

Impact of Decentralisation and Community Empowerment to Spatial Information Management

Gerhard Muggenhuber

Federal Office of Metrology and Surveying, Austria



Reinfried MANSBERGER

Institute of Surveying, Remote Sensing, and Land Information
University of Natural Resources and Applied Life Sciences, Vienna/Austria



Content of Presentation

- Urban rural Interrelation
- Information tools → Decision-making
- changing resources over time for Well-being?
- Selected Issues of Geoinformation
 - Data Acquisition
 - Data Distribution
 - Required Data for Decision-making in "Resource Management"
- Conclusions and Requirements

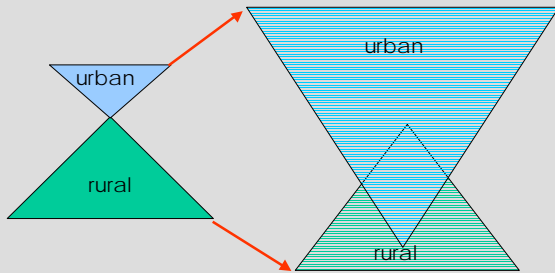


MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management



Urban - rural Interrelation

From neighborhood to conflict or interrelation ?

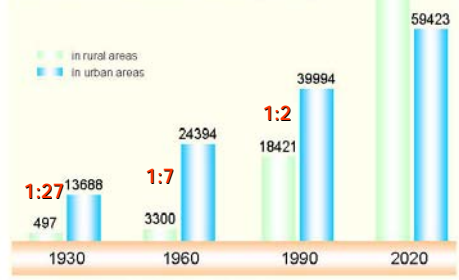


MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management



? Urbanization ?

Rural and urban population in the francophon Western Africa (in 1000)



Source: Debouay, P., Montpelier in entwickung • ländlicher raum Heft 5/03



MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management



Awareness and statistics on urbanization

- India is now 60% urban - what does this tell us?
- Swedish government's census bureau proposed: changing the definition of urban centres to a threshold of 1,000 persons
- Rapidly growing urban centres over the last 40 years are often in areas with prosperous agricultural areas



MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management



Challenges

- Access to land / land tenure systems
- Procedures for maintenance of land related data
- Access to markets
- Income and occupational diversification
- Education, capacity building
- Migration
- Decentralization
- Farming systems and urban expansion
- Competition between farming and urban-related use



MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management



Well-being ← Decision-making ← Info tools

- Awareness:**
interdependence of urban / rural communities
Spatial and temporal interaction between people and resources
The urban-rural divide is a universal problem although the aid agencies are focused on third world countries.
- Urbanization** eat up good agricultural areas
The 'urban fringe' - focus on the peri-urban areas'.
- A key element is **information and related infrastructure**
Our LIS to be broader based - especially land use and potential land use.
- Don't forget **water as a resource!**
The key to both urban and rural survival / we need to map it as a resource.
- Access to land** is of vital significance
The issue is about access to land and management of the use of land.
- Physical Infrastructure** (e.g. for transport) as a form of land use
Necessity of physical as well as conceptual urban-rural linkages.
- Economic backbone** in the rural areas.
Economic infrastructures need to be maintained.

From AGRO to INFO

Nach Nefodow, L.A. (1997): Der 6. Kondratieff: Wege zur Produktivität und Vollbeschäftigung im Zeitalter der Information

MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management

Well - being ↔ Resources

Society	<p>Agriculture: Land, forests, water, Industry: Energy, mining, transport, → land, forests, water</p> <p>Information: Data, ICT-tools, procedures, → land, forests, water</p>	Rural → Urban
---------	---	---------------

Improved use of resources:
land, water, energy, information
tools for better decisions

Spatial interrelation of resources
→ demand for **Land / Water Management**

Tools: → Spatial **Information Management**
→ Urban + rural **planning tools**

Remarks from others

At least 80% of public and private decision-making is based on some spatial aspects
The ISO BULLETIN, July 2001

..... to make relevant (geo) information available and accessible to decision makers and the general public
Objectives of CODI III, 2003

Good Governance requires transparencies and community participation in the decision process
Information Note, CODI III, 2003

Geoinformation

Geodata (GD) is a collective term for all kinds of data with a spatial reference.

GD	Spatial Reference Geodetic Reference System Units of Administration Addresses Geographic Names ...	Thematic Data Physical Data Economic Data Ecological Data Social and Cultural Data Legal Data ...
----	---	---

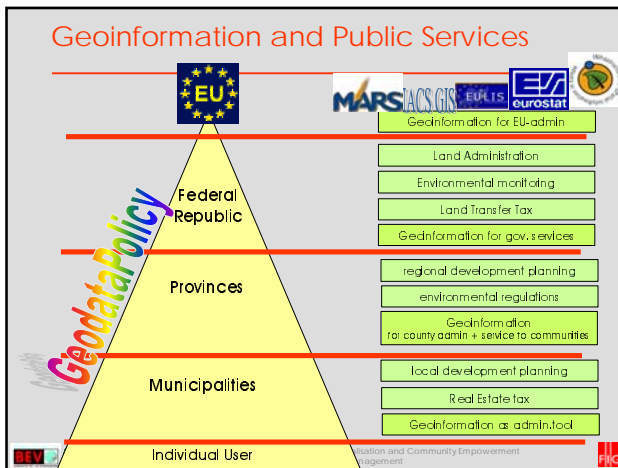
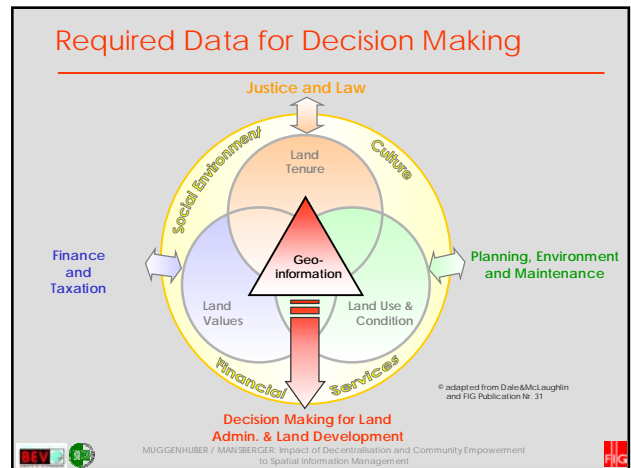
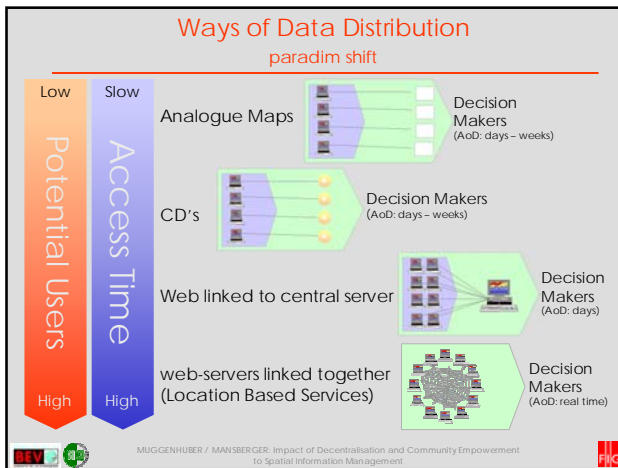
Geoinformation (Geographic Information, GI) is the result of **Geodata** and **Knowledge**
(aggregation, fusion, combination, filter, models, etc.)

GI = Geodata + Knowledge

Geodata Acquisition

improved systems and methods

- Positioning
GPS, LBS
- Laser scanning
(airborne or terrestrial systems)
- Digital image data
(high resolution, SPOT, QUICKBIRD, radar imageries)
- Image processing
(Semiautomatic / automatic; Pattern recognition)



Conclusions and Requirements related to GI Support for D & CE

- There is a strong need on GI for public and private decision making.
- GI is part of infrastructure in a country.
- Implementation of SDI requires cooperation:
 - PPP
 - amongst all professions involved in land management
- Decentralisation and Community Empowerment (D&CE) demand detailed geoinformation.

MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management

Conclusions and Requirements related to GI Support for D & CE. ... Cont'd

- D&CE require data access for an increasing number of users.
- D&CE demand GI-experts on a local level.
- D&CE require a specific geodata policy.
- D&CE require data exchange between different levels of public and private institutions.

MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management

Cooperation is needed to meet the challenges

Clash of professional perspectives / incentives for cross sector work

- Urban specialists need to understand more about the potential stimuli to urban development coming from agriculture
- Rural development specialists need to give more attention to the potential of urban demand

Collaboration

- between urban, peri-urban and rural local governments
- with the UN and other international / regional agencies in the formulation and implementation of policies affecting the use, development and management of land and marine resources (Art.2 of FIG Statutes)

natural resources with focus on water

MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management

Role of Surveyors

FIG and its members associations can be **enablers**, that is they can act as community developers, organizers or consultants alongside Community Based Organizations

Surveyors can be **mediators** between people and the authorities that control access to resources, goods and services

Surveyors can be **advisers** to State institutions on policy changes to increase local access to resources and greater freedom to use them in locally-determined ways, and that also includes rural-urban linkages (Töpfer, 2000).



MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management



What remains to be said

. . . Thank You for Your Attention



MUGGENHUBER / MANSBERGER: Impact of Decentralisation and Community Empowerment to Spatial Information Management

