



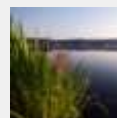
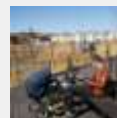
What's going on out there?

Gridded data for detection of pressure on land use

Jerker Moström, Analyst Land use statistics and geography

Statistics Sweden

EFGS Prague, 23rd-26th of October 2012



Background

- New environmental policy adopted in 2000
- Environmental objectives – ”A sustainable management in Coastal Areas and Archipelagos”
- Need to map regional pre-conditions
- Different choice of policy approach:
 - High activity – high pressure (”restrict”)
 - Low activity – no pressure (”stimulate”)
- Land use = response to socio-economic patterns



Is it possible to map degree of land use pressure?

- NOT assess the physical landscape itself...
- ...but the social and economic content of the landscape
- A socio-economic "characteristica"
- At different points of time (changes within a 10 year period)
- At a low geographical level (1 square km grid)



So, how?

Data from Statistics Sweden:



People



Money

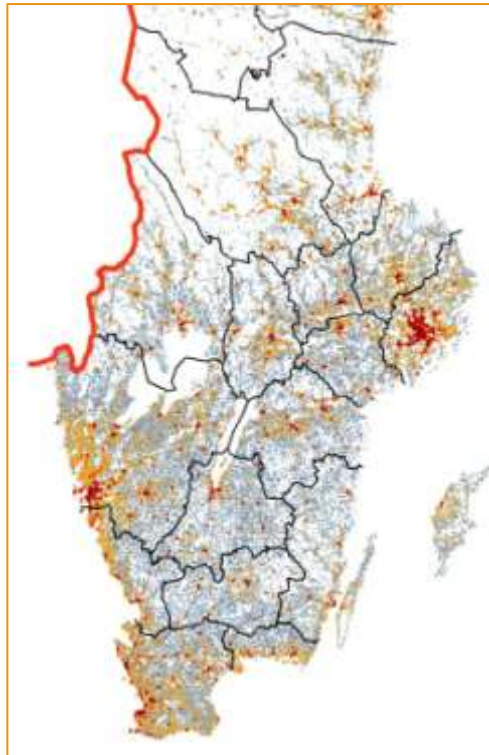


Real estates

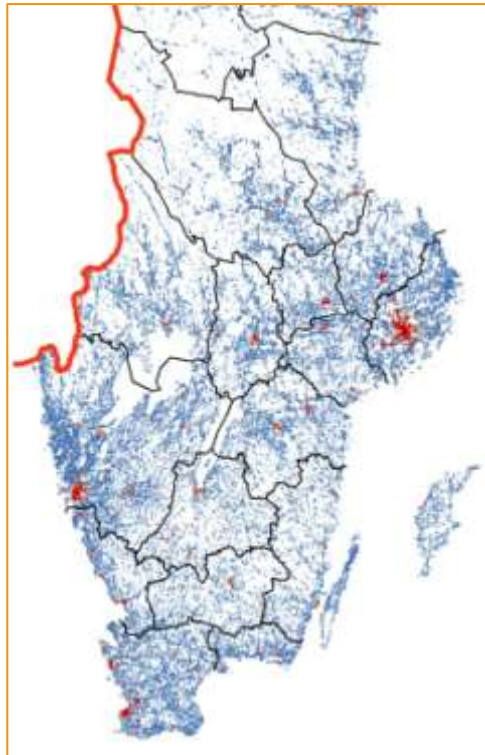


So, how?

