SENTINAL COMMUNITY SURVEYS
&
URBAN ENVIRONMENTAL RISK ASSESSMENT

a Concept Paper by
CIET and Development Workshop – Angola
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Summary:

Development Workshop has been involved for a number of years in developing programmes of community service provision, water, sanitation, school facilities upgrading and women's micro-economic activities in the peri-urban 'musseques' of Luanda, Angola. DW wishes to develop monitoring tools to measure the impact of its programme interventions and other external and environmental factors on the well-being of communities in the areas of programme intervention. DW is therefore developing information tools appropriate for rehabilitation and policy-making in marginalised peri-urban communities of Luanda through the design of a Geographical Information System for monitoring environmental and social impact.

Introduction:

The overcrowded peri-urban slums of Luanda (where over two-thirds of the population of Angola now lives) are clearly unhealthy places to live. However, very little information on environmental health is available which might be used to plan rehabilitation programmes, and whatever information there is tends to be dispersed, inaccessible and difficult to use. This proposal is for the development of a database, and a Geographical Information System, of appropriate environmental health indicators for a significant, representative area of peri-urban Luanda. This is the first phase of a programme to develop national capacity to collect and use data, through GIS, on environmental health that can assist in the planning of national reconstruction.

Development Workshop-Angola already has extensive experience in the peri-urban areas of Luanda, has access to existing information, and includes information collection as part of its ongoing programmes in peri-urban areas. DW has already provided technical assistance to a GIS mapping project for the Angolan Government's landmines survey, and is training a senior technician from the Institute of Physical Planning in GIS.

Spatial data from paper maps and airphotos have already been transformed to a digitised form by a GIS technician trained through the project. This spatial data is being linked with information on the natural environment, infrastructure, human settlements, demography and public health; these kinds of information come from routine and project reports, technical archives, existing maps and reports and from data collection by the project team.

The first phase of the project which is now nearing completion involved the procurement of GIS equipment, the training of a team, data collection, the creation of a map-base and

preliminary data dissemination. This phase served as a laboratory for the development of tools and a model database, and the formation of a national technician with a working knowledge of GIS and assessment skills. A broader level of GIS user awareness has been developed through several seminars involving DW staff in Luanda and Huambo and from existing partner organisations of Development Workshop-Angola.

Later phases of the programme (for which funding is being sought from other sources) will cover the creation of an environmental assessment network for peri-urban Luanda, made up of organisations who will share compatible GIS system tools and data gathering formats, who will be able to share information on peri-urban Luanda, jointly create an effective monitoring system and be able to monitor the impact of individual programmes.

General objective:

To develop Angolan planning for national reconstruction through improved capacity for data collection and assembly, use of GIS and monitoring of key indicators; and development of environmental health assessment tools.

Specific objectives:

1. to develop a set of assessment tools for measuring the inter-relationship between environmental factors, well-being and health of the communities in the project area;
2. to develop a data-base of appropriate environmental health indicators for a significant, representative area of peri-urban Luanda which taken together map the changing state of the environment and of the well-being and health of the people;
3. develop a team of nationals capable of using environmental assessment tools to evaluate risks and monitor the impact of project interventions on communities;
4. To subsequently develop an ongoing monitoring capacity using key indicators to accompany the evolution of programmes and interventions which impact on the environmental health and well-being of peri-urban communities (principal objective of phase II of project).

Strategy:

Development Workshop is undertaking a two phase project on environmental risk assessment. The first is a phase of developing tools, training national staff, building a data-base and selecting key indicators. A future second phase is the of building national institutional capacity for ongoing monitoring of the key environmental indicators. The detailed design of the second phase of the programme will be built from the experience of the first.

Development Workshop is employing environmental mapping tolls together with qualitative and quantitative information gathering techniques to produce a graphic/geographic base line environmental assessment. Existing data, statistics and demographic information have been transformed into graphic format which was projected onto spatial maps of Luanda. More detailed analysis of the project intervention

areas still needs to be carried out using the map base already prepared. Project teams, trained in qualitative research will provide supplementary community information.

Research Method:

During the months of August and September, 1999, Development Workshop proposes a collaboration with CIET (Community Information and Epidemiological Technologies) to develop the research framework built on the Urban Environmental Risk Assessment Project in order to provide monitoring tools for their ongoing peri-urban community services projects.

