

Information for Survival

The role of Statistics.

Lars H. Backer

lars.backer@mdmapping.se

European Forum for GeoStatistics (EFGS)

Think Global Act Local



1.

Two cultures

The two sides of today's dialectic

The B&I Perspective

(Based on Economics)

- Government
 - (Of the people, by the people for the people?)
 - To be advised by Economists
 - Project: production, distribution and consumption of goods and services
- National resources
 - ES (Economic System B&I)
 - SS (Social System as employees)
 - AE (Artificial Environment)
- Natural resources
 - NE (Natural Environment)



The S&P Perspective

(Based on Science & Practice)

- Government
 - (Of the people, by the people for the people?)
 - To be advised by Science & Practice (S&I)
 - Project: Sustainable Co-evolution of Nature and culture
- Artificial Evolution Process
 - AE (Artificial Environment)
 - SS (Social System)
 - ES (Economic System)
- Natural Evolution Process
 - NE (Natural Environment)

Beantwortung der Frage: Was ist Aufklärung?

„Aufklärung ist der Ausgang des Menschen aus seiner selbst verschuldeten Unmündigkeit. Unmündigkeit ist das Unvermögen, sich seines Verstandes ohne Leitung eines andern zu bedienen. Selbst verschuldet ist diese Unmündigkeit, wenn die Ursache derselben nicht am Mangel des Verstandes, sondern der Entschliesung und des Muthes liegt, sich seiner ohne Leitung eines andern zu bedienen. Sapere aude! Habe Muth, dich deines eigenen Verstandes zu bedienen! ist also der Wahlspruch der Aufklärung.“

Enlightenment is man's emergence from his self-incurred immaturity. Immaturity is the inability to use one's own understanding without the guidance of another. This immaturity is self-incurred if its cause is not lack of understanding, but lack of resolution and courage to use it without the guidance of another. The motto of enlightenment is therefore: Sapere aude! Have courage to use your own understanding!

IMMANUEL KANT An Answer to the Question: "What is Enlightenment?" Königsberg in Prussia, 30th September, 1784.

2.

Critique

The scientific perspective

Who should we listen to?

1. No problems: Business as usual.
 - The global economic community (market analysts, economists, based on assumptions)
 - Short perspective: **No problems**
 - Based on the assumptions the world economy growing at ca. 2% a year (will be doubled by 2034)
 - Long Perspective: **No Problems**
 - Economy is self regulating, system will take care of itself (assumption)
2. Big problems: Business as usual is not feasible.
 - The natural science community (environmental scientists, ecologists etc. based on scientific observations)
 - Short perspective: **Danger of deep recession from which there is no recovery**
 - Economy growth limited by overpopulation, resource constraints, global heating
 - Long perspective: **Not sustainable global culture**
 - We are destroying the prospects for future generations
3. Governments have so far listened primarily to Economists
 - But:
 - Trust in the E Scenario is diminishing
 - Trust in the S Scenario is increasing

S&P Critique

- ES (Economic System)
 - ES responsible for the efficient production, distribution and consumption of goods and services.
 - ES problems with Direct and Indirect costs
 - ES problems with difference between Capital and Income?
 - ES based on assumptions not knowledge!
- AE (Artificial Environment)
 - ES responsible for CO2 emission and global warming
 - Gross waste of unrenowable Energy and Water
 - Increasing cost less benefit for urban systems
- SS (Social system)
 - ES benefits the "haves" on the expense of the "have nots".
- NE (Natural system) **CRITICAL!**
 - ES responsible for the destruction of the natural foundation for the Economy.

3.

Warnings

In the short and the long perspective

Warning

1. We are destroying the prospects for future generations!
(For our grandchildren?)
2. We are risking a "perfect storm" in the form of a global recession from which there is no recovery!
(For our children?)

- Are we to face a Peripeteia to learn?

*Drop, drop— in our sleep,
upon the heart
sorrow falls, memory's
pain,
and to us, though against
our very will,
even in our own despite,
comes wisdom,
by the awful grace of God*

- From Hamilton's 1937
Aeschylus
(Agamemnon 179-183):

4.

Plan B

There might still be time..

There may still be time..

1. Reform (develop and improve) the Economic system
 - Legislation (Indirect action)
 - Both direct and indirect costs
2. Repair the damage to the Natural foundation of our economy
 - Projects initiated by governments (direct action)
 - Funded through tax on indirect cost

An integrated project of projects..

- Reform the Economic System (ES)
 - To serve as a means to an end!
 - To include both direct and indirect costs.
- Respond to social needs (SS)
 - Fight extreme poverty
 - Basic health and education
 - Stop population growth
- Rebuild the built environment (AE)
 - Learn from Detroyt! Abandon Las Vegas!
- Repair damage to the natural foundation for our economy (NE)
 - Restore the natural fertility of the Soil
 - Restore and protect natural aquifiers . (Water management)
 - Restore and protect terrestrial biotopes. (Forests etc.)
 - Restore and protect maritime biotopes. (Fisheries)
 - Recycle Everything!

