From the IMAGE of landscapes to the ASSESSMENT of ecosystems in Europe

Ecosystems and human well-being as seen through the lens of landscapes

- Landscape =
  - Heritage
  - Wealth, potentials
  - Value, services
  - Memory, emotion
  - Time, future

Landscapes are made of areas, zones, patches…

which are recognized by the people who

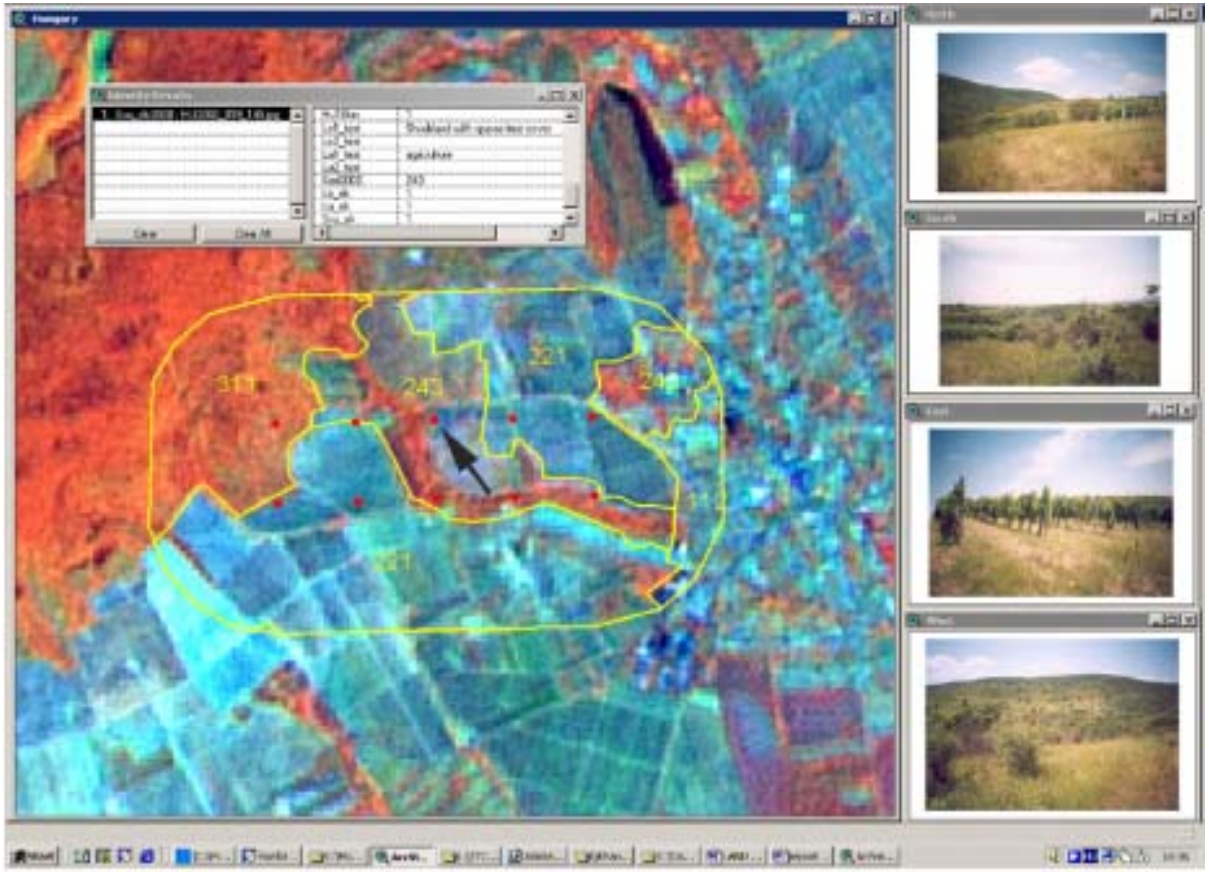
- Live there
- Have a property there
- Work there
- Visit them
- Govern them
- Study them

Ecosystems are perceived as parts of landscapes

Landscapes in Europe are very diverse, we can produce many images to represent them