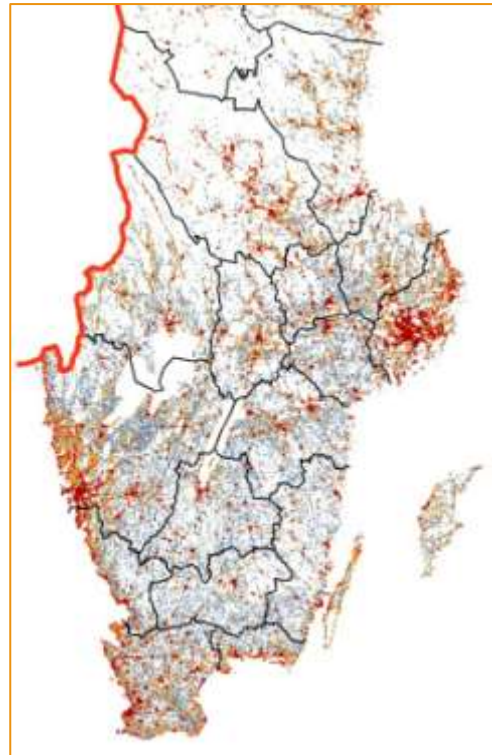
Data from Statistics Sweden:



Demography



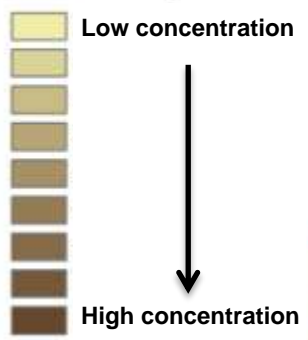
Assessed (tax) value



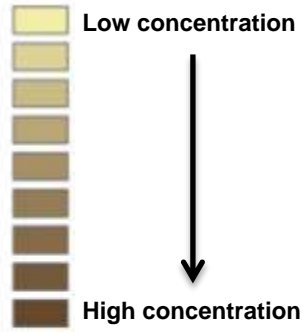
Real estates



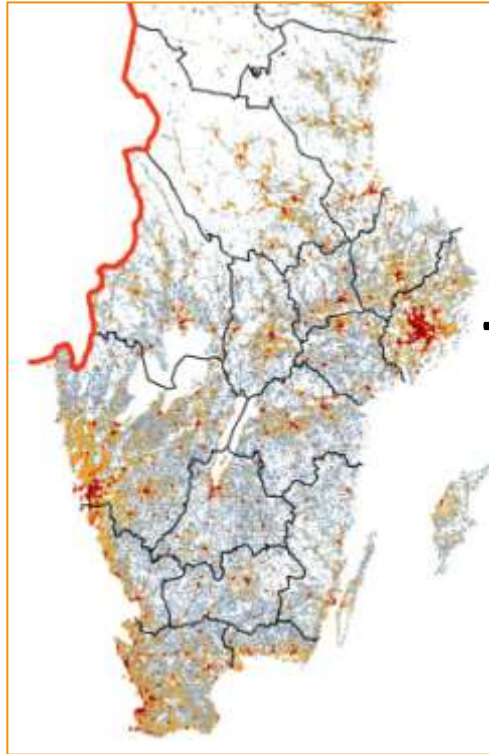
"Leasurescape"
Second homes/sq km



Real estate development/Sq km
Number of new project 95-05

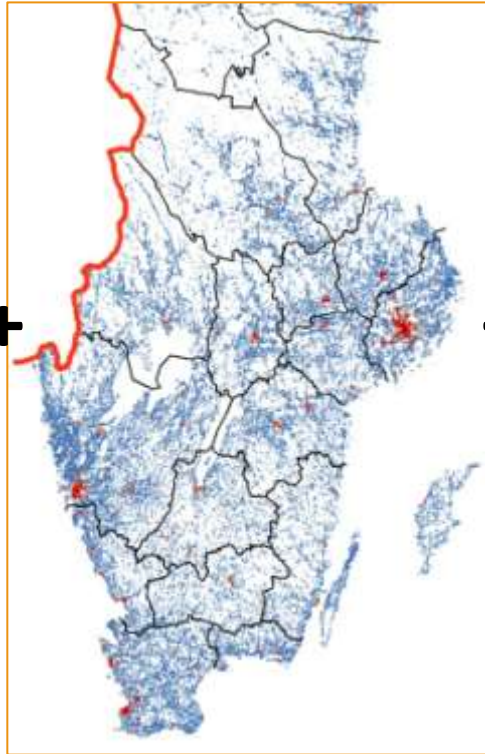


Index more communicative?



