Space"


SOCIAL
ECONOMICAL
ECOLOGICAL

The super story- Europe's Megatrends!

<u>Macro questions</u>:

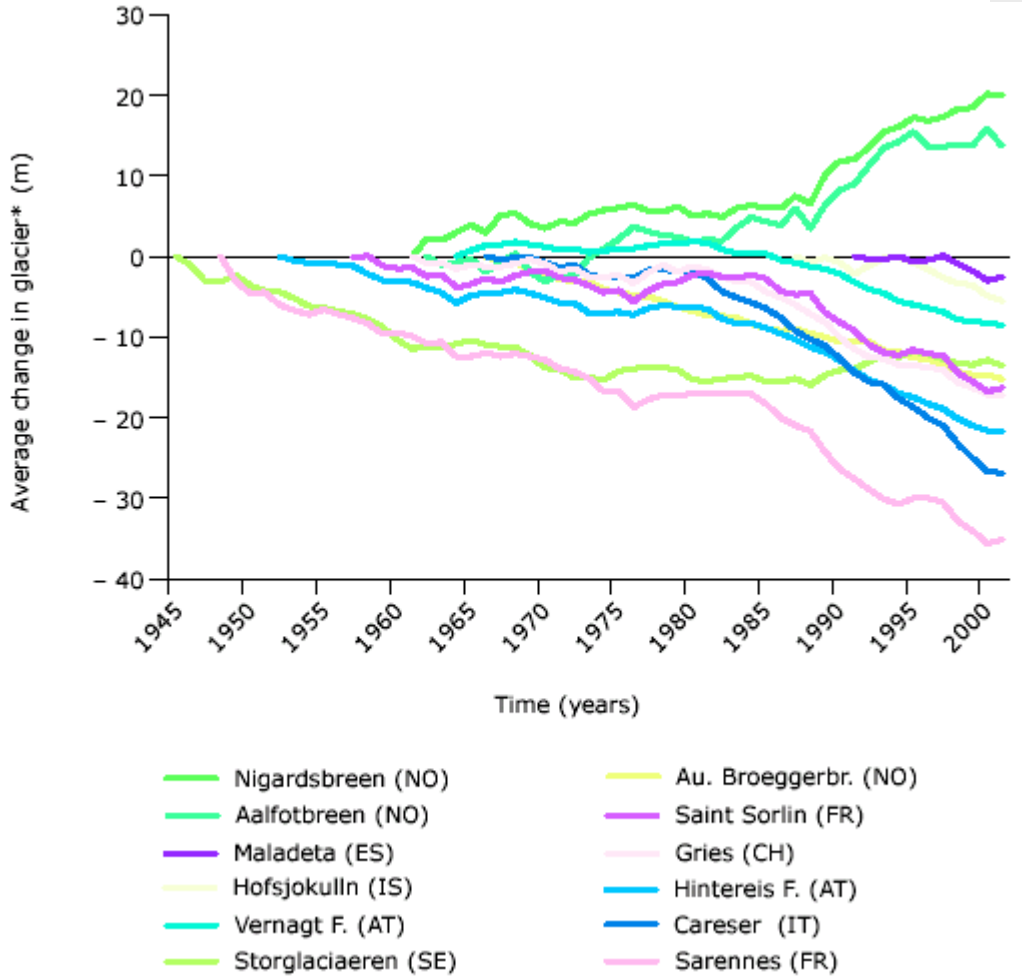
What is a model for sustainable development in Europe?