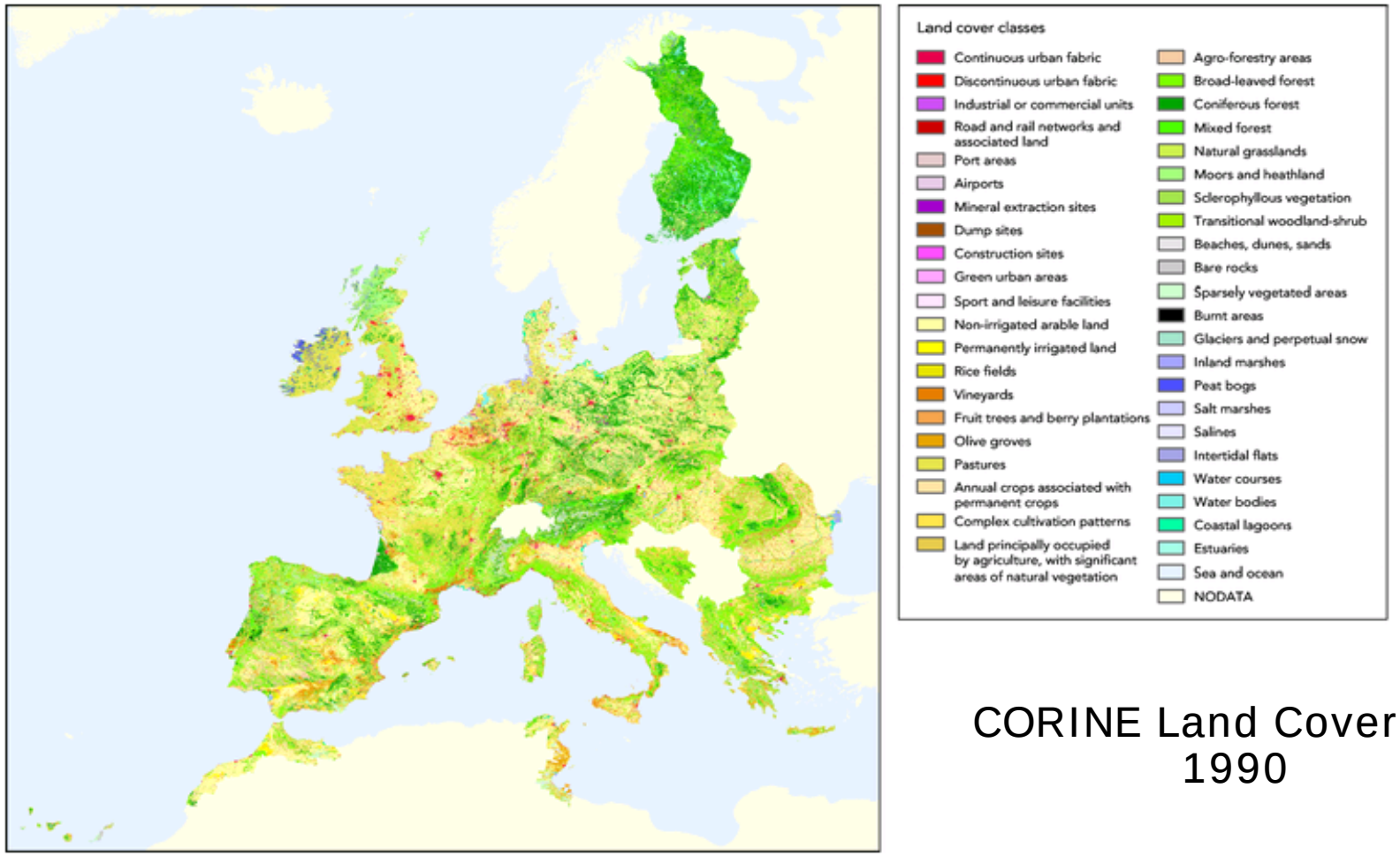
Or one single image for all Europe

Images deliver information about landscapes that we can analyse and interpret



for producing other images

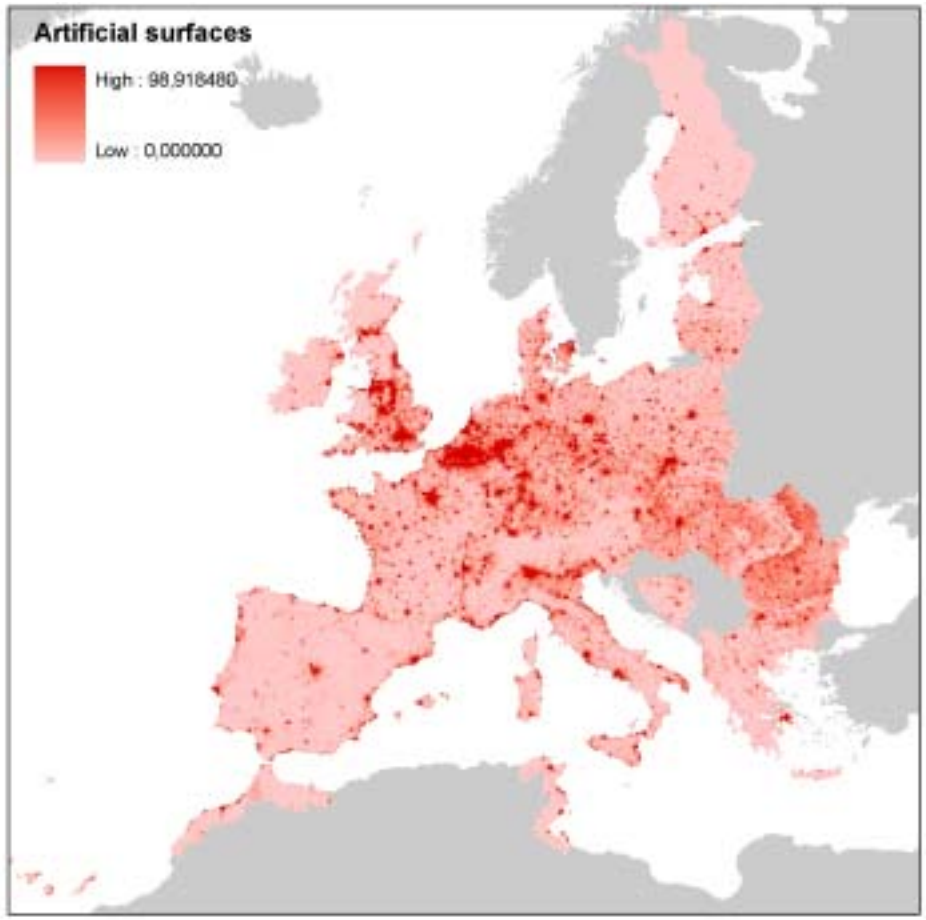
In Europe, we are analysing satellite images to produce another image, that of land cover



