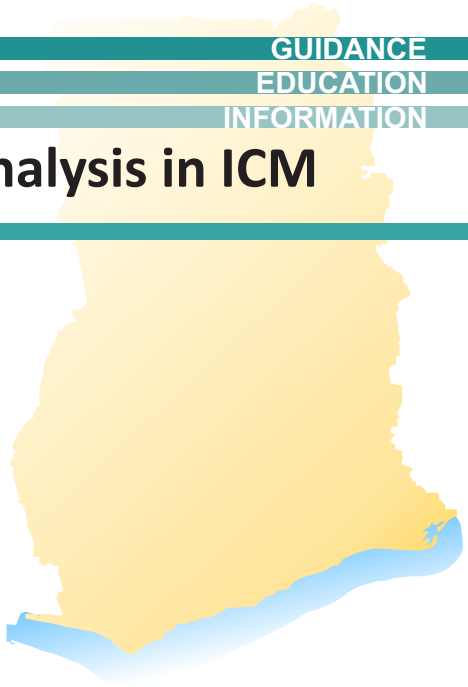
Tools for data gathering and analysis in ICM

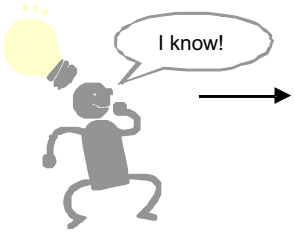


Definition ICZM:
Integrated Coastal Management (ICM) is a strategic approach to future-oriented development of seas and coasts. The aim is to balance environmental, economic, social, and cultural objectives. ICM mediates between the different uses of the coastal region such as nature conservation, tourism, coastal protection and fisheries and seeks to encourage participation of stakeholders.

Further information:

- ICM in Europe: http://www.coastalguide.org/
- LOICZ is a core project of the International Geosphere-Biosphere Programme (IGBP) and the International Human Dimensions Programme on Global Environmental Change (IHDP): http://www.loicz.org/

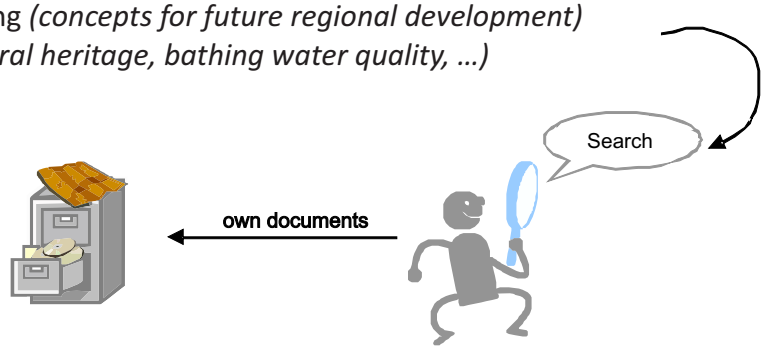
Spatial data plays a highly important role to conduct successful ICM processes. A few tips how to get a sound data basis:

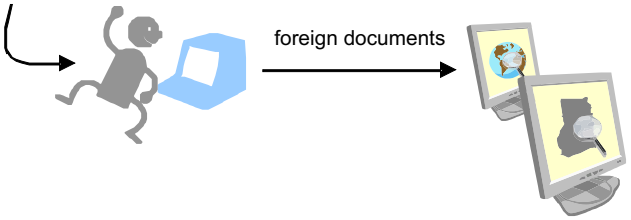


ICM-Data, some examples:

- economy *(shipping, industry, mining, mariculture, …)*
- ecology *(habitat data, nature conservation, …)*
- spatial planning *(concepts for future regional development)*
- opthers *(cultural heritage, bathing water quality, …)*

1st step:
search for in own data that you might already have (analog or digital maps, analog or digital data like statistical data or items with exact locations)



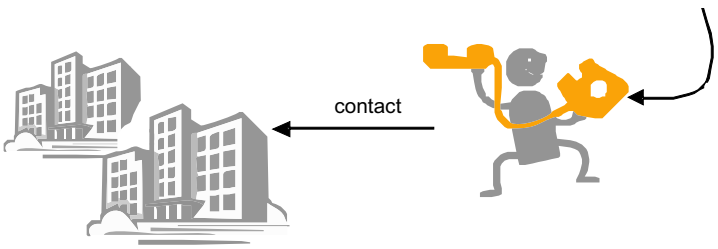


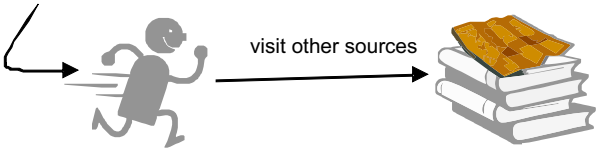
2nd step:
search online on global, international, national, regional and local websites for free and downloadable spatial data

Some data bases:

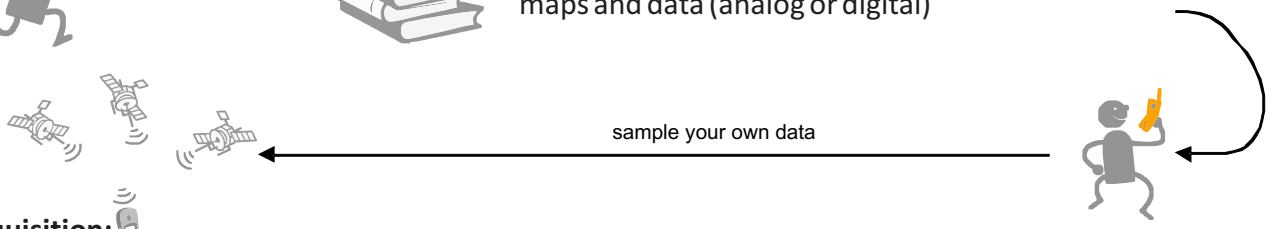
- GRID-Arendal in collaboration with the United Environment Programme (UNEP); provides maps, graphics and links to web atlases: http://www.grida.no/
- International Coastal Atlas Network; like African coastal & marine atlas: http://ican.science.oregonstate.edu/
- Integrated Coastal Management Global Web Service: http://go.worldbank.org/FE2VAGHCU0

3rd step:
Personal contact with other data holders, e.g. authorities, research institutes, NGOs or projects; request additional data (may incur costs); build up a network



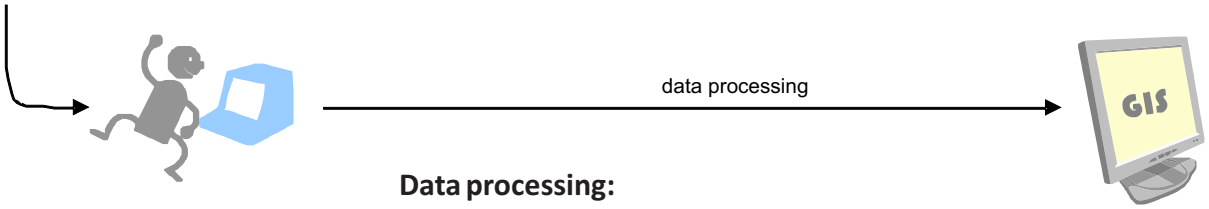


4th step:
Search in local libraries and archives for more maps and data (analog or digital)



Data aquisition:

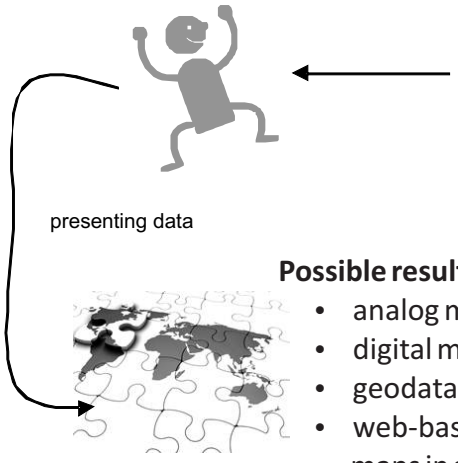
- refine existing data (e. g. composition of a beach, i.e stony or sandy) by on-site studies
- calculate new data from existing data (e. g. derive unnavigable zones from water depths or marine protected areas)
- exact measurements of new objects with geodetic methods (like survey with tachymeter or laserscanning)
- measurements with commercial GPS-receiver



Data processing:

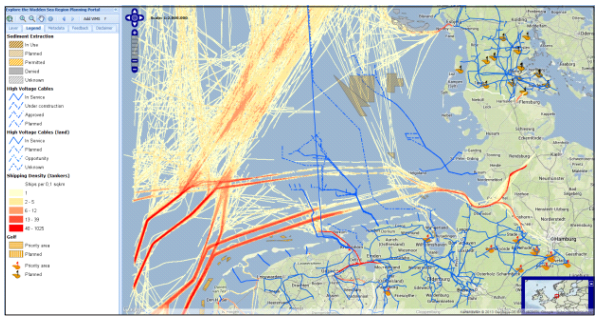
- scan analog maps and digitize analog data
- georeference scanned maps and digitize relevant data
- edit digital data
- evaluate digital data (like quality control)
- symbolize self-explanatory and clear
- record metadata

→ use GIS as far as possible and a spreadsheet program for table editing



Possible results:

- analog map collection
- digital map collection
- geodatabase with variable complementary layers
- web-based (online) map portal with possibilities for a larger audience to create maps in an easy and quick way



Example for an online map portal:
The Wadden Sea Region Planning Portal at

http://gis.eucc-d.de/northsea

provided by EUCC-D.

Contact:

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Friends of the Nation

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

On behalf of BMZ Federal Ministry for Economic Cooperation and Development