

# Nakuru local urban observatory

Fast-growing cities and towns in developing countries are often characterized by poor infrastructure, inadequate provision of basic services, and degradation of local resources. When development efforts make their way across urban landscapes, some communities may benefit more than others. ESAPP sought to empower communities at risk of exclusion in Nakuru, Kenya, by enabling their participation in the creation of a spatial planning tool.

## Sustainable development challenge

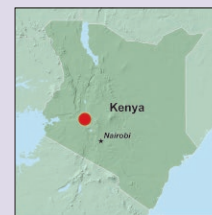
When it comes to exploiting new opportunities, people's knowledge and social capital are decisive. Often, when opportunities arise, a limited number of people succeed in strategically maximizing their existing power and strengthening their position, while others lose out. Access to knowledge and social capital must be democratized in order to combat growing inequality, to empower marginalized people, and to realize mutually beneficial opportunities of global change.

Nakuru, located 160 kilometres from Nairobi in the Great Rift Valley, is Kenya's fourth-largest city. It faces problems that are typical of rapidly growing cities in developing countries, such as inadequate infrastructure, poor basic services, and resource degradation. Because of lack of access to information, communities and their representatives are often unable to point to documented evidence to illustrate their needs. As a result, they frequently remain in a weak position in negotiations, for example about infrastructure development. This discourages public participation in urban development and planning, and leads to low levels of trust between citizens and local authorities. Building knowledge societies through more transparent exchange of information can help to transform the situation.

## ESAPP's response

ESAPP sought to identify and fill knowledge gaps, especially by facilitating access to, and dissemination of, existing knowledge. Based on a multilevel and multi-stakeholder approach, it worked to bring together a variety of social actors – bearing specific knowledge, perceptions, and norms – in order to jointly frame relevant development questions, desired outcomes, and strategies for development interventions.

The Nakuru Local Urban Observatory (LUO) project sought to provide local authorities with a user-friendly instrument for sustainable urban planning, while simultaneously enabling ordinary citizens to help shape urban planning and development via improved access to relevant information. Residents of Nakuru were expressly involved in planning and implementing the LUO project in order to ensure accommodation of their needs. They helped decide what information should be compiled and made available to interested users. Further, residents participated in generating a spatial database with the help of a participatory mapping approach. The collected information was then processed and made available to local authorities and community representatives by means of a web-based information platform.



## Main messages

- Communities urgently need better access to information in order to assert their needs for sustainable development.
- Information technology in general and Geographic Information Systems (GIS) in particular bear great potential for improving communities' access to relevant knowledge.
- However, these technologies also bear the risk of overemphasizing a few aspects of reality – in this case spatial aspects – at the expense of other crucial aspects and processes. To avoid this, a participatory approach is needed that emphasizes local perspectives and priorities.
- Finally, efforts to improve information access must be institutionally anchored to ensure long-term benefits. This sort of institutionalization can prove very challenging for technology-based projects, as they require openness to new technologies.



The Local Urban Observatory project set up an information centre in Nakuru town, where anyone interested could view the data on two computers and print out maps of selected data layers. Community groups were frequent users of the centre. Students from Egerton University (nearby), from Nairobi University, and even from abroad also visited the centre to access information for research purposes. (Photo: Albrecht Ehrensperger)



### The project story

The Local Urban Observatory (LUO) project began by bringing together municipal officials and development partners (community-based organizations, NGOs, businesses, universities, and international agencies) in order to identify the most pressing development and information needs. The main needs mentioned – in terms of both information and action – were economic development, basic infrastructure (especially water supply and sanitation), clarification of responsibilities among the various authorities, crime prevention and security, and social development. Next, urban development indicators were assessed in a spatially differentiated manner, for example at the level of town planning blocks or electoral wards. This provided a valuable tool for comparing the status of urban development in relation to planning units, and for monitoring the trends of important aspects such as shelter, economic development, environmental management, and social development.

The data inputted into the LUO information system were gathered in a participatory way at the neighbourhood level, and complemented with statistics from various sources. Community representatives used high-resolution satellite images to map spatial information layers. This type of data usually enjoys acceptance and stands a good chance of triggering debate at various levels, affording individuals an opportunity to air their views on various development issues. The data were later prepared by the project team for analysis with a Geographic Information System (GIS). Several training events in GIS technology were organized to reinforce the team's capacity and, with support from UN-Habitat, a licence grant was obtained from a large GIS company to equip the team with up-to-date tools.

Finally, a web-based information tool called NakInfo was developed. The tool features an interactive map and query function and integrates the data layers generated via participatory mapping. A "Nakuru Information Centre" was set up at the local town hall. It was donated by the local branch of the Lion's Club upon request from the project team. Interested users can now visit the centre, query the LUO database, and print out maps. In parallel, capacity development workshops were organized to train local authorities and community-based organizations in use of the NakInfo tool. In 2005, the project received an award for humanitarian contributions within computer science and informatics from the American Association for Computing Machinery (ACM).