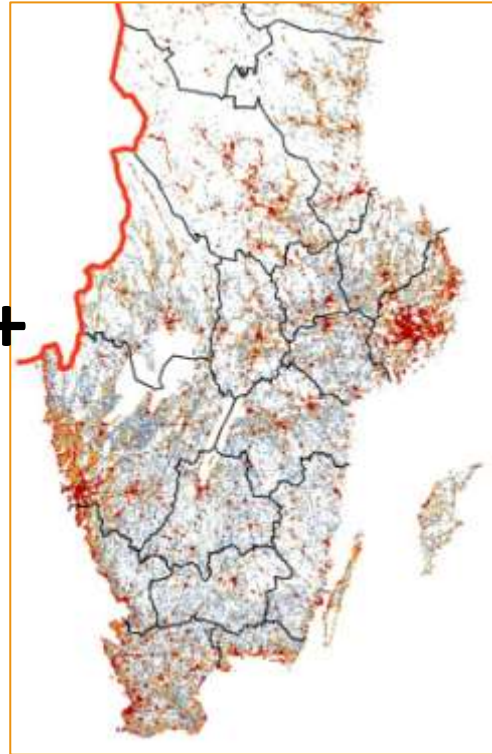
Demography

+



Assessed (tax) values

+



Real estates

=

A single output image



Index of land use pressure

Method

Change of no. people (> national avg., 0-national avg., <0)

+

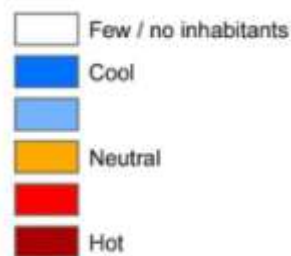
Change of no. real estates (> national avg., 0-national avg., <0)

+

Change of assessed (tax) value (> national avg., 0-national avg., <0)

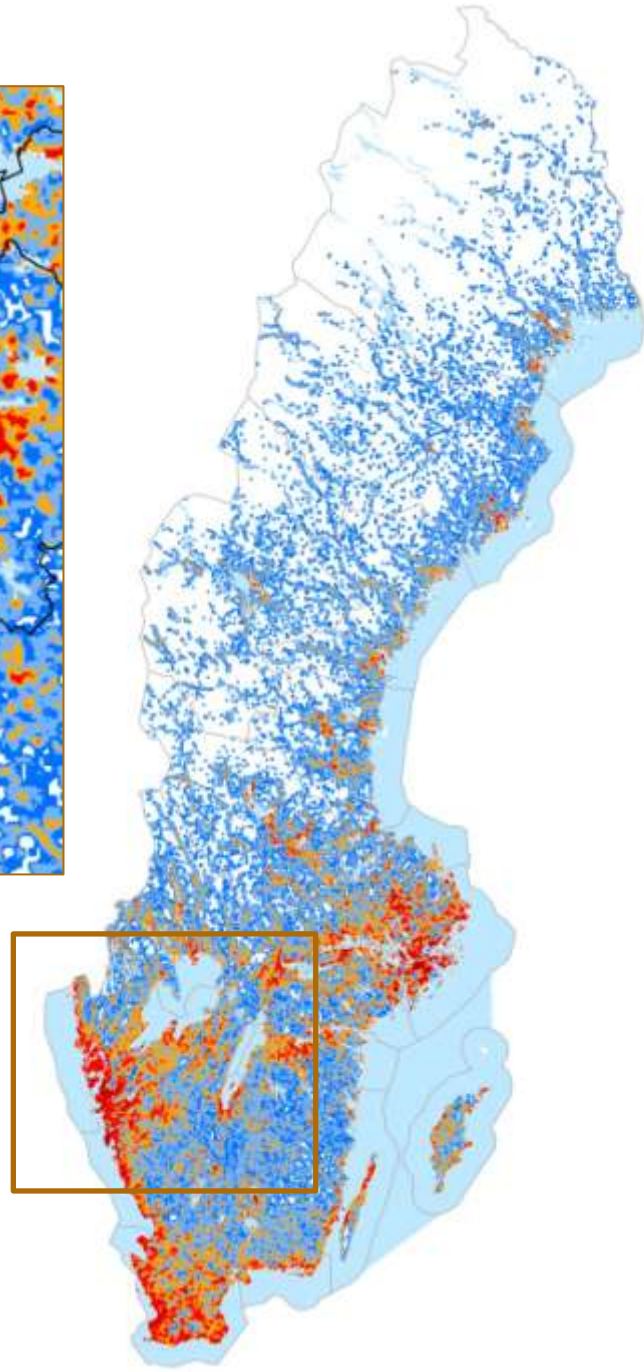
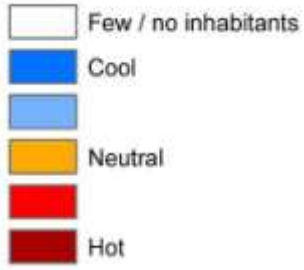
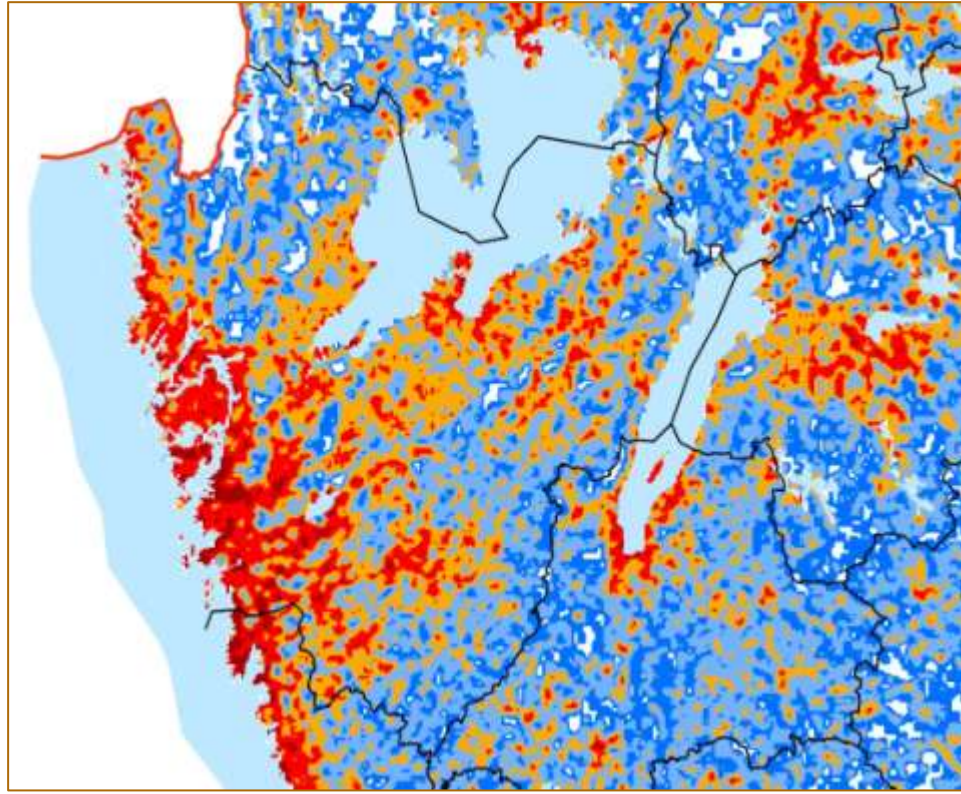
=

9 classes – reclass to 5 classes

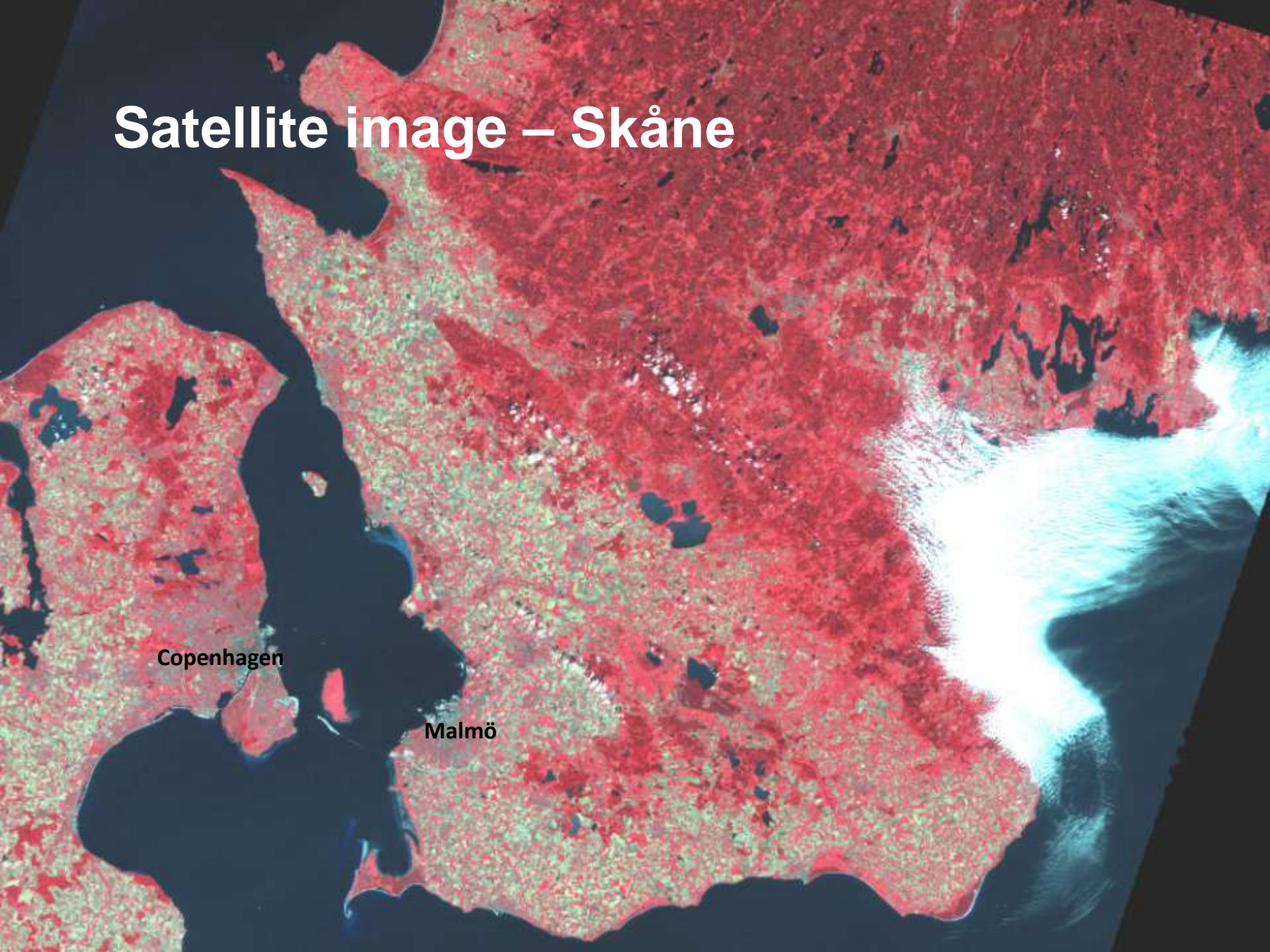


Smoothing filter to enhance regional patterns