CIET methods, also known as Sentinel Community Surveys (SCS), were originally developed in the mid-1980s as a capacity building process that could produce accurate, detailed and actionable data rapidly and at low cost [1, 2]. Ordinarily, CIET methods focus on the use of epidemiological[3] data in local or national planning. This may be at the level of a municipality, a city, a state, a number of provinces, or an entire country.

CIET surveys adapt modern research methods to gather evidence while involving local partners in the process. Rooted in modern epidemiology and participatory research techniques, CIET methods have been applied in many contexts besides health such as education[4], water and sanitation[5] and land mines[6]. These methods have been used to measure impact, coverage and cost of issues in environment[7], health care services[8], judiciary and institutional restructuring. It has proved useful for community-designed strategies to combat corruption in the public services in several countries[9]. CIET methods have been established in 44 countries over the past decade. They follow a

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1 Andersson N. Impact, coverage and costs: an operational framework for monitoring child survival emerging from two UNICEF projects in Central America. September, 1985.

2 Ledogar RJ & Andersson N. Impact estimation through Sentinel Community Surveillance: an affordable epidemiological approach. *Third World Planning Review* 1993; 15/3:263-272.

3 Epidemiology: the science of studying patterns and relations between events

4 CIETinternational. Gender gap in primary education. Secretary Planning & Development Department, Government of Sindh, Pakistan,/UNICEF. December 1996.

5 Andersson N., Villegas A., Paredes S., Micro-regional planning, in *Four Essays on Evidence-based Planning*. CIETinternational: New York, 1995.

6 Andersson N. da Sousa C., Paredes S. Social costs of land mines in four countries: Afghanistan, Bosnia, Cambodia and Mozambique. *British Medical Journal.* 1995; 311:718-721.

7 CIETinternational. NICARAGUA: Impact of the National Environmental Program. EDI/World Bank, December 1995.

8 CIETinternational. Health care services in Uganda. Government of Uganda, Ministry of Civil Service/World Bank. January 1995.

9 CIETinternational. Tanzania Service Delivery Survey: Corruption in the Police, Judiciary, Revenue and Lands Service. EDI/World Bank. July 1996.

rigorous, tightly-focussed process. After a thorough review of existing information on the proposed topic and the local population, a careful selection of sentinel communities is made to ensure a representative sample.

Fact-finding instruments are designed to produce quantitative and qualitative data - household questionnaires, institutional reviews, key informant interviews, and focus group discussions. The large amount of information gathered with these instruments is then analysed to determine the coverage, cost and impact of particular services, programs and interventions. Community and district level discussions of the data are then held. These discussions guide final analysis and interpretation of results to lead to strategies for communication and action.

Community feedback is an integral part of the information gathering process. This goes beyond householders answering survey questions; data from these interviews are returned to the communities where they are discussed systematically in focus groups of men, women and youth, and later between these focus group participants and community leaders. In this way, the communities in the region can contribute to policy making. The CIET methods thus offer one very concrete way of increasing citizen participation in service delivery.

A single survey offers a limited opportunity for supporting such a process. The CIET approach calls for data collection cycles to be repeated at regular intervals. In the course of repetition of the steps for each cycle, local researchers become increasingly capable of conducting these surveys themselves. With each new cycle, information on the previous cycle is disseminated to communities, the success of the solutions developed in previous cycles is measured, and topics for investigation can gradually be tuned to the needs and perspectives of the communities. In this way, CIET aims to provide a basis for sustained, critical dialogue on issues that have a profound effect on people's daily lives, while building local technical capacities to do the job with decreasing and, eventually, no external assistance.

Training

Interviewers and team leaders from each of the participating communities will receive training, including field practices to assure quality of the data gathered while introducing them to the processes of conducting interview with children, door-to-door surveys and focus group discussions. Since some/many of the participants will have done this sort of work before, few problems are expected. Several individuals identified by each of the participating organisations will receive training in data entry and analysis.

A spin-off benefit will be an increased organisational capacity for evidence-based planning. Staff will be exposed to and active participants in the interventions are developed from the survey findings. Participation of staff during this and subsequent cycles will build capacity for regional planning based on evidence.