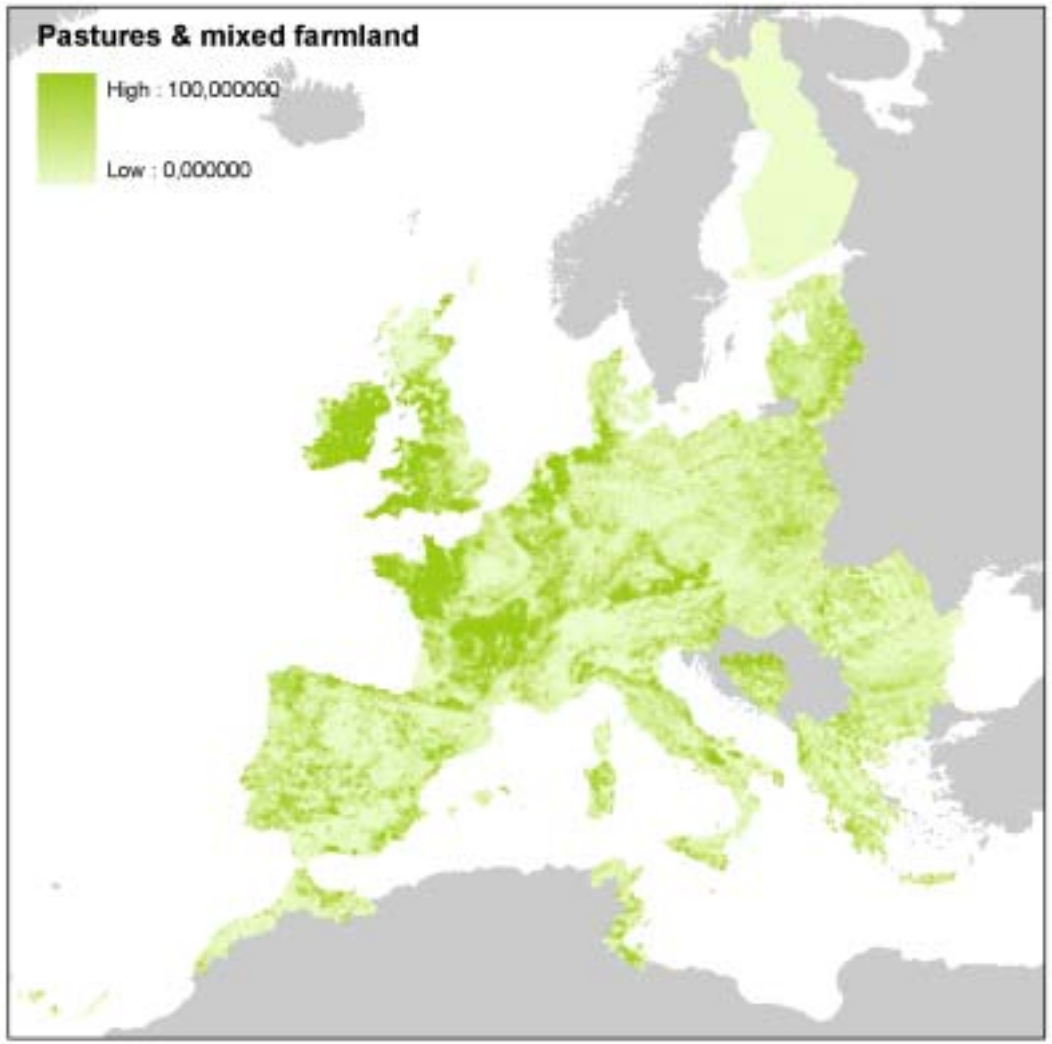
CORINE Land Cover 1990

Processing, analysing and modelling images, it is possible to highlight aspects of landscapes, e.g. where key features are located such as