Satellite image – Skåne

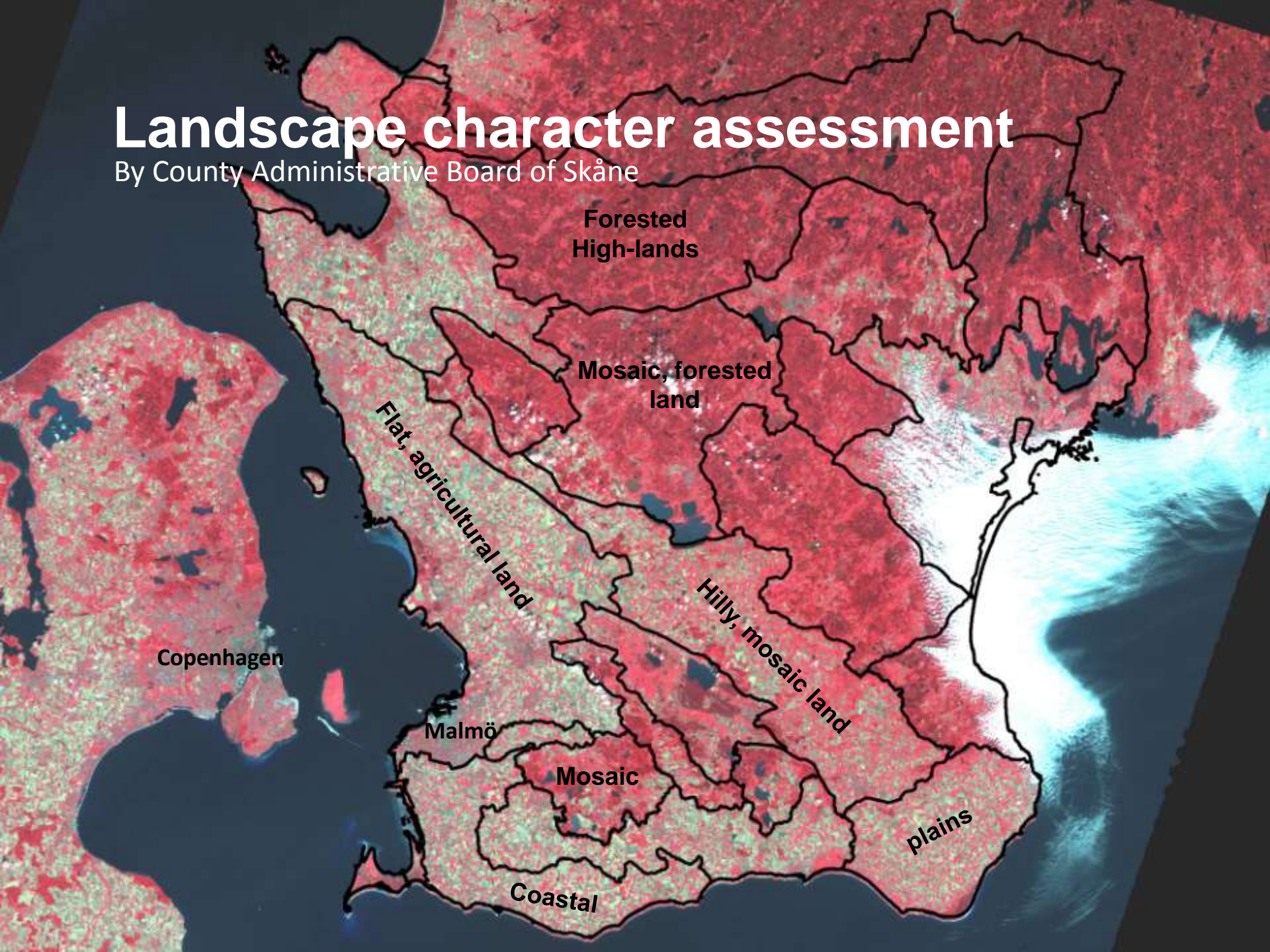


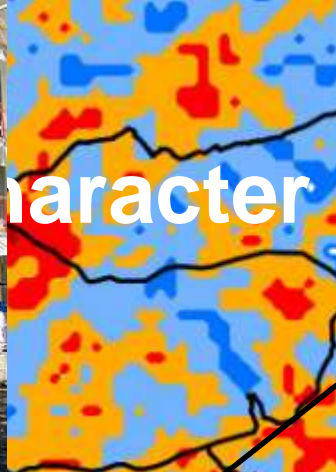
Copenhagen

Malmö