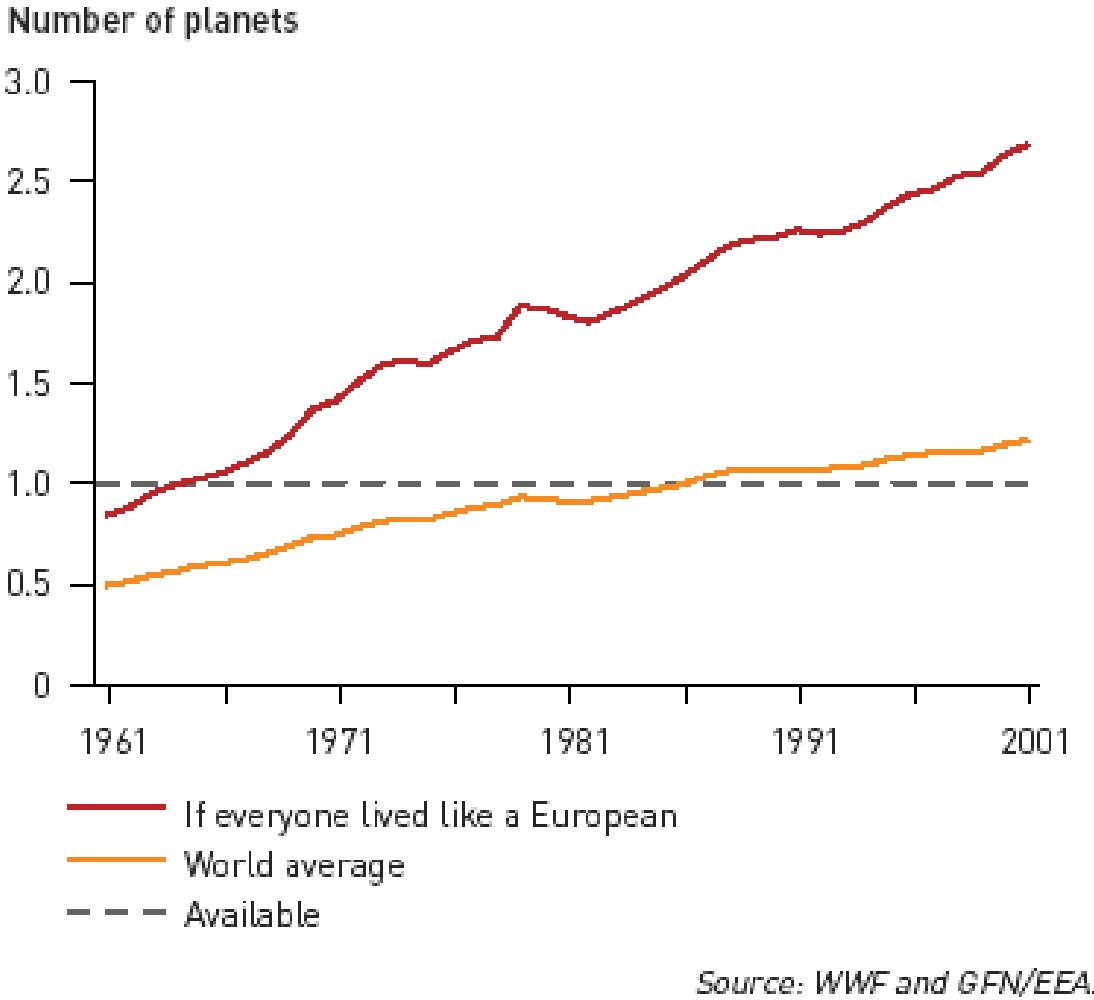


80% of Europeans will live in urban areas by 2020.

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.



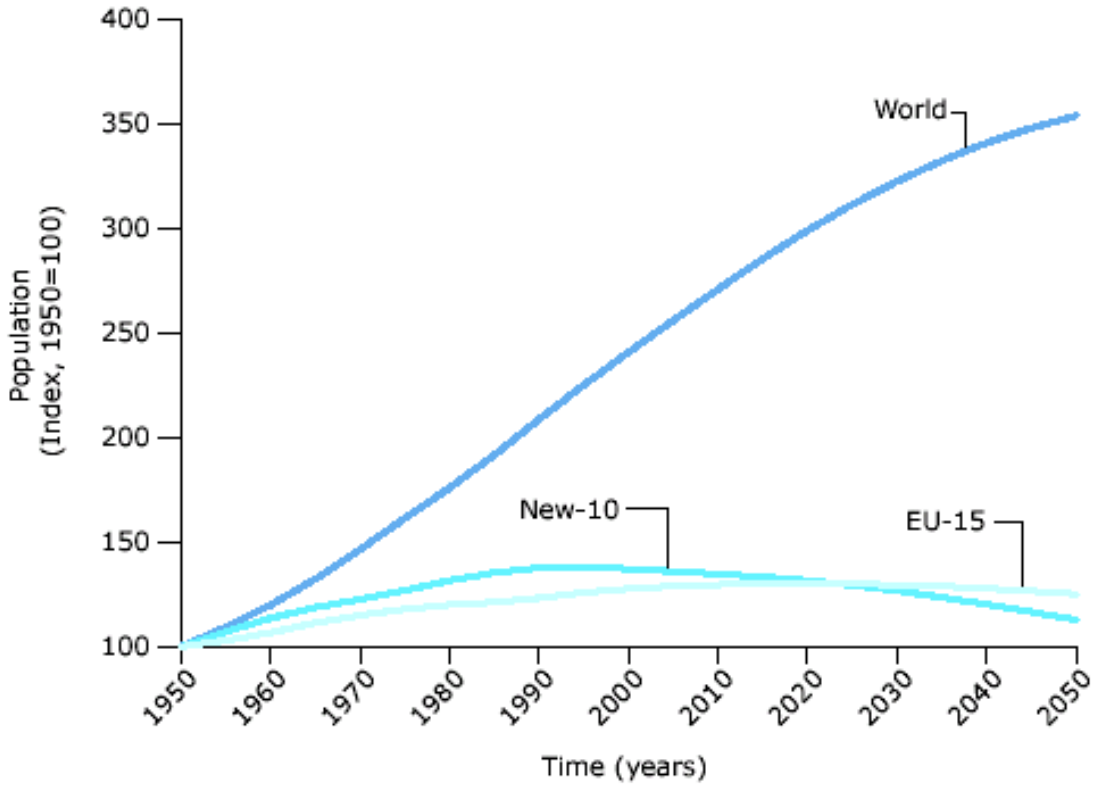


Source: WWF and GFN/EEA.

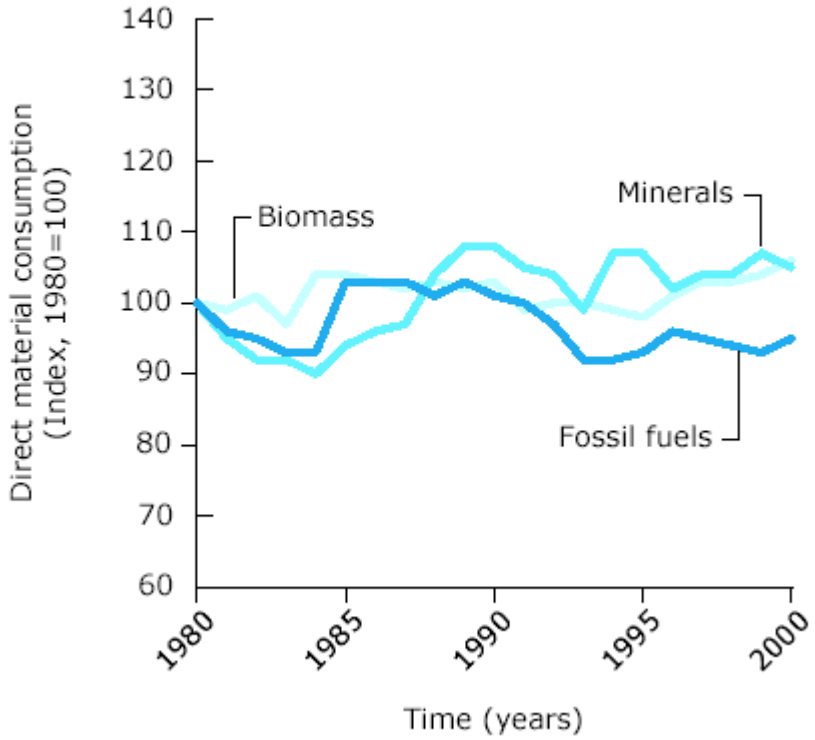
THE ECOLOGICAL FOOTPRINT OF EUROPE AND THE WORLD

The orange line shows the world's demand as compared to the available capacity (the one planet line). The red line shows the number of planets necessary if all members of the human family lived the EU average lifestyle.

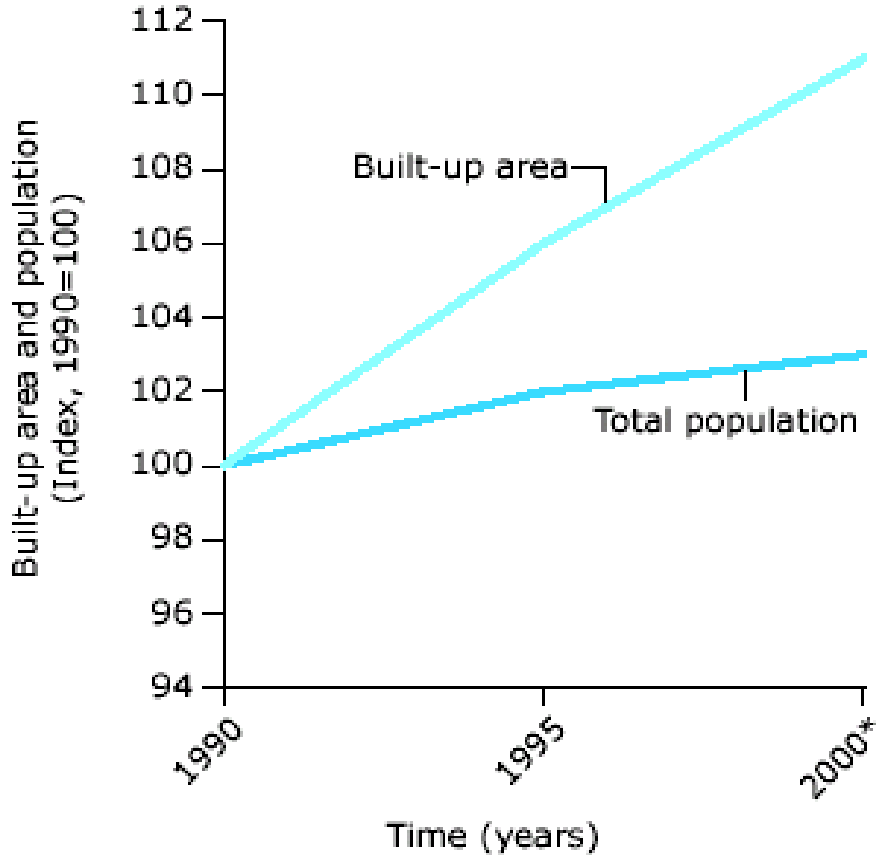
Europe's population is growing more slowly and ageing. Many countries are expected to have declining populations by 2020.



Direct material consumption, a measure of the materials used by the economy, remained more or less constant at around 16 tonnes per capita during the second half of the 1990s.

