



# Making satellite data to statistics and accounts

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Group on Earth Observation (GEO) Earth  
Observation for Ecosystem Accounting  
(EO4EA) workshop, March 2017



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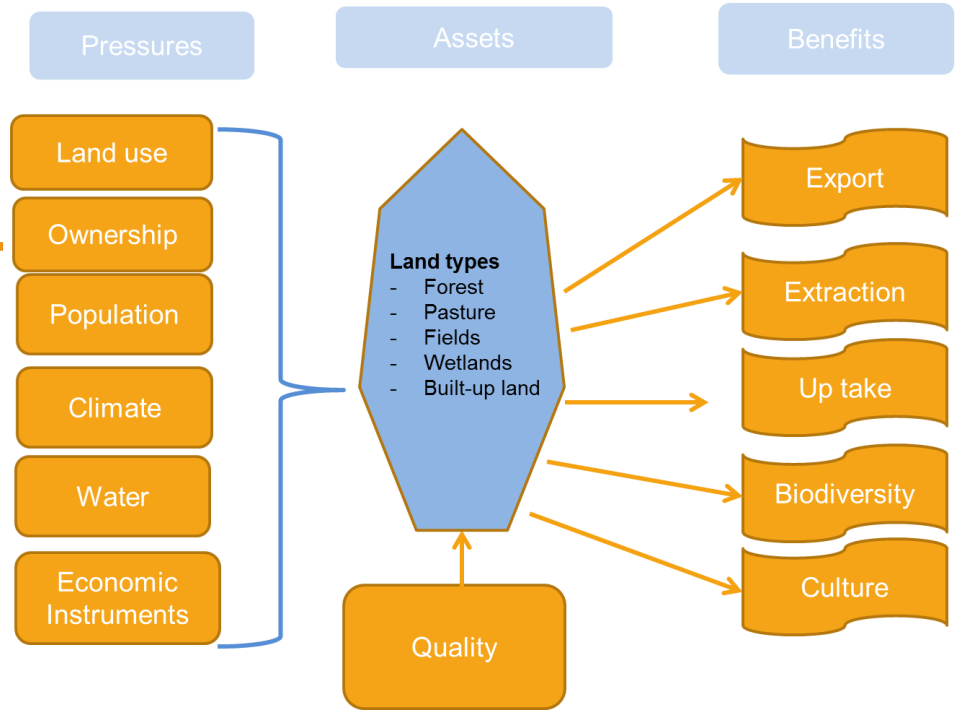
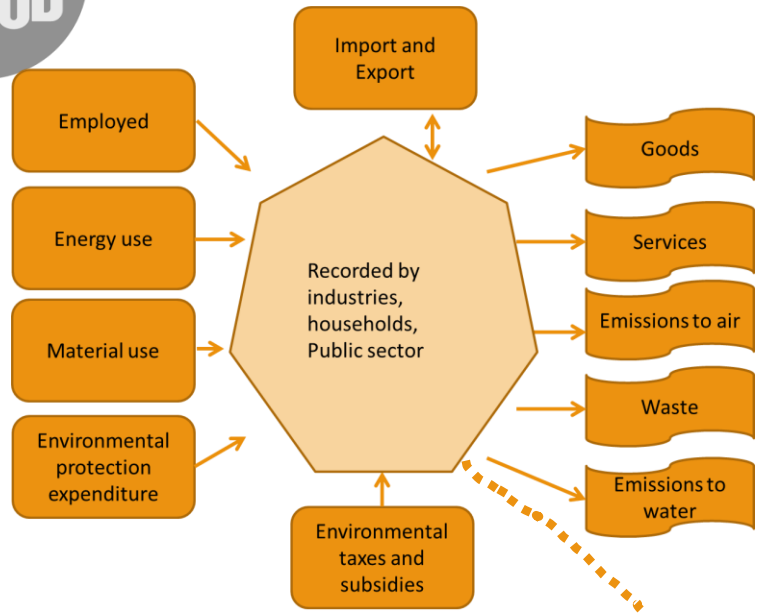
# The System of Environmental Economic Accounting (SEEA)

- An internationally agreed statistical framework to **measure the environment and its interactions with economy**
- The SEEA **Central Framework** was adopted as an international statistical standard by the UN Statistical Commission in 2012
- The SEEA **Experimental Ecosystem Accounting** complement the Central Framework and represent international efforts toward coherent ecosystem accounting





# The concept – a Swedish way of thinking





# Testing the link between land and environmental accounts

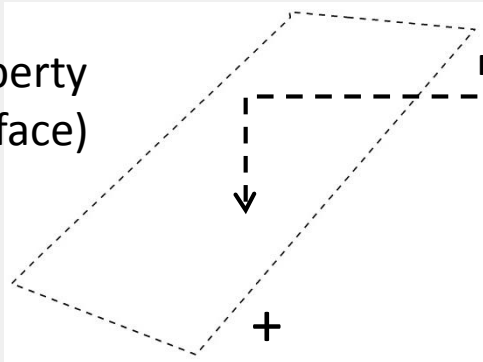
- Two projects until now, commissioned by the Ministry of environment and energy
- The link: industry and households owning land – NACE classification
- Using existing data – too much and not enough!



# Geo data

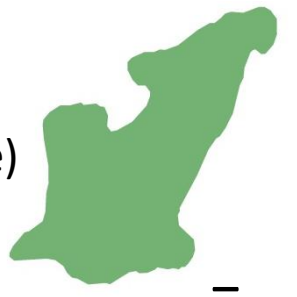
# Register

Property (surface)



Register data connected to geo data

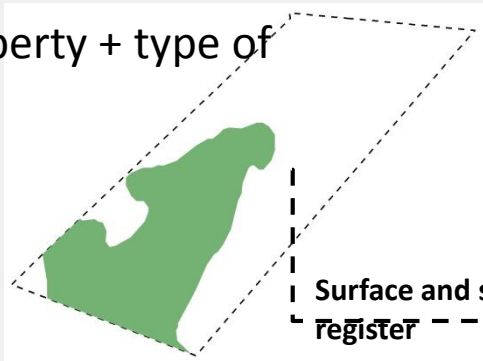
Type of land (surface)



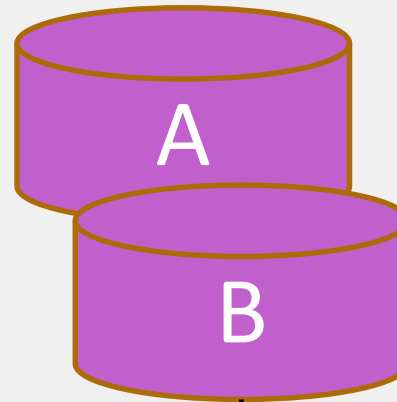
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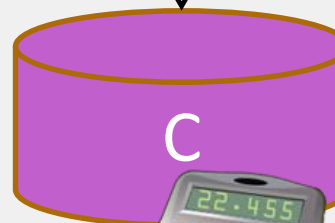
Property + type of land