**Top:** Representatives of local authorities and community groups were trained in the use of offline version 1 of the NakInfo mapping tool at a local Internet café. The training process also enabled the project team to identify software bugs and improve the tool's functionality. (Photo: Albrecht Ehrensperger)

**Bottom:** Before making the information available, each data layer was vetted by representatives from local authorities and local communities. The vetting process was challenging and required compromise with respect to certain data layers, especially those reflecting people's perceptions, such as the level of safety in various parts of town. (Photo: Albrecht Ehrensperger)



## Innovation and relevance

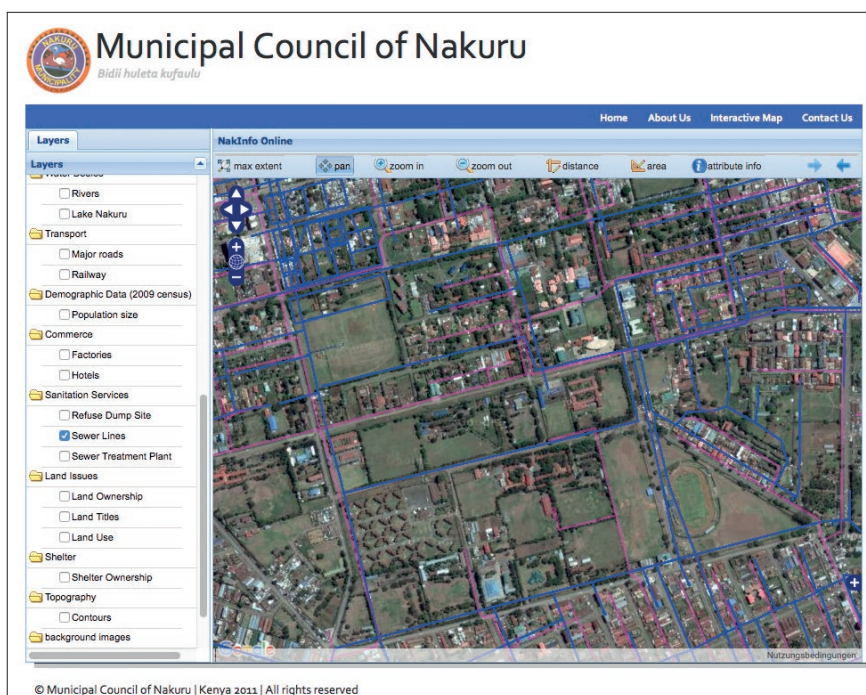
The LUO project emphasized use of newly released high-resolution satellite imagery in order to construct a coherent and comprehensive spatial database for the municipality of Nakuru. The project team successfully combined use of a high-tech spatial analysis and visualization tool with a participatory approach, bringing together local authorities and members of civil society. This resulted in a highly inclusive process: the combined use of visual tools and geo-referencing enabled even community members who could not read or write to fully participate in creating standardized and widely exchangeable knowledge for the LUO database. The LUO project also broke new ground by integrating qualitative data in the spatial database based on community members' perceptions, including areas considered insecure or particularly affected by poverty.

Various processes of decentralization are occurring in countries of Eastern Africa. In many cases, responsibilities that are highly relevant to sustainable development are being devolved to regional and local authorities. Often, such authorities are poorly prepared to assume these responsibilities and lack the data and information needed to make informed decisions. This is particularly true in contexts of dynamic change such as rapidly growing urban centres. In such contexts, improving the quality, availability, and visibility of data and information bases is highly beneficial. The LUO project illustrates how local authorities and civil society can work together with researchers to establish a better information basis for decision-making. While the approach and success of such projects highly depends on context-specific aspects, the LUO project could certainly be adapted and applied elsewhere.



**Top:** Participatory mapping of relevant spatial information was led by a local community representative in every town planning block and facilitated by Local Urban Observatory project members and field assistants. Participants liked the interactive character of the exercise and appreciated that everyone could participate regardless of their ability to read or write. (Photo: Albrecht Ehrensperger)

**Bottom:** The new online version of the Nak-Info mapping tool includes 32 spatial data layers that can be individually selected and rendered on maps. Information can be queried for individual spatial objects. Maps may be saved as digital image files or printed out. This map extract shows water supply pipes (blue) and sewerage lines (pink) in the town centre. The tool can be viewed online at <http://nakinfo.unibe.ch/nakinfo.html>.





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### Further reading

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### Highlight profile

This highlight is based on the achievements of 5 ESAPP priority action projects.

**Implemented during:**  
2003–2014

**Total funds contributed by ESAPP:**  
CHF 186,000

**Implemented by:**  
Centre for Development and Environment (CDE), University of Bern, Switzerland

**In collaboration with:**  
Municipal Council of Nakuru, Kenya; Practical Action East Africa, Nairobi, Kenya; UN-Habitat, Nairobi, Kenya

**Main beneficiaries:**  
Local authorities of Nakuru municipality and community-based organizations in Nakuru town

### This highlight

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### What is ESAPP?

The Eastern and Southern Africa Partnership Programme (ESAPP) is a research implementation programme funded by the Swiss Agency for Development and Cooperation (SDC), coordinated by the Centre for Development and Environment (CDE) of the University of Bern, Switzerland, and implemented jointly by CDE and a network of partner institutions in Eastern and Southern Africa. Launched in 1999 and completed in 2015, ESAPP implemented over 300 priority action projects in the programme region, which included Eritrea, Ethiopia, Kenya, Tanzania, Mozambique, and Madagascar.

### What are ESAPP Highlights?

ESAPP Highlights are a series of 24 project descriptions providing insights into ESAPP's research and implementation partnerships. Each Highlight describes a succession of demand-driven priority action projects addressing local and regional sustainability issues. The 24 Highlights are collected in a publication that includes additional background information on ESAPP (see citation above). The individual Highlights and the entire publication are also available for download on CDE's website: [www.cde.unibe.ch](http://www.cde.unibe.ch) (keyword search: "ESAPP").