

Coastal Zones issue

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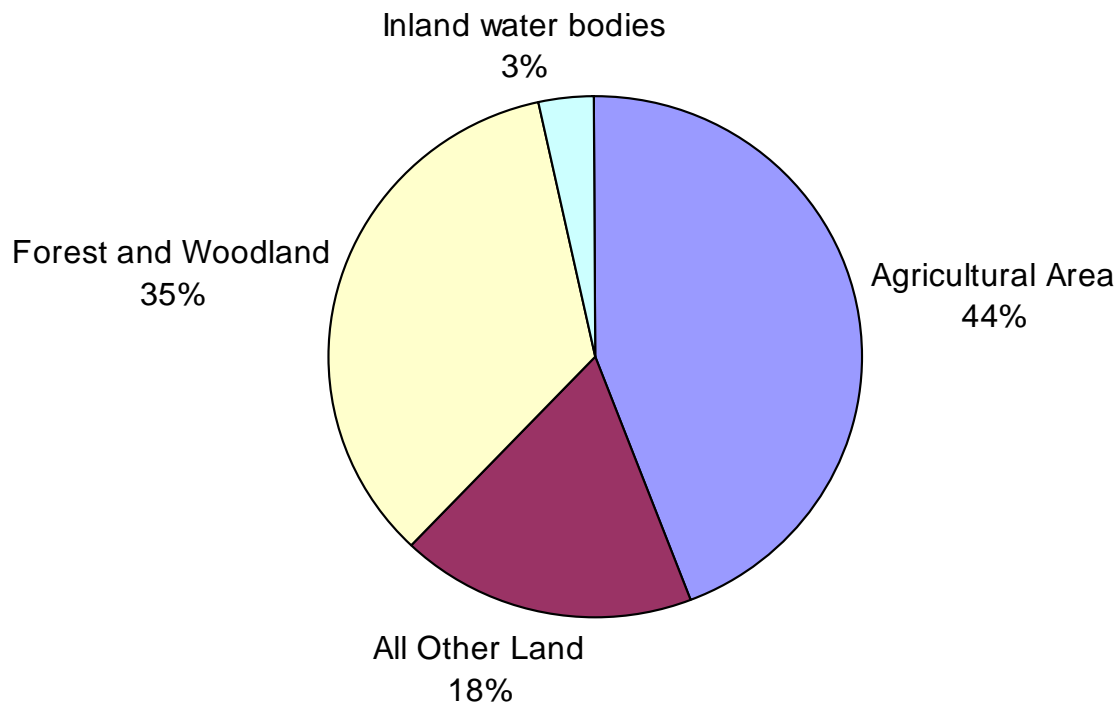
Application of land accounts in integrated spatial assessment of the coasts

Objective: provide information on trends in coastal land use/land cover in support of Integrated Coastal Zones Management at the European scale

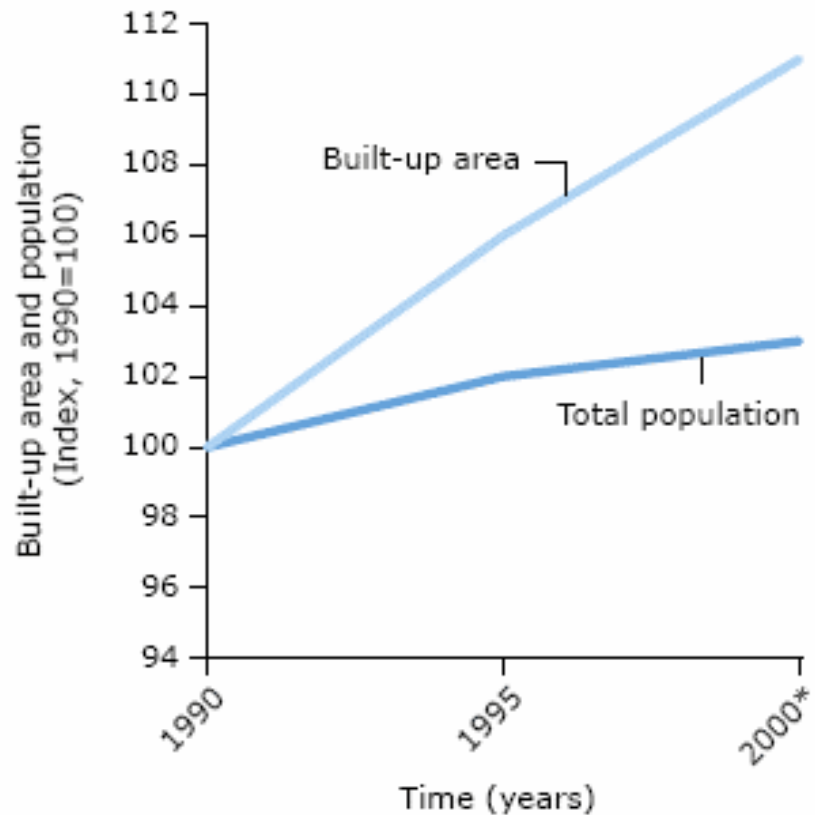
- streamlining of macro indicators with reference to coastal units and land cover flows