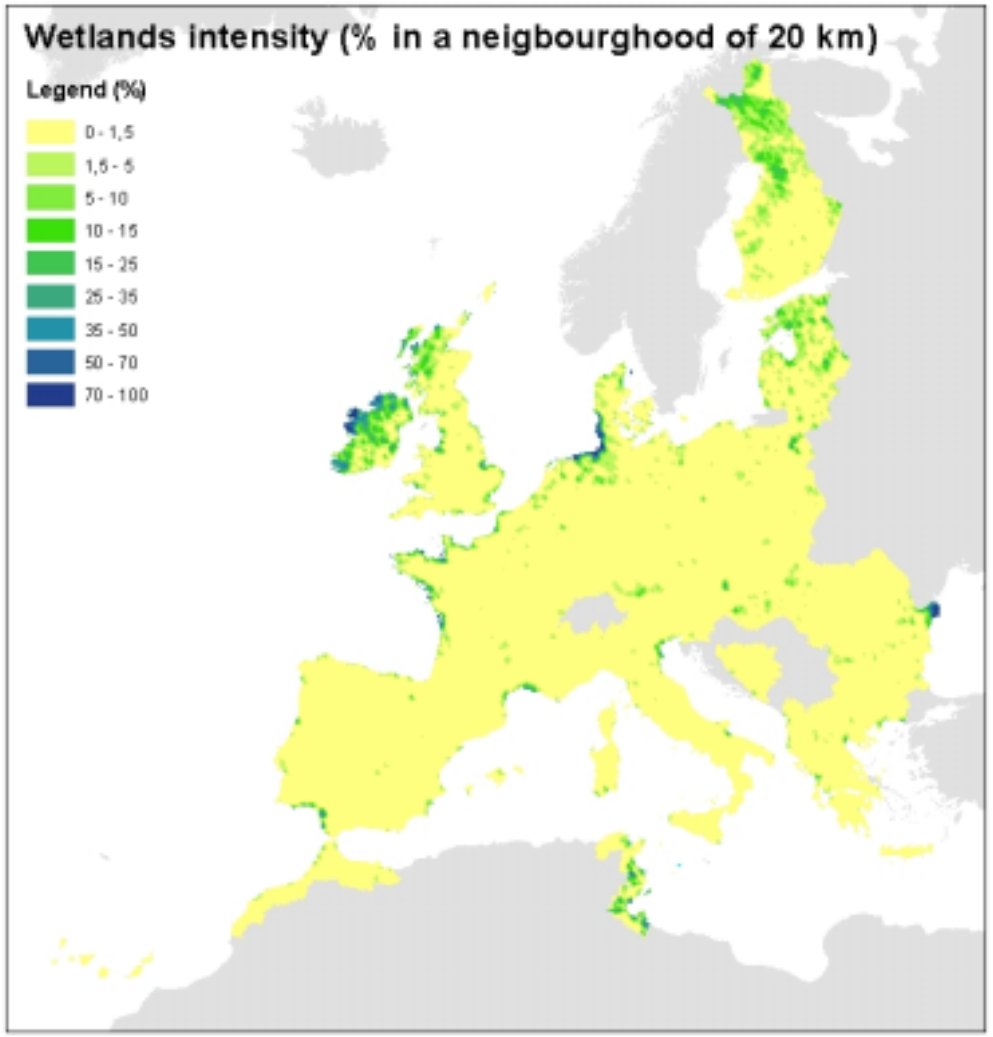
Urban and other artificial surface areas



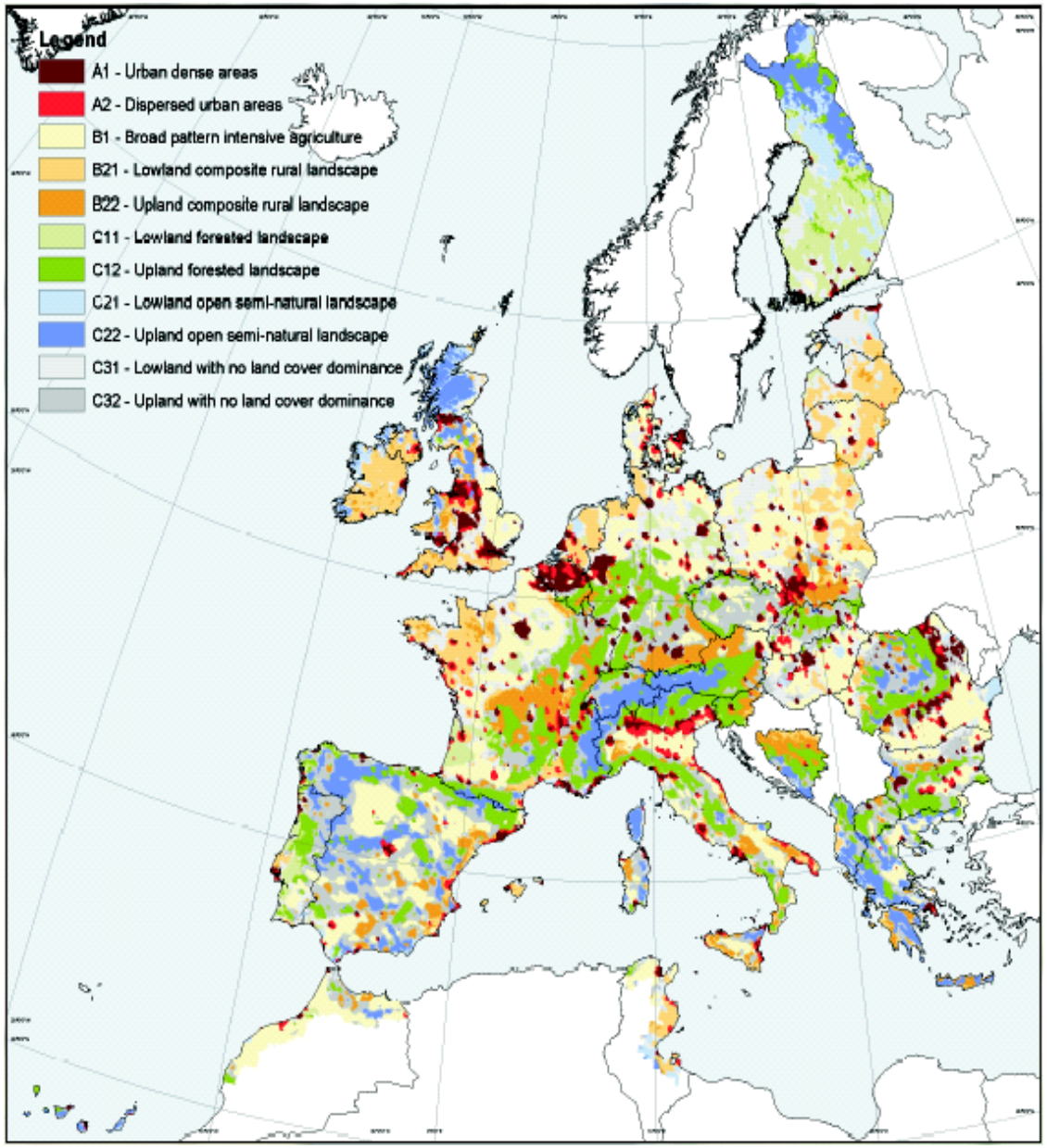
Pasture and mixed farmland



Wetlands


Wetlands intensity (% in a neigbourghood of 20 km)
Legend (%)
0 - 1,5
1,5 - 5
5 - 10
10 - 15
15 - 25
25 - 35
35 - 50
50 - 70
70 - 100