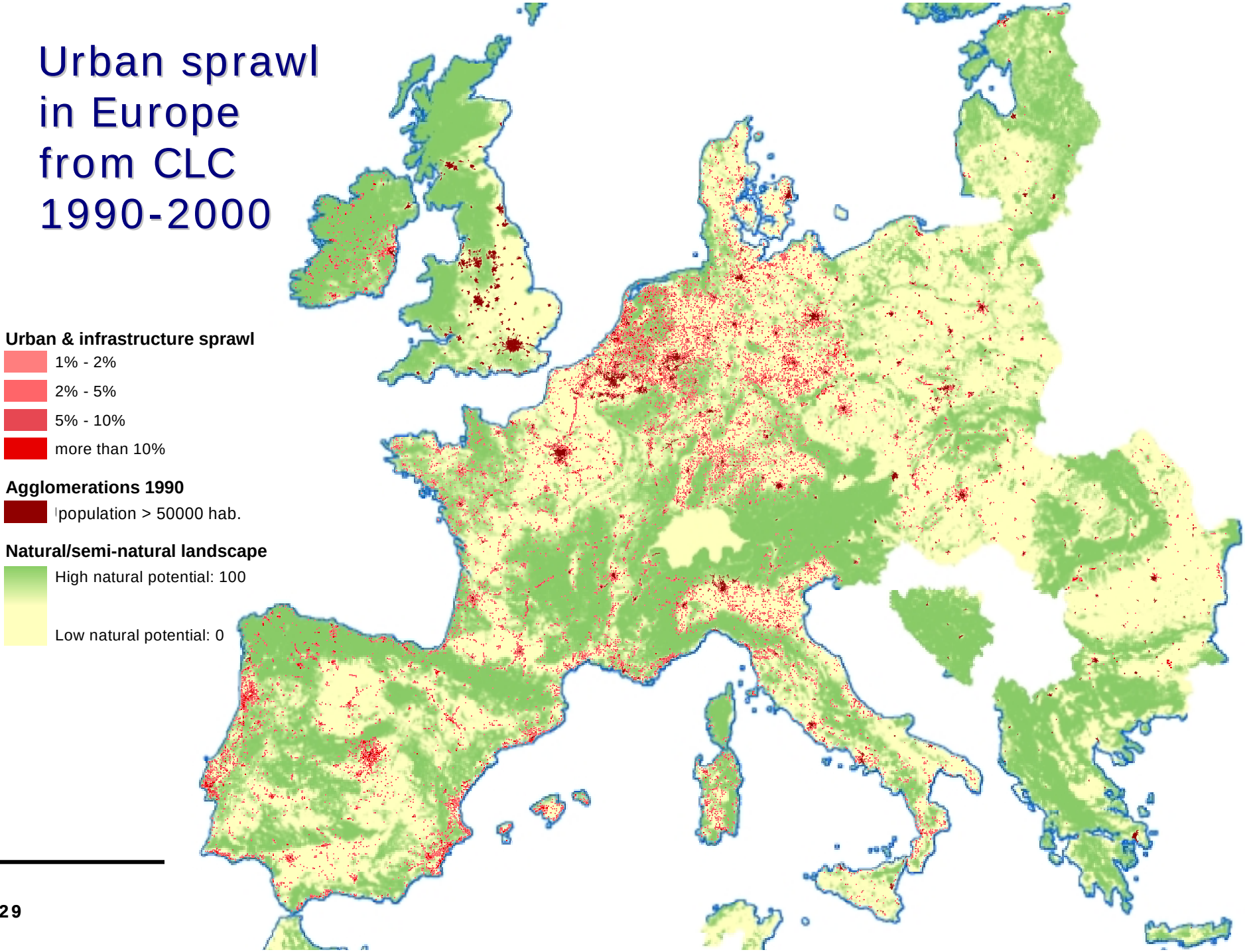


Built-up areas are spreading across Europe and increasing much faster than the population.

