



Framework for Development  
of Environment Statistics  
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# Units for environment statistics and their classification

statistics for informed

decision making

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# Issue for FDES

## Tension

- Cover and integrate everything in a very complex system
- Provide a simple explanation and a short list of data items that should be collected by countries

# Units as a key concept in environmental statistics

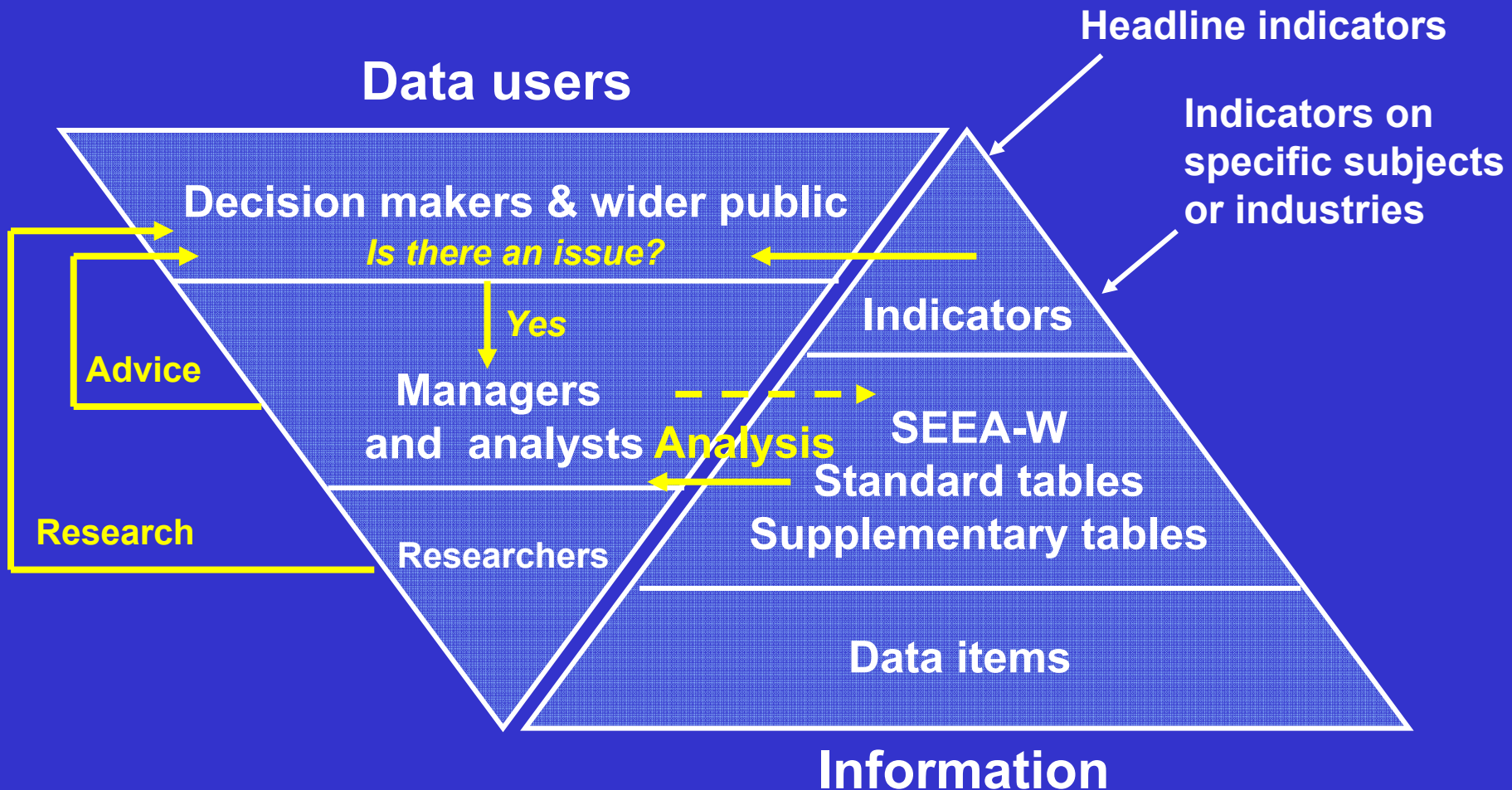
## Agents in the economy

- People, businesses, government, households, etc
- Enterprises and establishments

## Elements of the environment

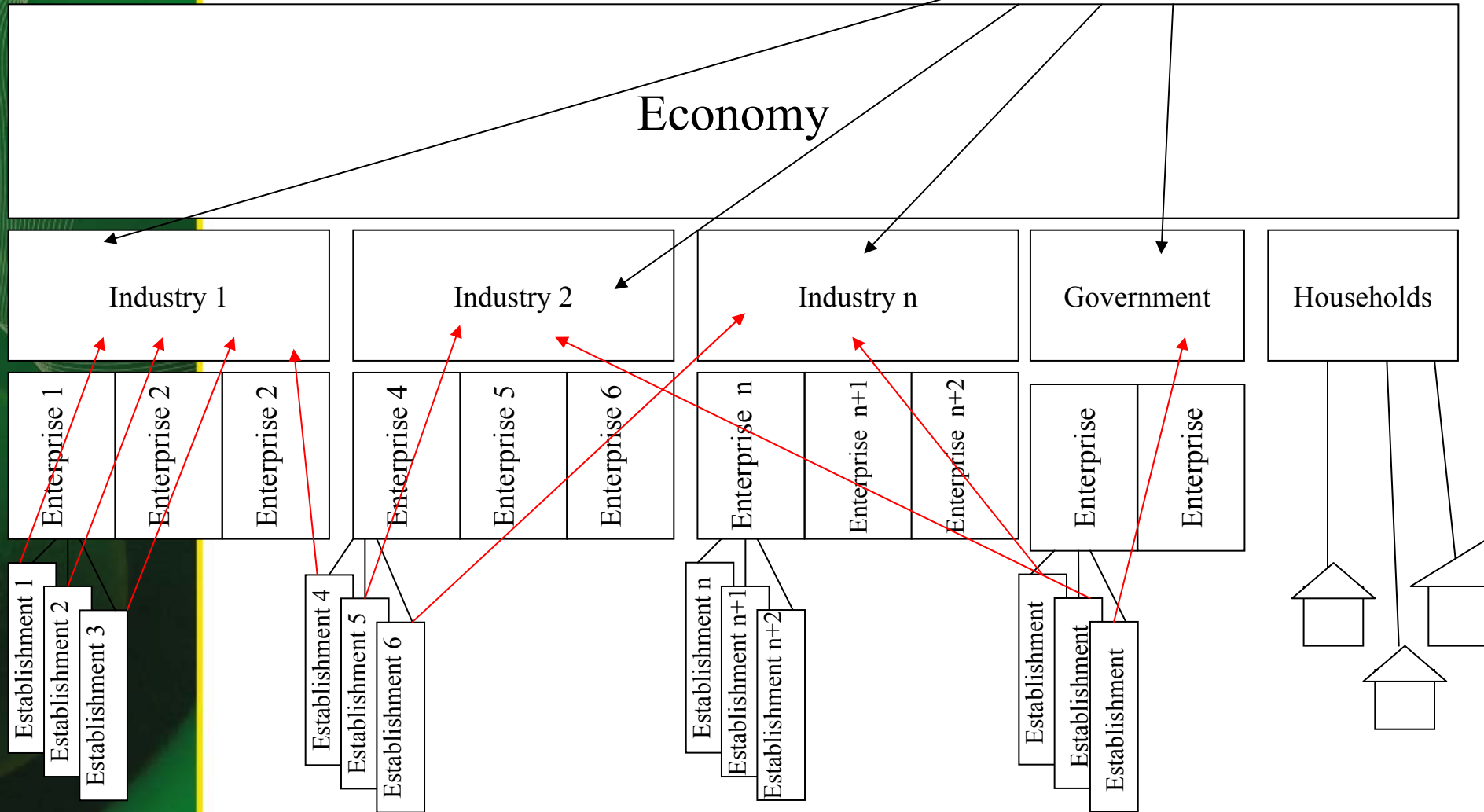
- Land (wetlands, grassland, forests, agricultural land, urban land, water (rivers, lakes, groundwater), species, sub-surface minerals and so on.
- Human settlements and land covers

# Audiences for information: indicators, accounts and data



# Units and industry classification

International  
Standard Industrial  
Classification



# Characteristics of economic units

1. Identification code
2. Location
3. Industry (ISIC)
4. Type of economic organisation
5. Type of legal organisation
6. Size (e.g. by number of employees)



# Units of the environment: water, cont.

## Surface water bodies

- Lakes
- Rivers and streams
- Wetlands
- Glaciers
- Snow and ice
- Artificial reservoirs

## Aquifers

- Unconfined aquifer
- Confined aquifer

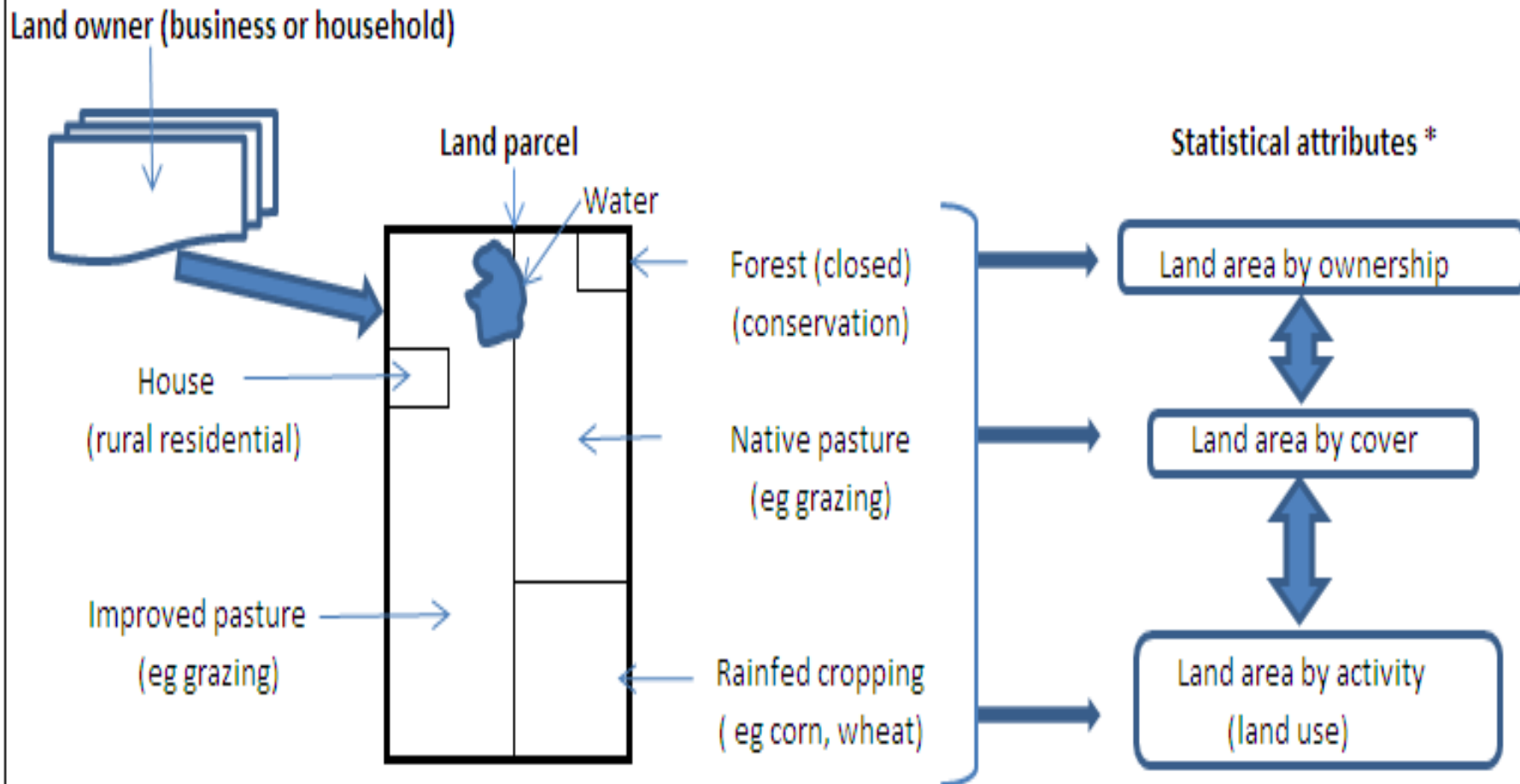
## Soil water



# Characteristics of inland water bodies

1. Name
2. Identification code
3. Location
4. Type of water body (e.g. lake)
5. Organisation(s) responsible for management
6. Physical characteristics (e.g. saltwater, freshwater, size in area or volume)

# Linking statistical units to land and the characteristics of the units



\* eg land value, industry, employment, income, production etc

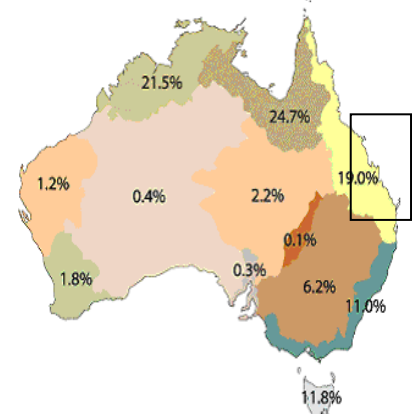
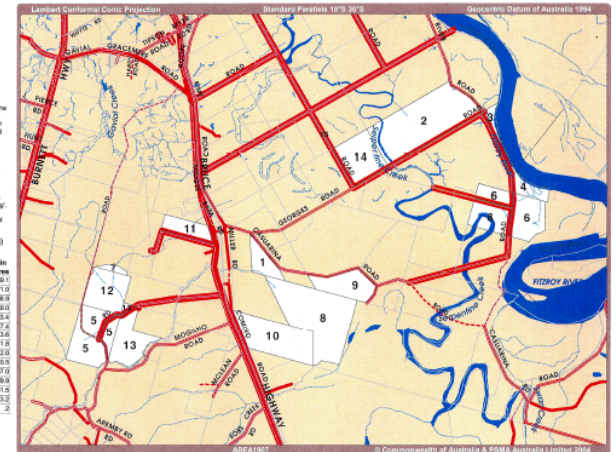
# Great Barrier Reef Catchments

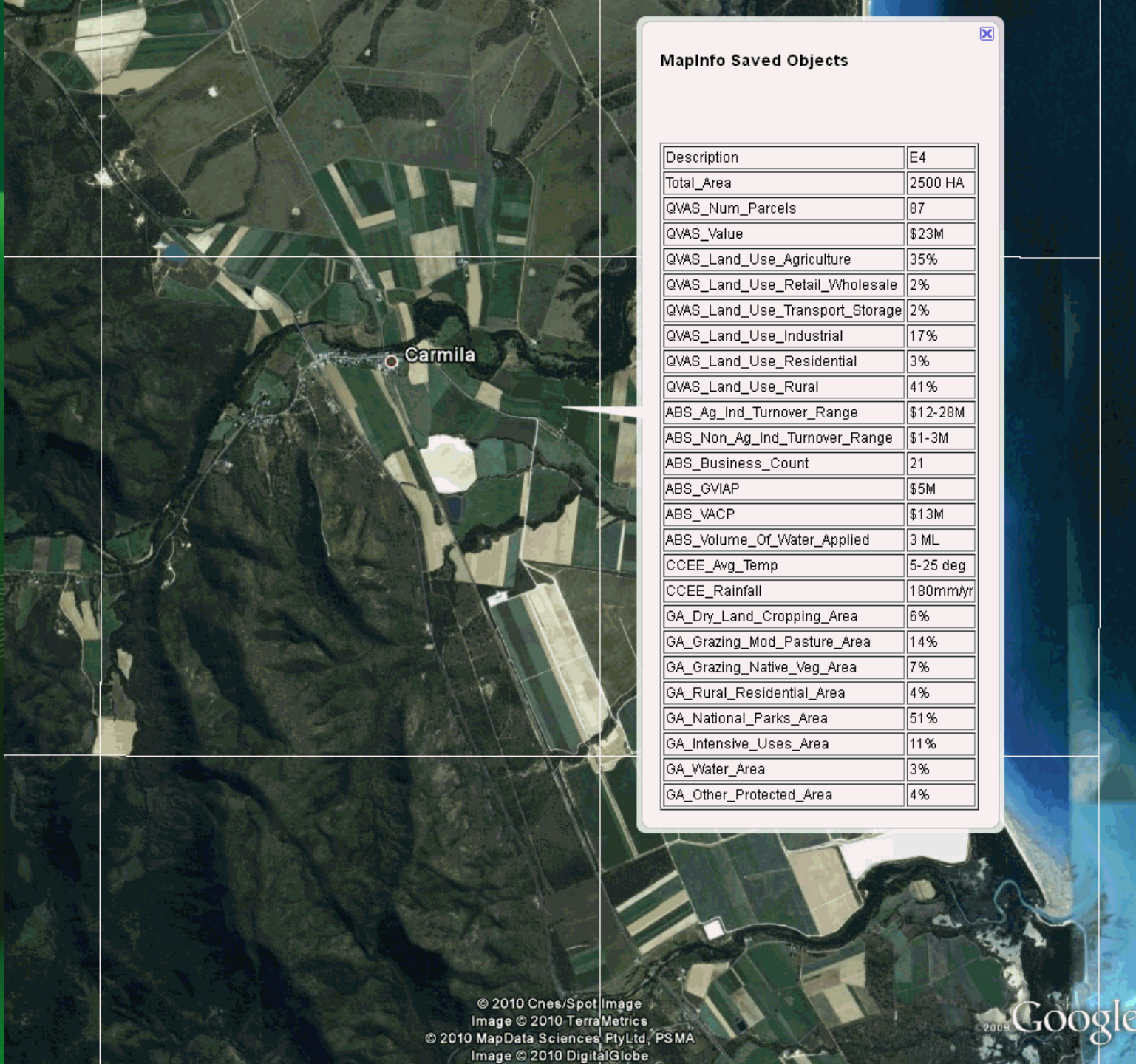


Based on or contains data provided by the Department of Natural Resources and Mines, Queensland 2000 which gives no warranty in relation to the data including accuracy, reliability, completeness or suitability and access to holding including without limitation, liability in negligence for any loss, damage or costs (including consequential damage) arising in any use of the data.

For the purpose of the accompanying survey, CNL 15 area parcels contained within the map constitute your holding. The list in the table below corresponds to the parcels on the map. The total area of your holding is shown below.

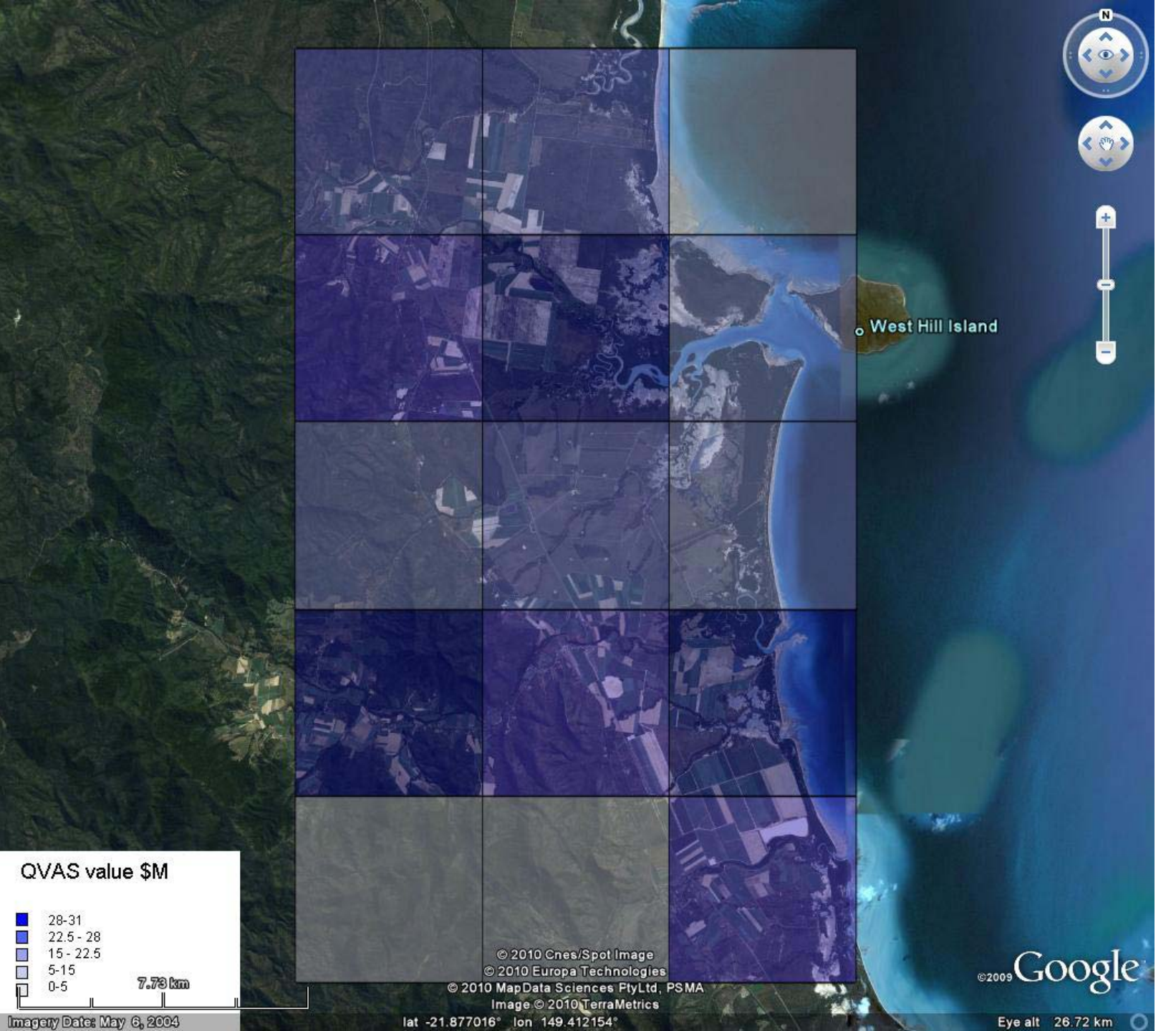
Total Holding Area (Hectares)		Area in	
2016		2016	
ID	Lot Plan	Area in	hectares
1	102 LVI402	59.1	
2	116 LVI403	391.0	
3	136 LVI407	36.9	
4	138 LVI407	40.0	
5	1538 LVI4042	183.4	
6	155 LVI404	347.2	
7	155 BR04036	43.6	
8	2 RPN0002	341.8	
9	3 RPN0004	132.8	
10	3 RPN0006	210.5	
11	115 LVI411	87.0	
12	100 LVI4039	128.9	
13	643 LVI4038	131.6	
14	99 LVI403	143.2	
15	1 RPN0175	2	





### MapInfo Saved Objects

Description	E4
Total_Area	2500 HA
QVAS_Num_Parcels	87
QVAS_Value	\$23M
QVAS_Land_Use_Agriculture	35%
QVAS_Land_Use_Retail_Wholesale	2%
QVAS_Land_Use_Transport_Storage	2%
QVAS_Land_Use_Industrial	17%
QVAS_Land_Use_Residential	3%
QVAS_Land_Use_Rural	41%
ABS_Ag_Ind_Turnover_Range	\$12-28M
ABS_Non_Ag_Ind_Turnover_Range	\$1-3M
ABS_Business_Count	21
ABS_GVIAP	\$5M
ABS_VACP	\$13M
ABS_Volume_Of_Water_Applied	3 ML
CCEE_Avg_Temp	5-25 deg
CCEE_Rainfall	180mm/yr
GA_Dry_Land_Cropping_Area	6%
GA_Grazing_Mod_Pasture_Area	14%
GA_Grazing_Native_Veg_Area	7%
GA_Rural_Residential_Area	4%
GA_National_Parks_Area	51%
GA_Intensive_Uses_Area	11%
GA_Water_Area	3%
GA_Other_Protected_Area	4%



# Conclusions

- A statistical unit is the entity about which information is sought and for which statistics are ultimately compiled.
- Economic units are well established
- Environmental units have only been defined for inland waters
- Need to identify and classify environmental units for other terrestrial, marine and atmospheric environments.
- For the purposes of collecting and compiling environment statistics it is important to have frames for relevant environmental units and relevant economic units