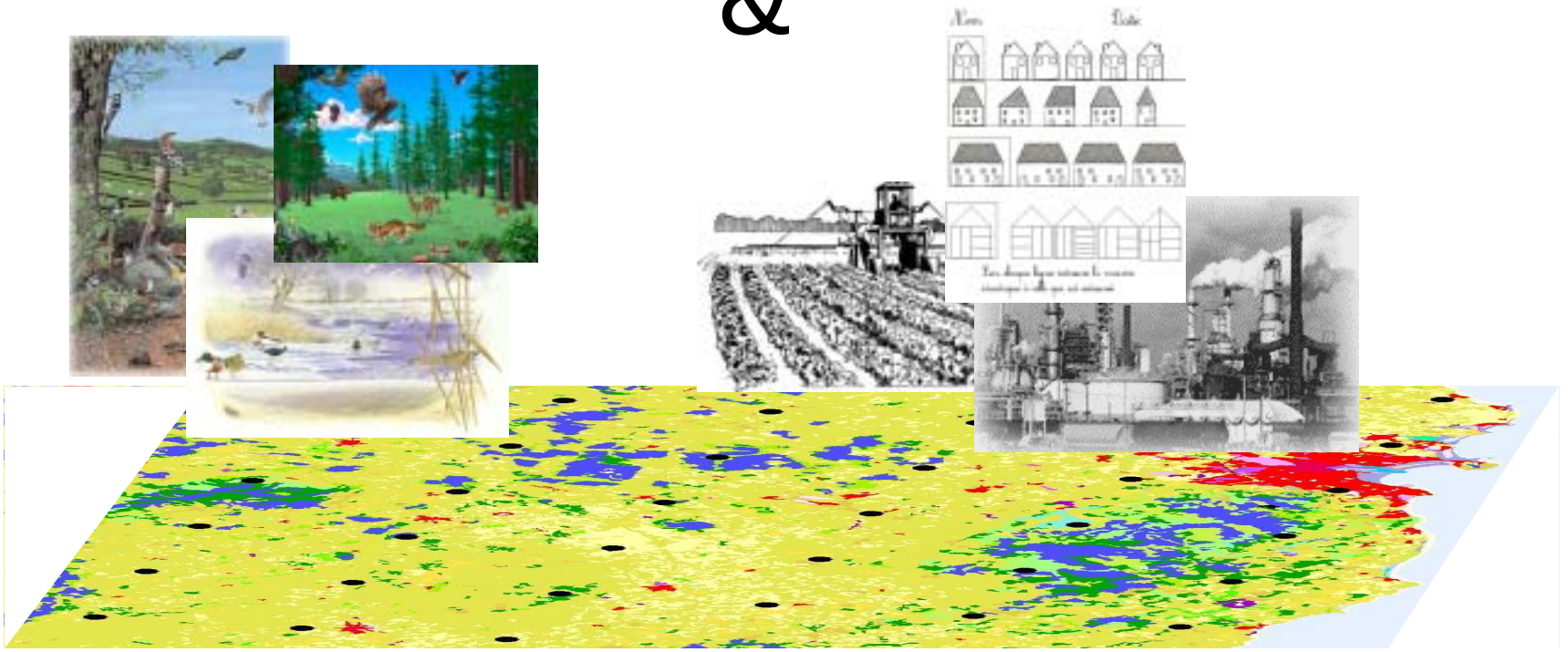
Combining these elements, we can compose a map of dominant landscape types of Europe that we can use for framing various assessments



Further analysis can be done according to the major sea catchments of Europe

Land cover is an image that reflects altogether

Ecosystems & **Land Use**



Therefore, the land cover image, available for all Europe, can be used for streamlining the assessment of ecosystems in relation to human activities through time e.g. …

what about the popular model of Europe's polycentric development?

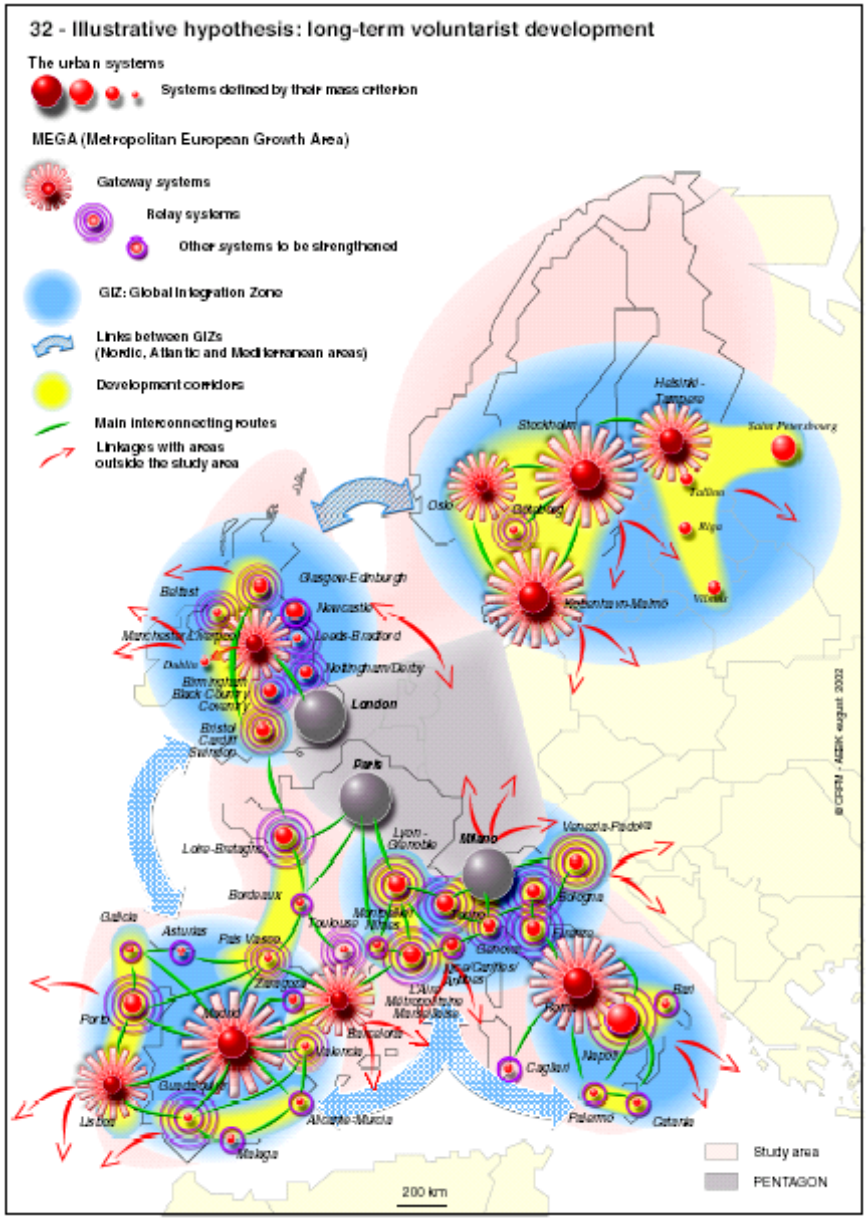
The model suggests a more efficient and equitable organisation of the EU territory

Questions:

What about the environment?

Is this scenario better than others?

Why? Which impacts?



Images of landscape change for understanding trends and dynamics

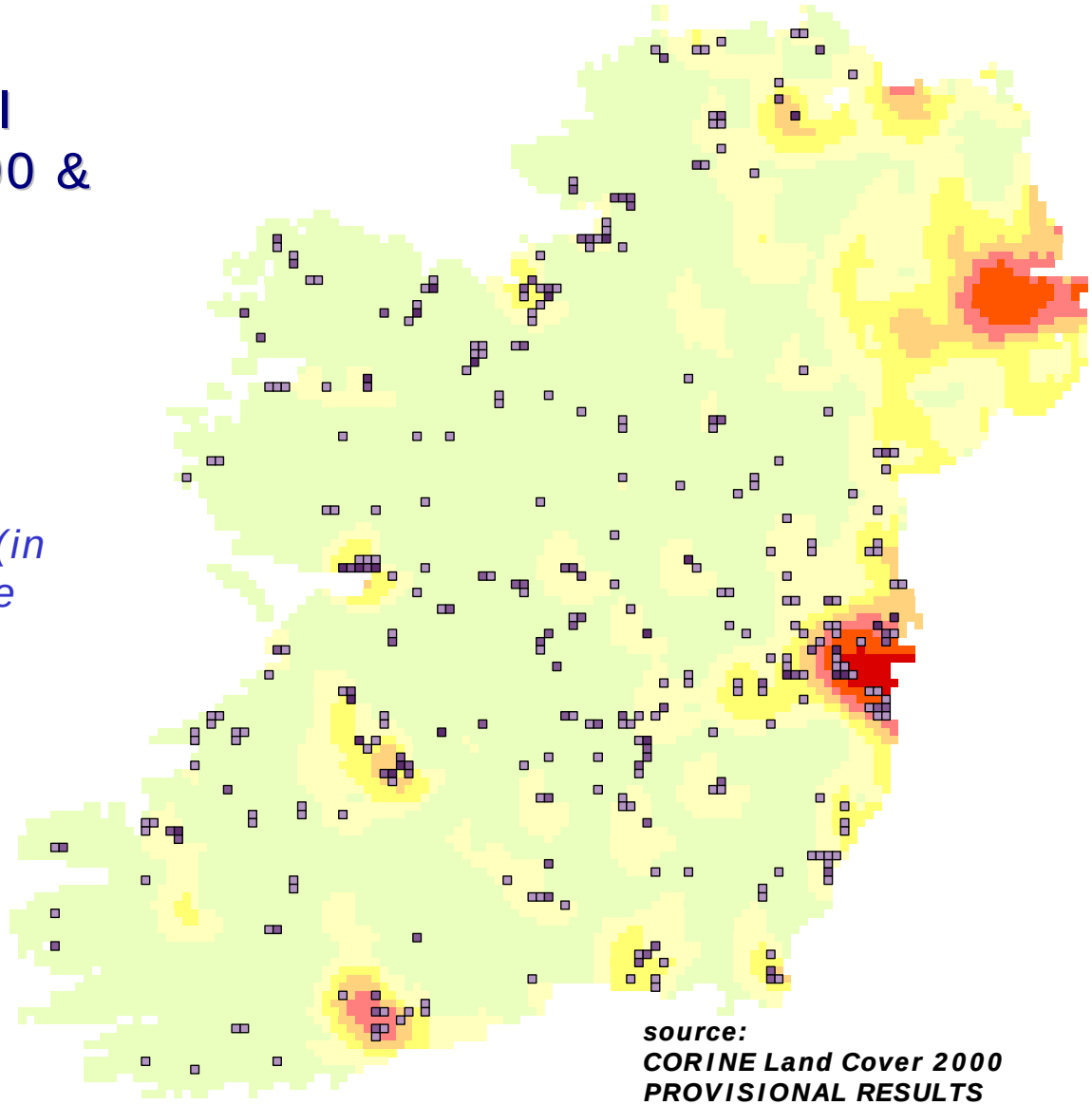
- How much is landscape changing?
- How is it changing?
- What impacts?
- What drivers?