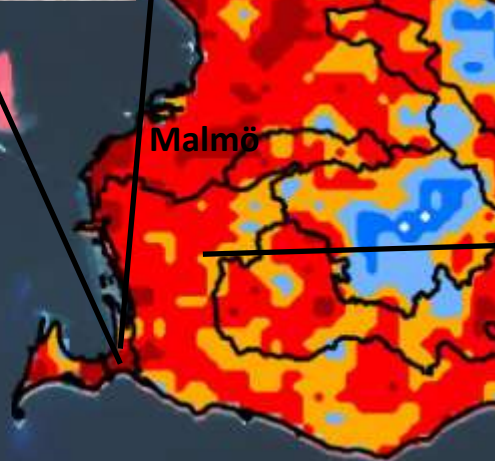
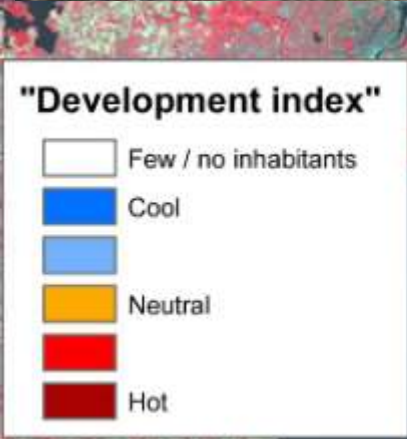
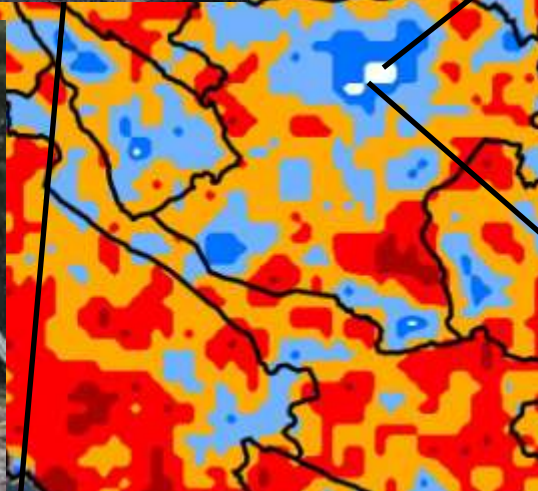
Landscape character assessment