5.

GGISS

Information for survival

GGIISS

- The GGIISS idea
A Global Geographic Integrated Information System of Systems
- GGIISS Structure
 - Semantics (objects)
 - Attributes (Statistics)
 - Features (Map Features)
- GGIISS Scale (from Global to local)
- GGIISS Scope (the whole MES)
 - ES Economic System
 - SS Social System
 - AE Artificial (manmade) Environment
- GGIISS Dynamics
 - Simulations

6.

The Role of Statistics

A new foundation....

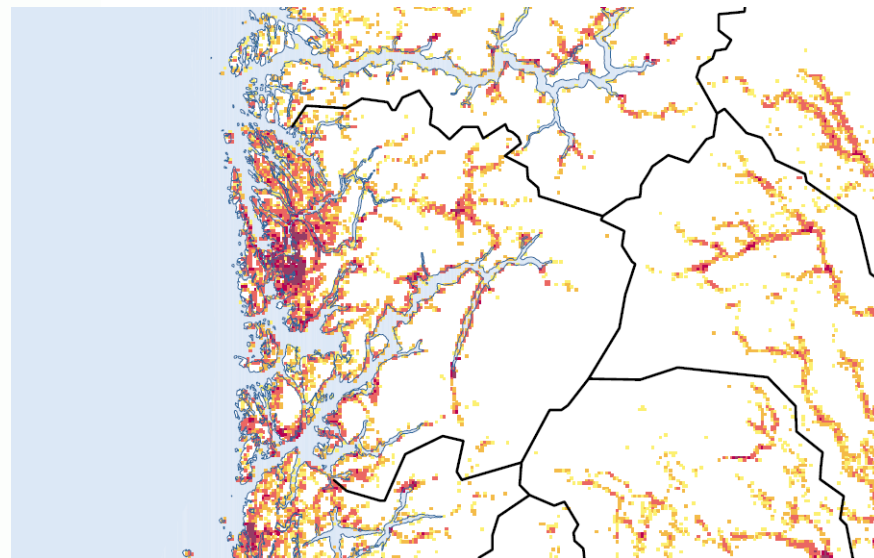
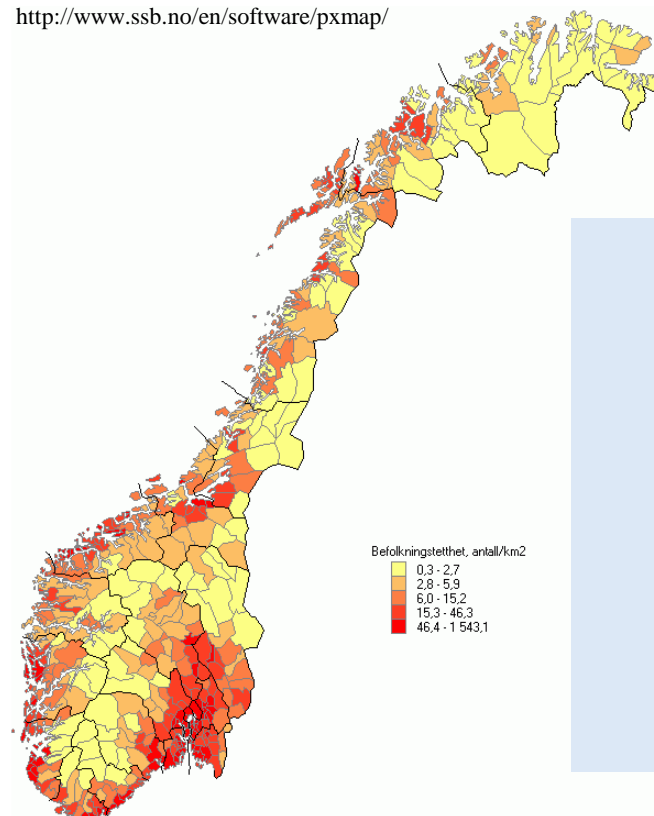
Both Grids and Blobs!

- Grid raw data (preactive and interactive action)
To provide qualified point data, the raw material for spatial analysis
 - To serve S&P the cooperation between practical science and scientific practice.
 - We need a to build a new high resolution neutral foundation for the systems of official statistics that may be used for S&P GGISS for the interactive management of Spaceship Earth as an integrated Man environmental System.
- Blob aggregations (passive and reactive evaluation)
To provide aggregations to delineated areas, (the result of spatial analysis) for for accounting/benchmarking/monitoring.
 - To serve B&I the cooperation between sustainable economics and public administration.
 - We need to develop the systems of official statistics to serve the accountant perspective to sustainable development.

Befolkningstetthet. Antall innbyggere per km². Kommune. 1999

Klikk på kartet for å redigere kartet i PX-Map på egen PC.

<http://www.ssb.no/en/software/pxmap/>



Thank You!

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Population explosion?
Resource constraints?
Climate Change?



Solvable Problems?

Not without GeoStatistics !