Settlements and infrastructure occupy relatively little space

Land-use in the EU15 *Source: FAO 2004*



In Europe, built-up area has expanded by 20% during the last two decades, much faster than the population (6%), (CEC (2003))

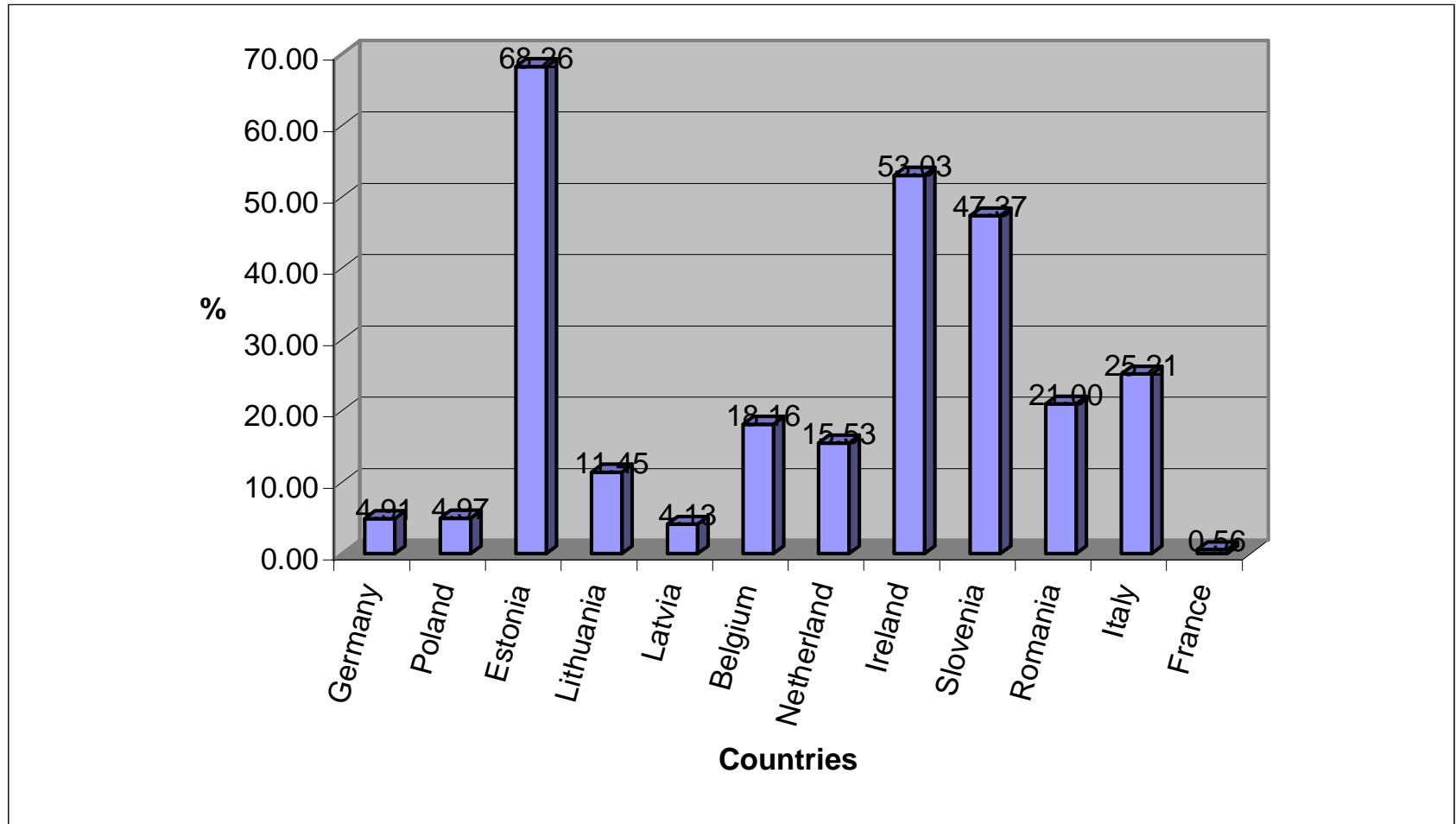


* Data for 2000 or latest available year

Source: EEA 2004

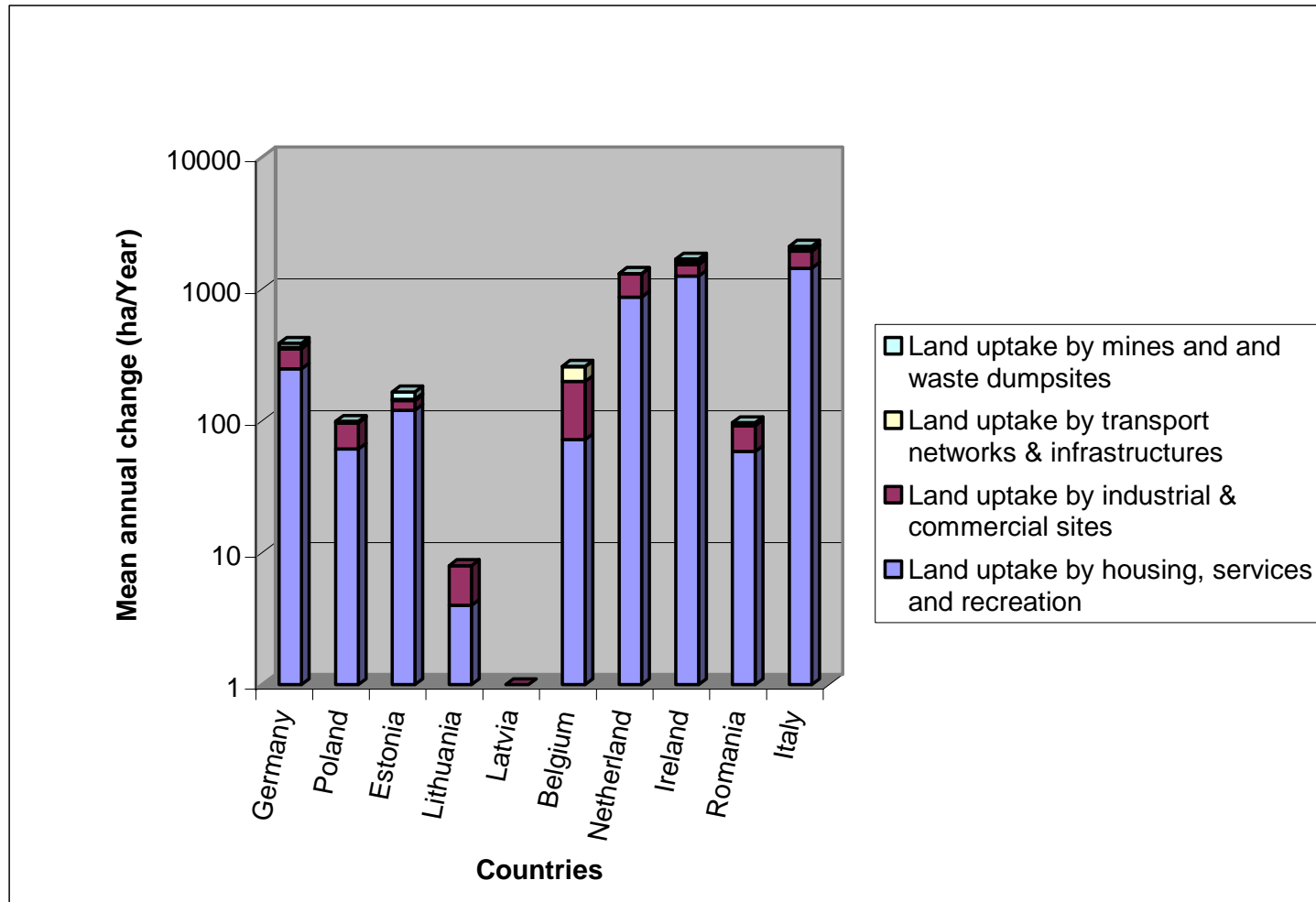
Intensity of coastal urban land uptake versus hinterland

Total change 1990-2000 in 10 km coastal zone versus whole country



Land uptake by housing, services and recreation is dominating

Mean annual uptake 1990-2000 in 10 km coastal zone



Land Use Functions for targeted accounts

- *UF1 Residence, incl. services*
- *UF2 Commerce*
- *UF3 Transport*
- *UF4 Industrial production*
- *UF5 Energy production*
- *UF6 Mining & quarrying*
- *UF7 Waste dumping*
- *UF8 Water management*
- *UF9 Farming, food production*
- *UF10 Forestry*
- *UF11 Tourism & Recreation*
- *UF12 Nature conservation*
- *UF13 Other uses*

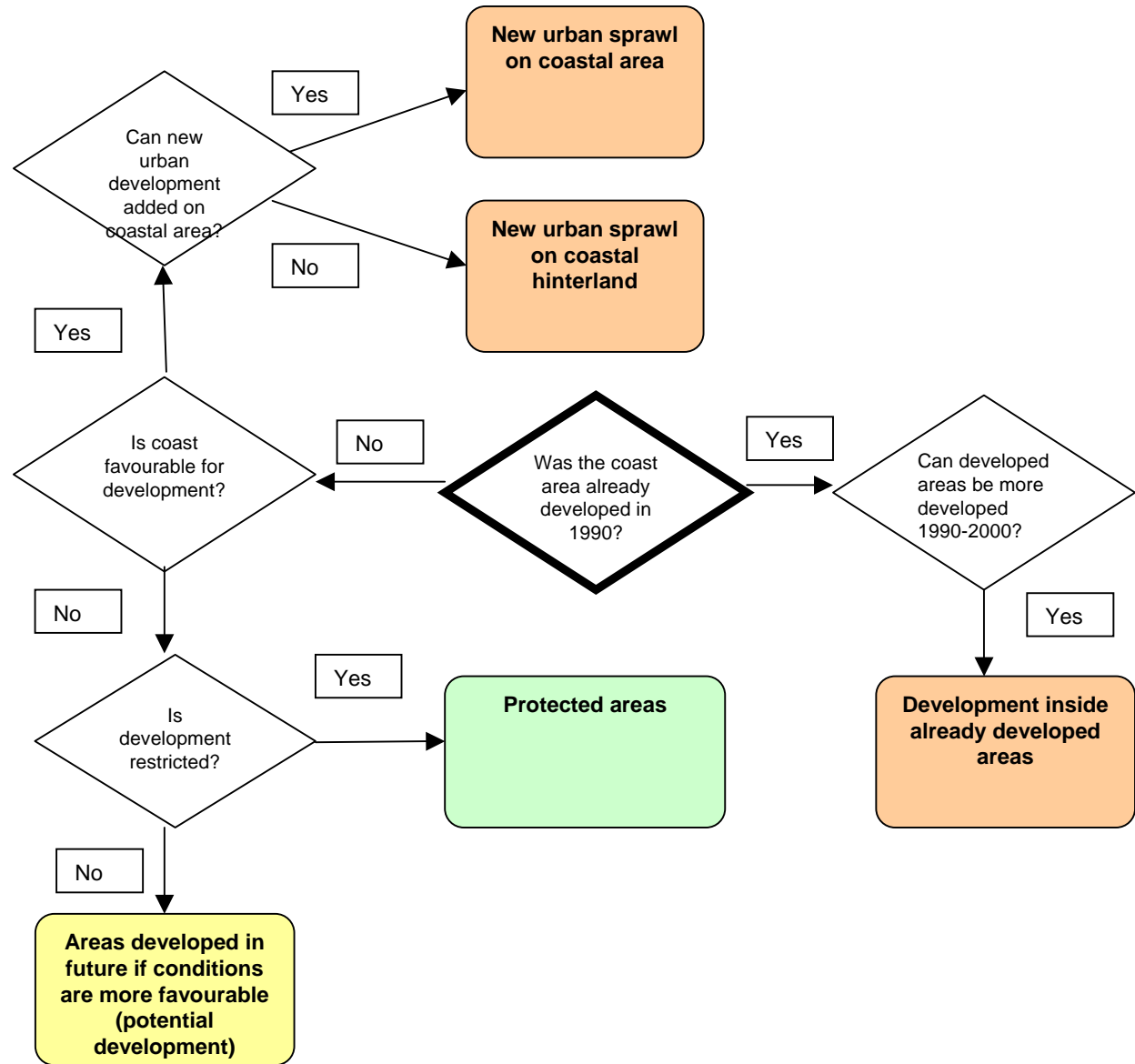
Functions of Coastal zone and LUF

Coastal zone functions	Land use functions
<p>Marine/coastal uses</p> <p><i>Gateways for sea transport</i></p> <p><i>Wind-energy installations</i></p> <p><i>Mining/oil production</i></p> <p><i>Other seabed uses</i></p>	<p>UF3 Transport</p> <p>UF5 Energy production</p> <p>UF6 Mining & quarrying</p> <p>UF13 Other uses</p>
<p>Food production</p> <p><i>Agricultural production</i></p> <p><i>Finfish</i></p> <p><i>Shellfish</i></p> <p><i>Algae extracts</i></p>	<p>UF9 Farming, food production</p> <p>UF9 Farming, food production</p> <p>UF9 Farming, food production</p> <p>UF4 Industrial production</p>
<p>Protective functions</p> <p><i>Habitat and species protection</i></p> <p><i>Wetlands, estuary and delta protection</i></p> <p><i>Landscape maintenance</i></p> <p><i>Coastline defence</i></p>	<p>UF12 Nature conservation</p> <p>UF12 Nature conservation</p> <p>UF12 Nature conservation</p> <p>UF8 Water management ?</p>