Surface and selected data from geo data goes back to register

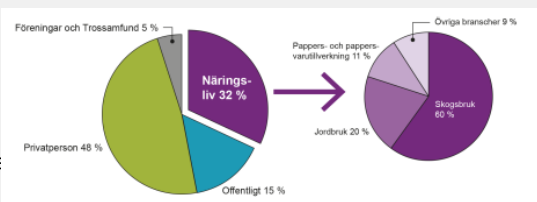


Additional data are hooked in



Allocate hectares

Statistics



here



statistiska\_centralbyran\_scb

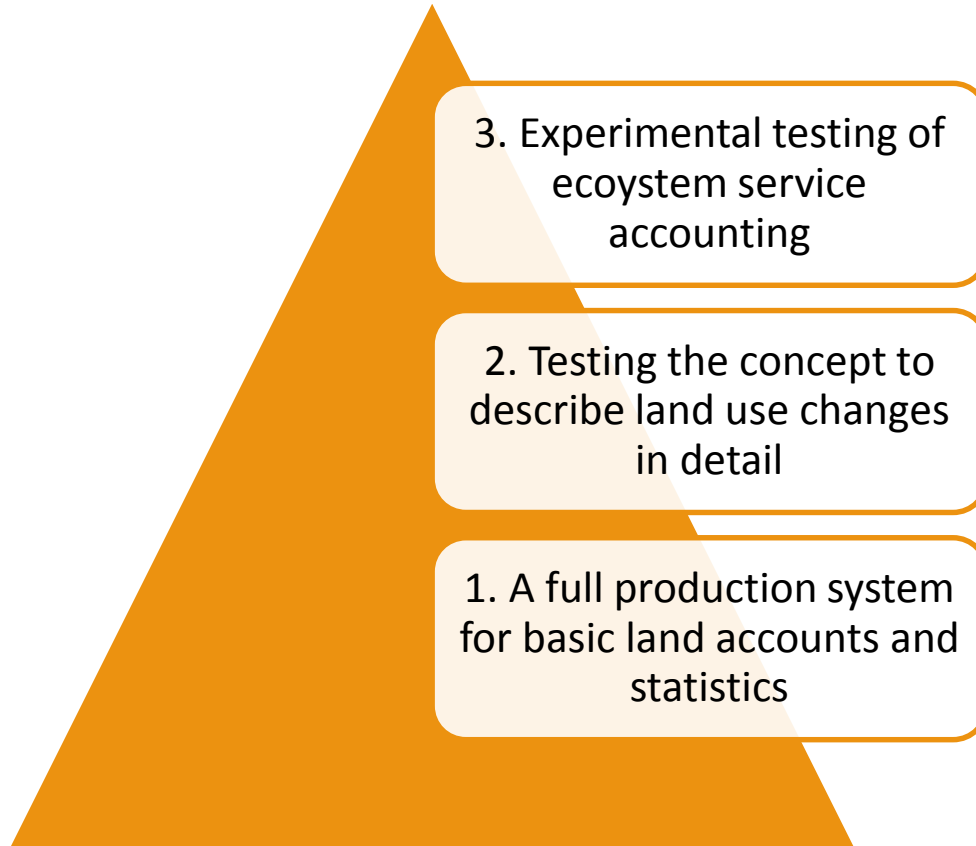


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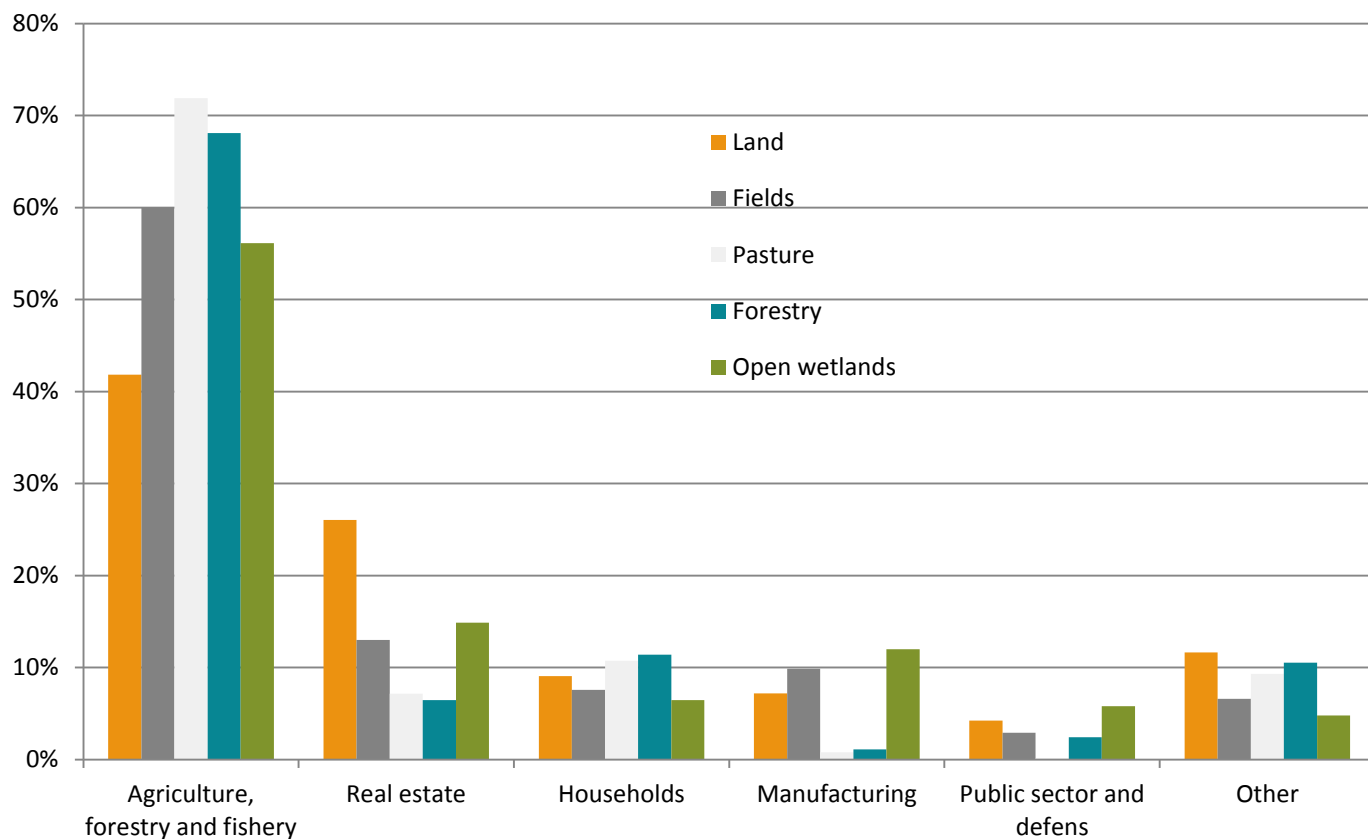