Counts and accounts of changing hectares, patterns, resource, populations, activities

Ireland

Urban Residential Sprawl 1990-2000 & Density of Urban Areas in the Landscape

Residential sprawl seems moderately attracted by towns *(in red to orange on the image)*



Urban Residential Sprawl

Hectares per grid cell of 900 ha

- 0 - 5
- 6 - 29
- 30 - 65
- 66 - 150

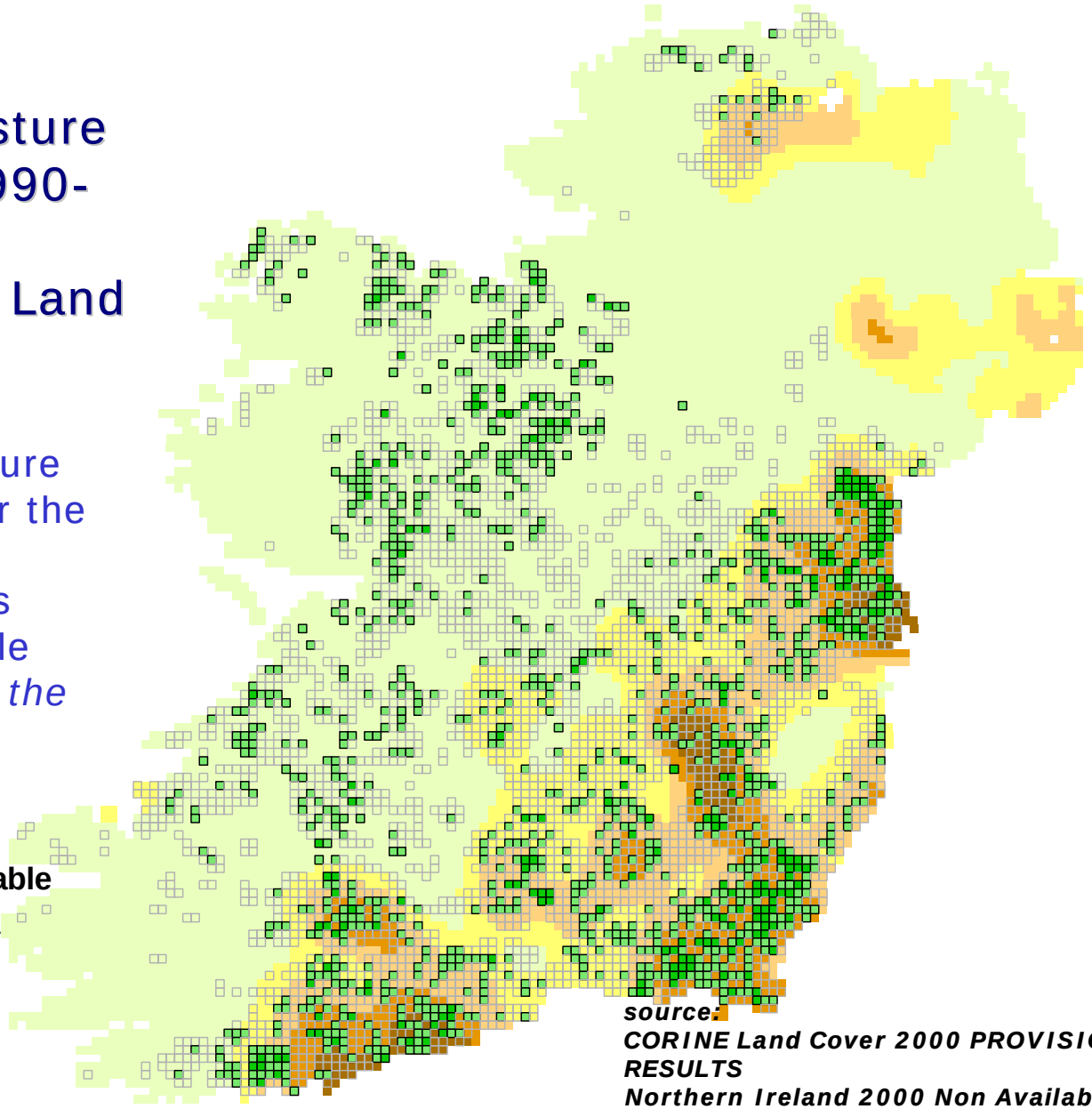
source:
CORINE Land Cover 2000
PROVISIONAL RESULTS
Northern Ireland 2000 Non Available