By County Administrative Board of Skåne





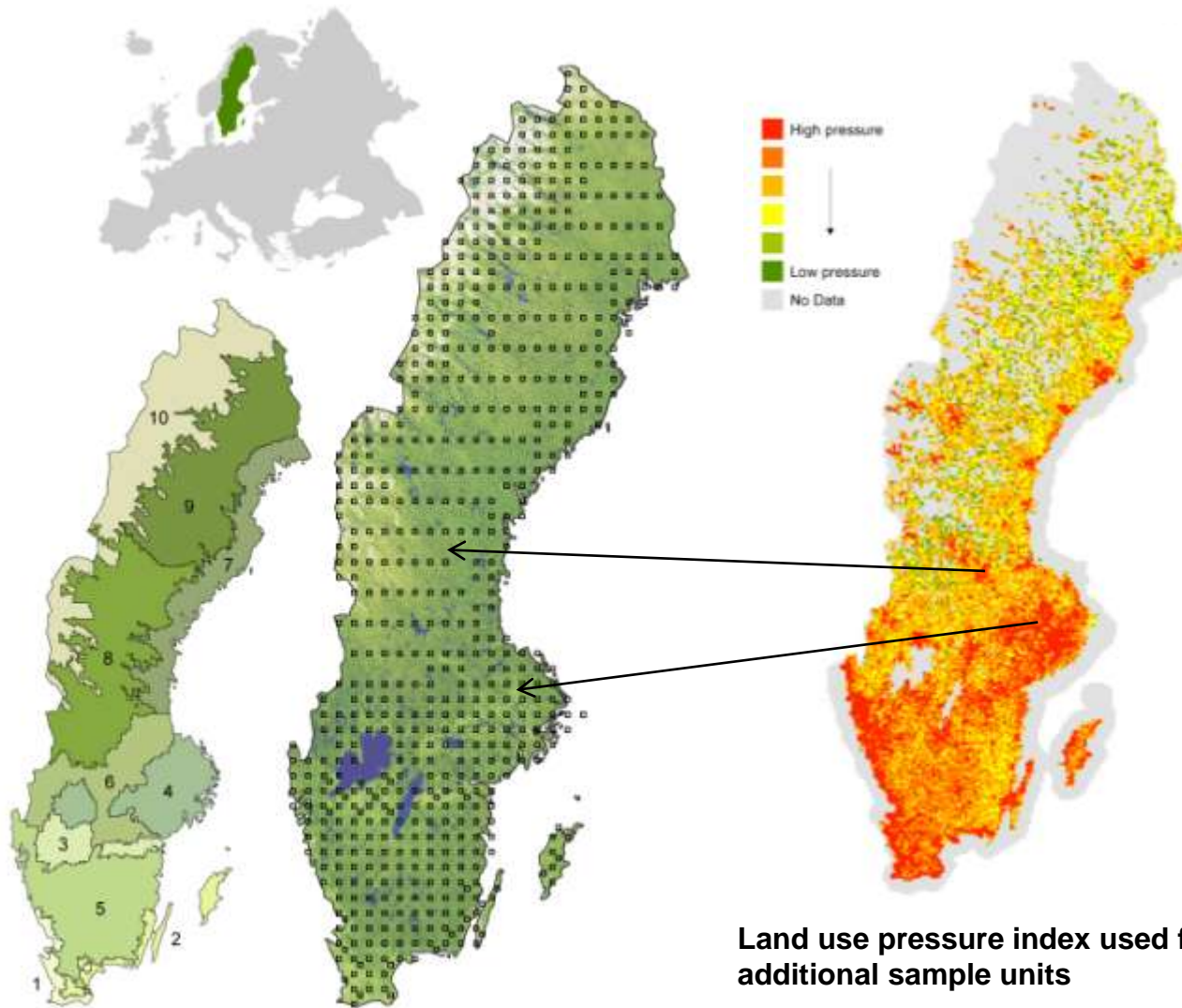
Character



National Inventory of Landscapes in Sweden - Monitoring programme run by Swedish University of Agricultural Sciences



Statistiska centralbyrån Statistics Sweden



10 bio-geographical strata

631 sample units

Land use pressure index used for layout of additional sample units



Conclusions

Benefits

- "Cheap" (compared to field studies etc)
- Repetable
- Possible to cover vast areas
- Dynamic scale

Weakness

- Blunt/inprecise
- Proxy procedure
- Scenarios - *assumed* correlations between the social and economic processes and land use itself





Thank you for your
attention!

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