# What has been the result?



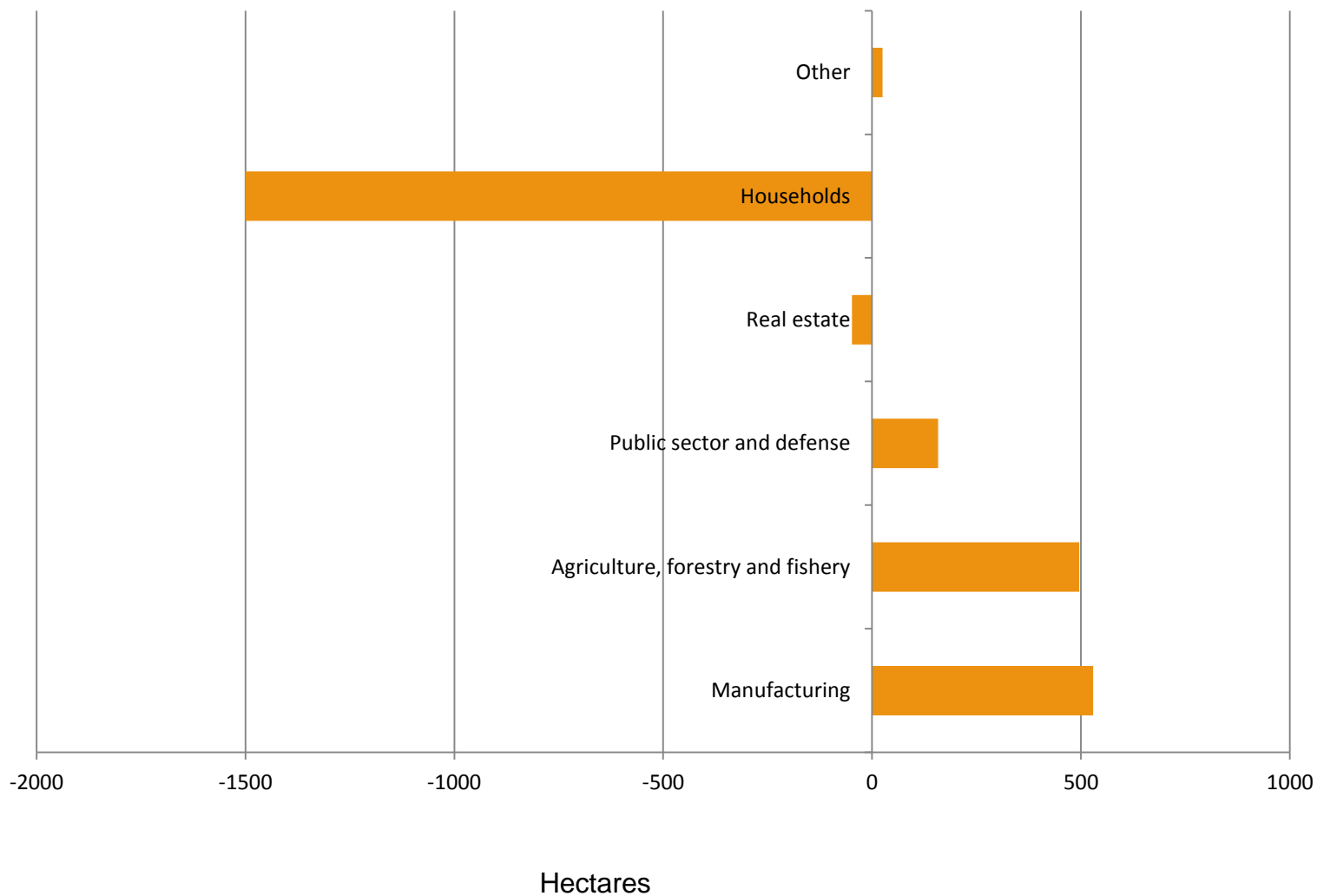


# Land owner by industry, and type of land 2015, NACE





# Changes in land ownership, total land 2011-2015

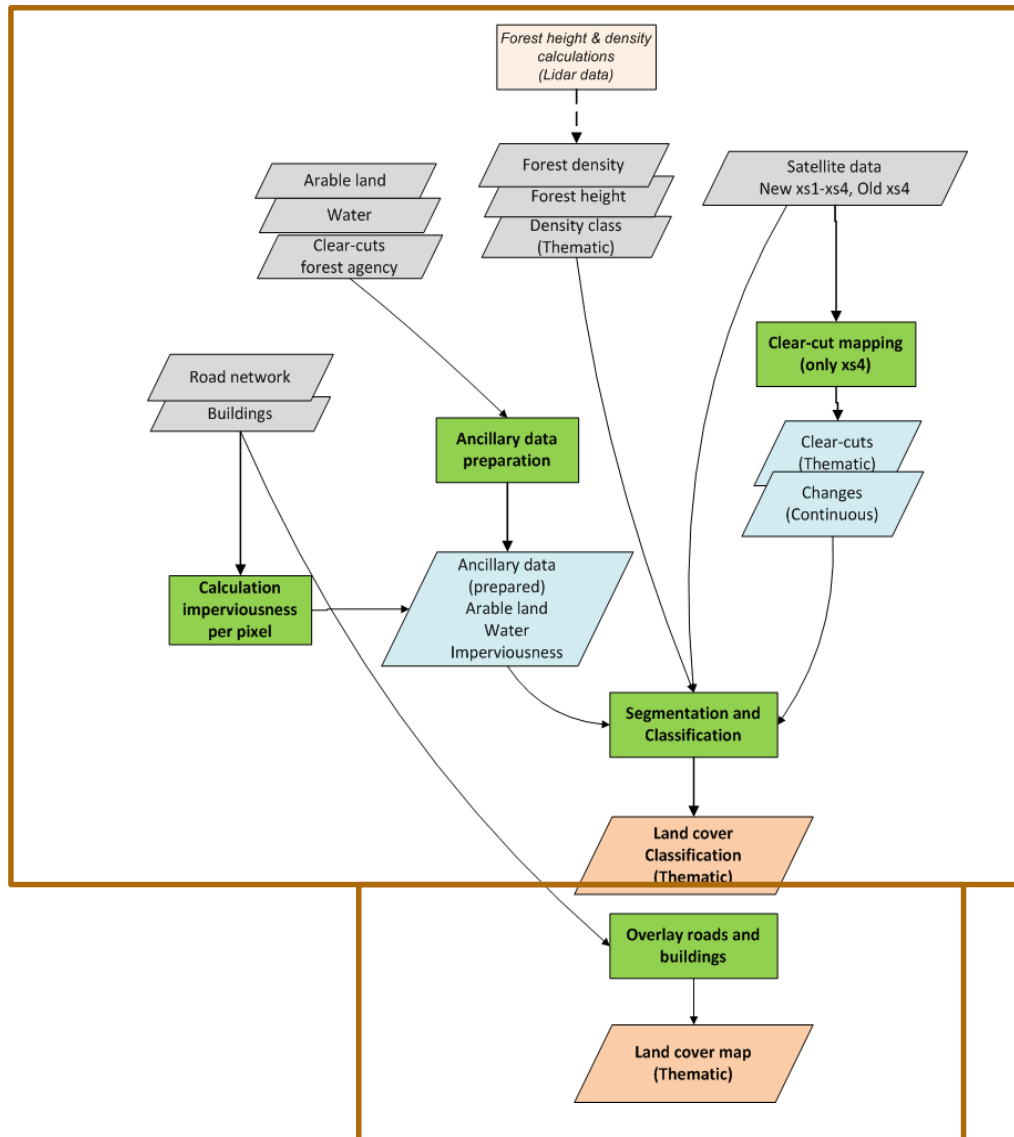






# But how about the underlying process

Classification process - overview



Metria (Consultant)

Statistics Sweden





# A stronger link to ecosystem services

- Land ownership a basic start to understanding changes in land use and the quality it has
- Ownership does not always equal "usership"
- The research community is needed for establishing links between production of ecosystem services and the economy.





# Case: National land cover data

- Consortium of Agencies (10) agreed on a new high resolution national land cover database.
- Multi-purpose & open data product based on Sentinel + laser scanning. To be continuously updated.
- Fits the basic needs for ecosystem mapping
- Additional, tailor-made products can be derived at low costs.
- Statistics Sweden will use the land cover data to retrieve urban green space statistics and improve land accounts





# Some general conclusions

- Difficult for NSIs to keep remote sensing trained staff for high-end use of EO data
- ...but, NSIs need to involve in development of EO base products (such as land cover maps etc).
- From a statistical perspective, important to obtain a high degree of consistency as regards to existing classification systems (between information retrieved from EO data and other data)

