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WATER AND SANITATION FOR ALL: PARTNERSHIPS AND INNOVATIONS

The question of sustainability

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A COUPLE OF years ago, the term "sustainability" was introduced into environmental discussions, and has since been discovered and utilised by several disciplines, which do not always give it the same meaning. It seems that the term has been used first by foresters in the 18th and early 19th centuries, and in its original forestry meaning the term sustainability has to be understood as an economic concept.

In recent times, the biggest problem is that the developer is faced with tensions between different facets of environmental concern - nature conservation; energy efficiency; purity of air, earth and water; archaeology; landscape; countryside preservation - each with its own set of experts and specialist agencies. The challenge is to make sense of these disparate elements in terms of sustainability. A holistic view could be achieved by collaboration between all the interests, involving agencies and people at different levels, to ensure that sustainability works.

Overall, sustainability means living on the earth's income rather than eroding its capital. It means keeping the consumption of renewable natural resources within the limits of their replenishment. It means handing down to successive generations not only man-made wealth (such as buildings, roads, etc.) but also natural wealth, such as clean and adequate water supplies, good arable land, a wealth of wildlife and ample forests. It suggests a constantly maintained level of well being through time.

Development in the context of sustainability is broader than simply the economic growth or the GNP. It implies improvement to:

- the quality of life;
- health and nutritional status;
- equity in access to resources and services;
- per capita income;
- perceived quality of the human environment.

"Sustainable development" is an attempt to balance two moral demands. The first demand is for "development", including economic development and economic growth. It arises mainly from people in developing countries whose present poverty gives them a low quality of life and calls urgently for steps to improve that quality of life. The second demand is for "sustainability", for ensuring that we do not mortgage the future for the sake of gains in the present, and also not waste what is presently available.

Although they can be in conflict, these two moral demands have a parallel basis. Economic well-being is a central human need. Economic activity usually occur in ways that are robust in the face of environmental limits. A key to sustainable development is choice. Good design is not to force a particular brand of behaviour, but to facilitate behaviour which is environmentally benign: to open up options which currently may be squeezed out by dominant market trends or policy conventions.

The eco-system principle safeguards environmental integrity. Development should be matched by a concern for human needs. The starting point for sustainable development is the satisfaction of basic human needs of shelter, warmth, health, opportunities for work, access to facilities and a pleasant environment. Social and environmental goals are often mutually reinforcing, thus providing a broad constituency of support for policy.

Community participation in sustainable development is a long term complex process of engagement involving negotiations, bargaining, dialogue and conflict resolution. Intensive and sustained interaction is required to facilitate these processes. Participatory development and planning can be a very empowering experience.

The management of any participatory process in sustainable development depends on the objective and the mission of the support and funder organisations. If these organisations value empowerment of disadvantaged groups and are willing to make it a major objective, they will have to take risks, allow conflicts to surface and then enable the people to manage the process. Most external donors and short term consultants have a low capacity for taking risks and this trend seems set to continue, especially in South Africa. This presents dangers as well as opportunities for the sustainability of projects. Some of the dangers are the following:

- neglect of the importance of behaviour and attitudes;
- training by inexperienced people;
- opportunities for inappropriate organisations to climb on the bandwagon;
- rewards systems which stress targets for disbursements as physical achievements instead of capacity building (often donor-driven);
- rushing in and out of communities in order to achieve preset targets, neglecting capacity building.

The opportunities in addressing the sustainability of a project are the following:

- increased priority given to behaviour and attitudes in training;

Table 1

EFFECTIVE USE		
Optimal use	**Hygienic use**	**Consistent use**
Number and characteristics of users Quantity of water used, all purposes Time taken to use facilities Water resource management	Water quality from source to mouth Sources of en route contamination Practices to improve water quality Site and home hygiene Personal hygiene	Pattern of daily use Pattern of seasonal use

- more time for participation and institution-building in the early stages of the projects, with bigger budgets for training and less for infrastructure;
- no targets for disbursements or coverage,
- project procedures providing for change, participation and diversity;
- a process approach, permitting continuous revision of the projects.

But how do we know when development is sustainable? How do we measure it? The main indicators for the development, implementation and evaluation of sustainable water and sanitation projects are set out in Table 1 and 2.

Experience to date suggests the importance of long term engagements between the implementing agents, donors/ funders, the training agents and the communities. There is no quick fix. The in-out-consultancy can sow seeds, but the seeds will most likely wither. Long term involvement will support participatory development and change with training, experimenting and learning from experience.

Where governments and funders are considering sustainability, we are faced with a choice: In opting for sustainability, the stakes are high, scopes abound for errors of omission. People in future may look back and wonder how and why we were so slow to act when the opportunities were so vast.

Considering the high stakes involved in the participatory approach and the need for speed in development, there is a high risk that donors and implementing agents alike will conclude that the bottom-up approaches do not work, and the idea might be abandoned again before it has ever had a fair chance to prove itself.

References

BARBOUR, I.G., 1980, *Technology, environment and human values*; Praeger Publishers, New York.

DEPT OF ENVIRONMENT AFFAIRS, SCOTLAND, 1992, *Common Sense and Sustainability: A Partnership for the Cairngorms*; Working Group Report, Edinburgh.

FIEDELDEY, A.C., 1993, *Man and Environment, The Psychological Experience of an Essential Relationship*; Nasionale Kultuurhistoriese Museum, Pretoria.

IUCN, UNEP, WWF, 1991, *Caring for the Earth, a Strategy for Sustainable Living*; Gland, Switzerland.

McINTOSH, A., 1992, *Organising Rural Water Supplies, New Ground*; Journal of Development and Environment 7.

RAMSEY and DUERR, (eds), 1975, *Social Sciences in Forestry: a Book of Readings*; WB Saunders Co, Philadephia.

RUCKELSHAUS, W.D., 1989, *Toward a sustainable world*; Scientific American 261(3).

WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, OUR COMMON FUTURE, 1987, