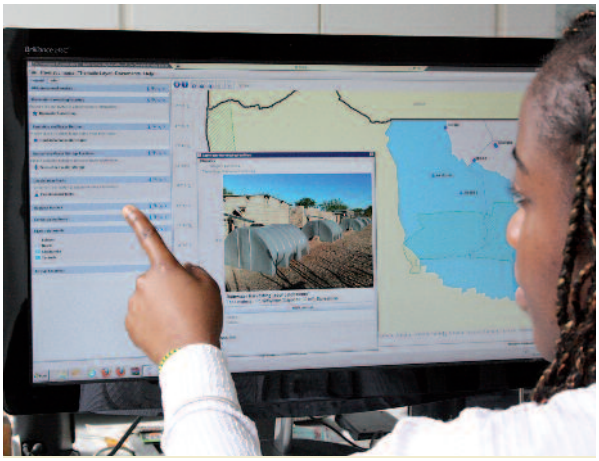
Factsheet

CUVEwaters integrated water resources management

Interactive Water Information and Planning Tool for the Cuvelai-Etosha Basin

Challenge

The Integrated Water Resources Management (IWRM) is widely accepted as an appropriate approach to strive for sustainable water resources management. To implement the IWRM, there is a need for environmental information of the river basin which requires reliable spatial data and information from different disciplines but also consistent tools for the storage, management and dissemination of relevant data and information. In Namibia, although the data is available, the accessibility of this kind of information is limited as there are no tools equipped for providing access.



The IWIP-CEB supports the synopsis of various thematic and spatially distributed information.

Approach

The Interactive Water Information and Planning Tool for the Cuvelai-Etosha Basin (IWIP-CEB) was developed by CuveWaters in a participatory approach. GIS experts of the four Regional Councils (RCs) and members of the Basin Management Committees (BMCs) in the CEB, as well as from MAWF, GIZ and BGR were involved.[1] The IWIP-CEB supports stakeholders in ministries, RCs, BMCs and science in decision making based on geographically linked (GIS) data of various topics and sources, for example about population and infrastructure at the regional or basin-wide scale.

1 MAWF – Ministry of Agriculture, Water & Forestry, GIZ – German Corporation for International Cooperation, BGR – German Federal Institute for Geosciences and Natural Resources

Platform for maps and documents

The IWIP-CEB is a demand-oriented tool of limited complexity that provides a platform to manage and disseminate maps and documents.
Designed maps of the Cuvelai-Etosha Basin and of Namibia from the CuveWaters project and external sources include

- Environment (climate, geology, soils, vegetation, surface- and groundwater, land use etc.)
- Infrastructure (transportation, settlements, water supply, health care)
- Administration units and population statistics
- Research results (CuveWaters implementation sites and water technology, analysis on water risks, livelihood etc.)

For more information see www.cuvewaters.net

Documents of the CuveWaters project and the MAWF include

- Factsheets and additional information for RFWH, Desalination and Sanitation & Reuse
- Rain- and Floodwater Harvesting Toolkit
- Policy brief for RFWH, brochures and posters
- Journal articles and other publications
- Multimedia (photos, videos, interviews)
- CEB and IWRM documents of the MAWF

While developers compile GIS and other data with the Geopublisher software, end users of the IWIP-CEB only need basic knowledge to design their own maps, filter data thematically and geographically and export them. In this regard, the IWIP-CEB can serve as an educational tool in IWRM and geographical as well as general information management. The IWIP-CEB is distributed as stand-alone software including all data either on storage media or online. Nevertheless, the IWIP is not restricted to the CEB and can be developed for other basins in Namibia.

From the basin to the national scale

The final version of the IWIP-CEB was taken over by the MAWF. The ministry supports the integration of research and planning activities as well as stakeholders in the CEB. In a follow-up project at MAWF, the IWIP will be tested as an information system for river gauging and water quality sites at the national scale. Here, the goal is to make the data visible and to support monitoring and planning processes with IWRM relevant information.

Functionalities at a glance

IWIP (thematic atlas and information tool)

- Software and data in one Java-based application (platform independent (PC, Mac, UNIX, Linux)
- Design, display and analysis of geo-data (vector and raster)
- Filter-tool to display only a subset of data
- Export of data for use in GIS environments and spread-sheets
- Illustration of metadata
- Link to further documents like PDFs or videos
- Display of graphics linked to features in the map (pop-up information)

Geopublisher (atlas creator software)

- Open source software (distribution and modification free of charge) with easy handling and user forum
- Start of a separate atlas project or update of an existing one
- Support of multilingual entries for greater accessibility and stakeholder integration
- Design of menus and content management
- Integration of GIS data and composing new maps
- Atlas export for use offline on CD-ROM or online

Links

IWIP at IWRM Namibia (hosted by MAWF):
http://www.iwrm-namibia.info.na/projects/cuvewaters/index.php

IWIP at CuveWaters project:
http://www.cuvewaters.net/Digital-Atlas.113.0.html

CuveWaters project:
http://www.cuvewaters.net

Geopublisher, developed by Stefan Tzeggai (Wikisquare) and maintained by Michael Janik:
http://live.osgeo.org/en/overview/geopublisher_overview.html

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