European Environment Agency

Ireland

Conversion of Pasture to Arable Land 1990-2000 & Density of Arable Land in the Landscape

Conversion of pasture takes place all over the country, more intensively in areas with previous arable land *(in brown on the image)*



Legend

Conversion of Pasture to Arable

Hectares per grid cell of 900 ha

- 0 - 50
- 51 - 150
- 151 - 454

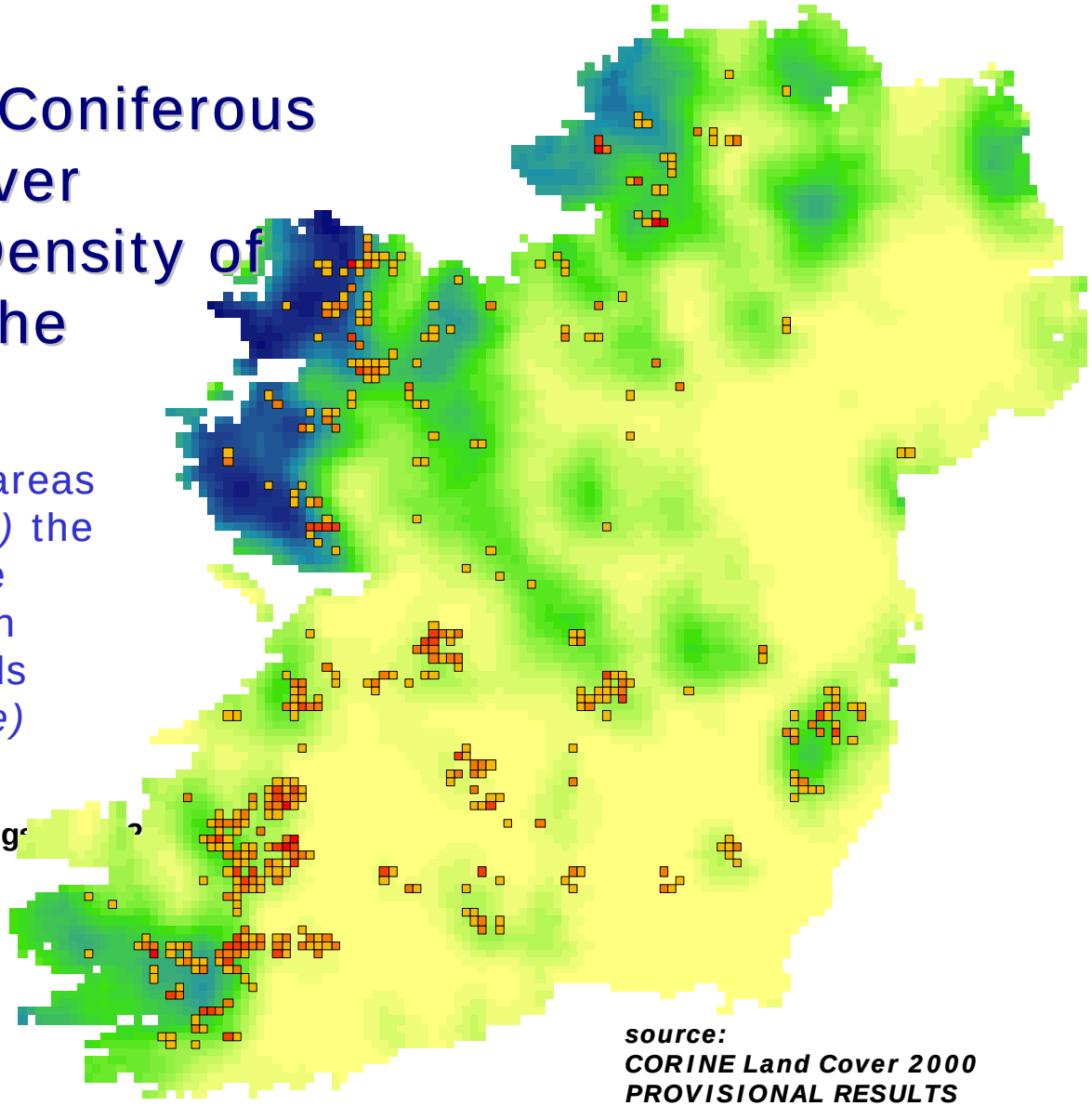
source:
CORINE Land Cover 2000 PROVISIONAL RESULTS
Northern Ireland 2000 Non Available

European Environment Agency

Ireland

Plantation of Coniferous 1990-2000 over Wetlands & Density of Wetlands in the Landscape

Limited in the large areas of peat bogs *(in blue)* the phenomenon is more visible in regions with small patchy wetlands *(green on the picture)*



Legend

Coniferous planted on peatbog

nb ha by grid of 900 ha

- 6 - 54
- 55 - 107
- 108 - 197
- 198 - 394

source:
CORINE Land Cover 2000
PROVISIONAL RESULTS
Northern Ireland 2000 Non Available

European Environment Agency

EUROPEAN MA – NEXT STEPS

- Using models which are built around the key drivers of change and offering choices across sectors and socio-economic development profiles
- Involving stakeholders in a dynamic process and ongoing commitment to participate
- Presenting results at key decision-nodes in the policy cycle