www.grid.unep.ch

Regional training workshop on geographical information system for energy planning

Data and metadata collection guidelines

Data collection requirement for EcowrexII – UNIGE

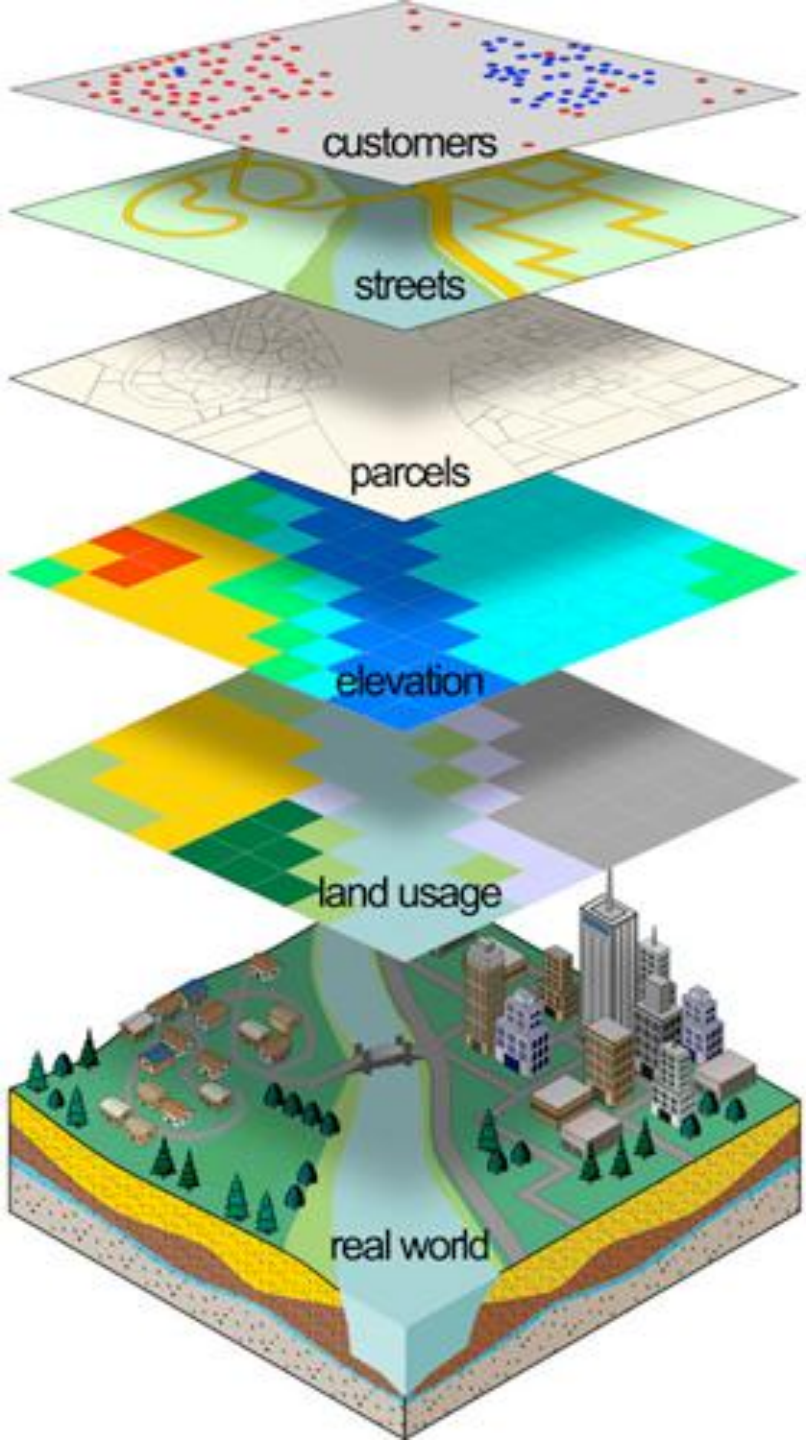
Dakar, 11 August 2014

Andrea de Bono
Université de Genève
UNEP/GRID-Geneva

Data collection requirement for EcowrexII – UNIGE

Why we would like to use (local) data from Member States?

How your data will be used?



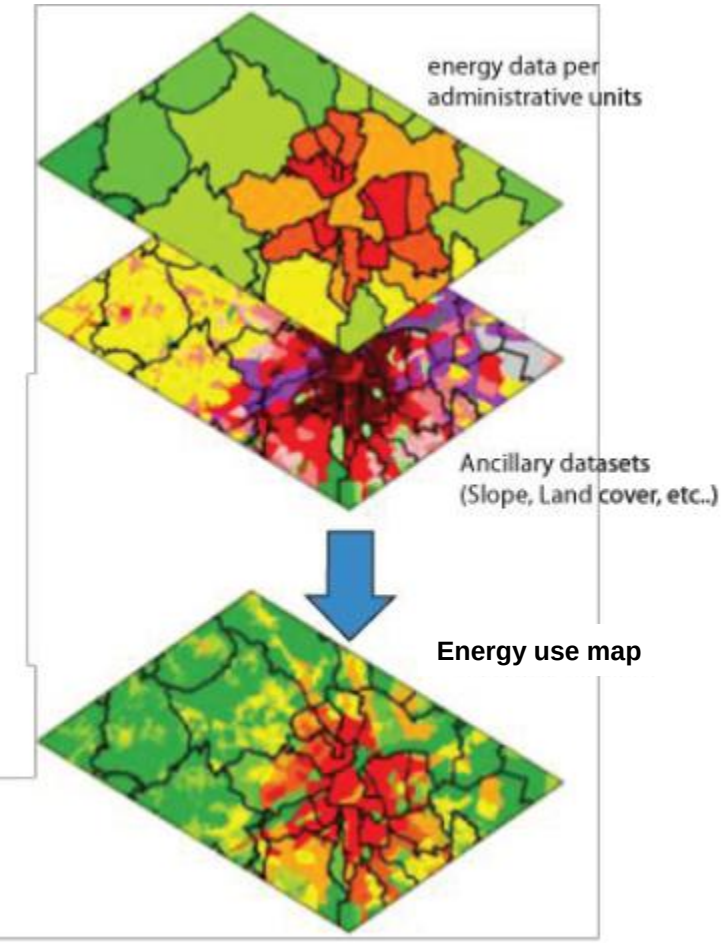
Geographic Information Systems (GIS) is a computer-based system used to manipulate, manage, and analyze multidisciplinary geographic data.

A GIS constitute the work platform for the potential mapping of renewable energy *since they allow integrating the available information into a single organized and interactive system.*

In the ACP –EU project: "Promoting sustainable energy access through the use of Geospatial technologies in West Africa", we (GRID-UNIGE) are responsible for:

1. ***To create a spatially explicit datasets (GIS) on energy consumption***
2. ***To create a spatially explicit datasets on potential energy production (solar and wind)***

Both Top-down and Bottom-up approaches will be employed



Top-down approach

Data on energy use are generally provided by administrative units.

Since principal energy users like population and industrial/commercial units are distributed not uniformly inside these units, these data do not reflect the real patterns of energy use on the field.

There is a need to spatially disaggregate (downscaling) the energy consumption, i.e. to represent it in smaller and uniform geographical units, for example cells of 1 km^2 or 1 ha.

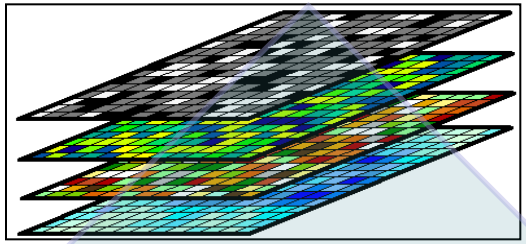
Most of socio-economic data are provided by international organizations (WB, IEA..) at national level….

This coarse geographic resolution don't capture the variations inside the country!!!

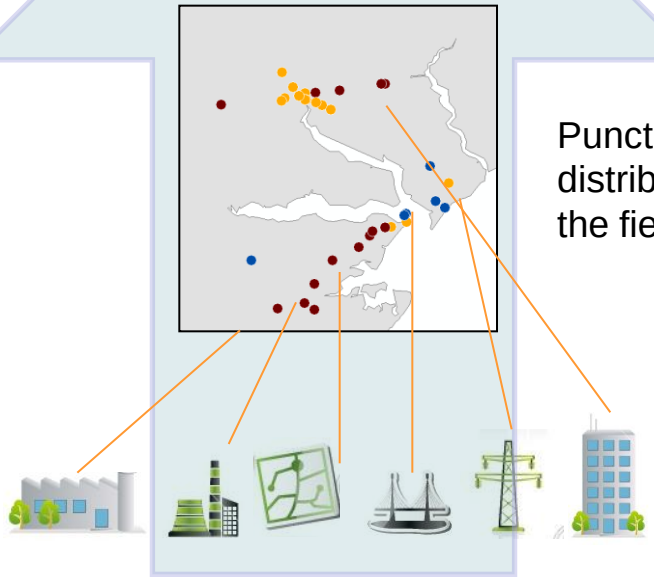
In order to generate the more realistic map, we need the finest geographical resolution in terms of size of administrative units: in this way, sub-national data provided by national statistical offices, ministry etc. will be surely the best option.

Bottom-up approach

Aggregation into thematic layers



- Urban land
- Network
- Power plants
- …



Punctual distribution on the field

Local Infrastructure (GIS data)

Example of local infrastructures

- Hospitals, schools
- Factories, farms, industrial sites
- Roads, railways
- Power plants
- Harbors, airports
- Mines

Data on “local infrastructures” can guarantee a result closest to the real world

…Measure against modeling

How your data will be used?

In a first part of the project they will be exclusively employed in the processing phase*, or in other words they will actively contribute to the building of energy consumption and potential energy production maps.

We can guarantee that:

- ***Your original data (raw) will be not accessible from external users***
- ***Once maps will be published, the source of data will be fully mentioned***

* Embedded into the maps (not accessible)

How your data will be used?

In a second phase of the project during the construction of the Ecowrex II platform (SDI) it could be possible that some of your data will be published but,

We can guarantee that:

- ***You will decide if they can be published and shared or not.***
- ***You will decide the right of use of your data: access, download…***

UNIVERSITÉ DE GENÈVE

UNEP | GRID Geneva

Merci

www.grid.unep.ch

debono@unepgrid.ch