<p>Socio-economic functions</p> <p><i>Dwelling</i></p> <p><i>Recreation & tourism</i></p> <p><i>Employment e.g. fisheries and tourism</i></p> <p><i>Research & education</i></p>	<p>UF1 Residence, incl. services</p> <p>UF2 Commerce</p> <p>UF11 Recreation & Tourism</p> <p>UF9 Farming, food production</p> <p>UF13 Other uses</p> <p>UF13 Other uses</p>

Urban land use function on the coast?

- ***UF1 Residence, incl. services***
- *UF2 Commerce*
- ***UF3 Transport***
- *UF4 Industrial production*
- ***UF11 Tourism & Recreation***
- ***UF13 Other uses e.g. fisheries & aquaculture***

Analysis of coastal artificialisation



Towards the spatial typology of coastal urbanization in Europe

Urban type	Trends 1980-1990	Trends 1990-2000	Countries and regions
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Example:

Mature urban development North Sea	-Growth during the 80s and before (since 2d world war) -Driven by harbors, commerce and oil production -High GDP - EU15	-Continue to grow at a lower rate at the coast and more in the hinterland -High pressures on natural resources and high protection -GDP still high but lowering down	Netherlands, Belgium
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LEAC as spatial integration tool for coastal assessment

- Horizontal integration across different environmental medias (land, water, ecosystems)
 - LEAC is able to harmonize many individual spatial processes in to common spatial change detection approach
- Vertical integration across levels of governance (local/regional, national, EU)
 - LEAC can be applied in variety of scales