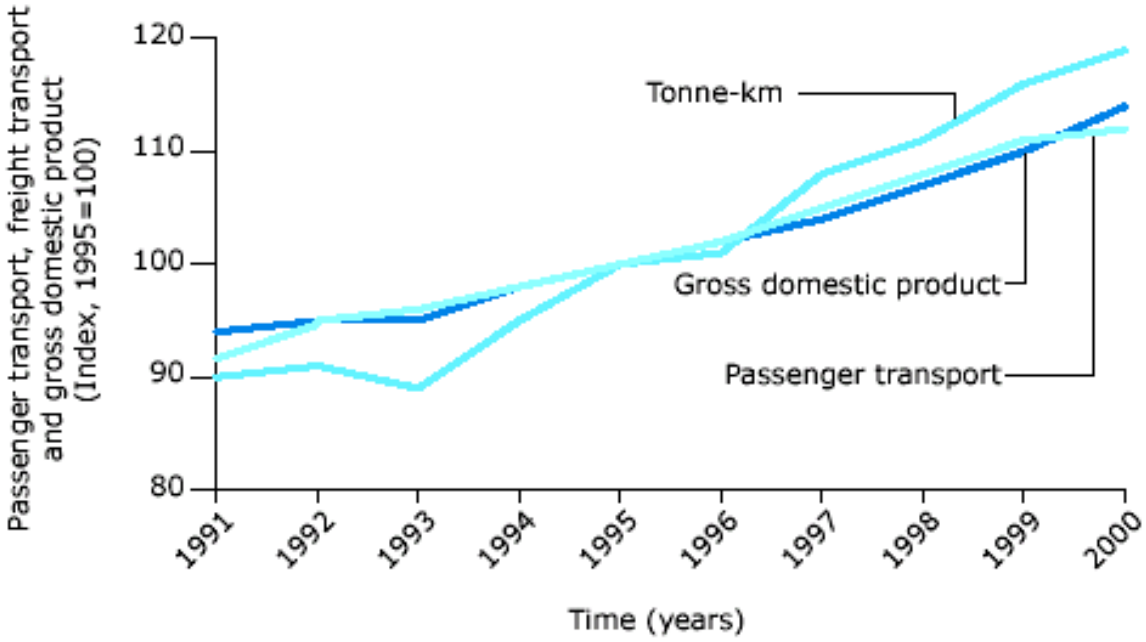


* Data for 2000 or latest available year

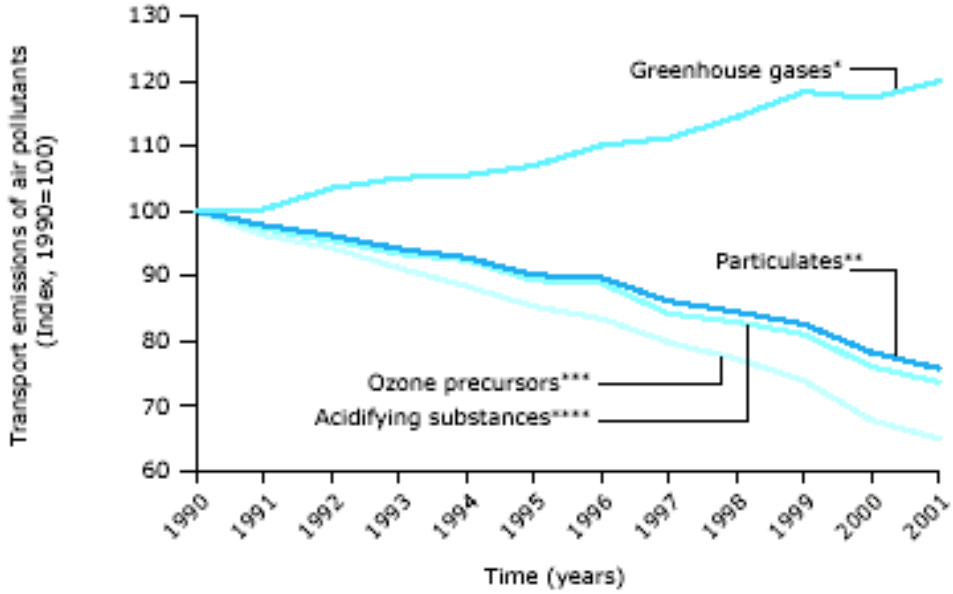
Urban sprawl in Europe from CLC 1990-2000



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



Carbon dioxide emissions continue to rise as transport demand outstrips improvements in energy related emissions.



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

Macro questions: What is a model for sustainable development in Europe?

1 Finland 75.1
3 Uruguay 71.8
2 Norway 73.4
4 Sweden 71.7
5 Iceland 70.8
6 Canada 64.4
7 Switzerland 63.7
8 Guyana 62.9
9 Argentina 62.7
10 Austria 62.7
11 Brazil 62.2
12 Gabon 61.7
13 Australia 61.0
14 New Zealand 60.9
15 Latvia 60.4
16 Peru 60.4
17 Paraguay 59.7
18 Costa Rica 59.6
19 Croatia 59.5
20 Bolivia 59.5
21 Ireland 59.2
22 Lithuania 58.9
23 Colombia 58.9
24 Albania 58.8
25 Central Afr. Rep. 58.7
26 Denmark 58.2

27 Estonia 58.2
28 Panama 57.7
29 Slovenia 57.5
30 Japan 57.3
31 Germany 56.9
32 Namibia 56.7
33 Russia 56.1
34 Botswana 55.9
35 P. N. Guinea 55.2
36 France 55.2
37 Portugal 54.2
38 Malaysia 54.0
39 Congo 53.8
40 Netherlands 53.7
41 Mali 53.7
42 Chile 53.6
43 Bhutan 53.5
44 Armenia 53.2
45 United States 52.9
46 Myanmar 52.8
47 Belarus 52.8
48 Slovakia 52.8
49 Ghana 52.8
50 Cameroon 52.5
51 Ecuador 52.4
52 Laos 52.4
53 Cuba 52.3

54 Hungary 52.0
55 Tunisia 51.8
56 Georgia 51.5

64 Madagascar 50.2
65 United Kingdom 50.2
66 Nicaragua 50.2
67 Greece 50.1
68 Cambodia 50.1
69 Italy 50.1
70 Bulgaria 50.0
71 Mongolia 50.0
72 Gambia 50.0
73 Thailand 49.7
74 Malawi 49.3
75 Indonesia 48.8
76 Spain 48.8
77 Guinea-Bissau 48.6
88 Côte d'Ivoire 47.3
89 Serbia & Monteneg. 47.3
90 Macedonia 47.2
91 Turkey 46.6
92 Czech Rep. 46.6
93 South Africa 46.2
94 Romania 46.2
95 Mexico 46.2

111 Togo 44.5
113 Dem. Rep. Congo 44.1
112 Belgium 44.4
115 Egypt 44.0
114 Bangladesh 44.1

Environmental sustainability index 2005 country rankings

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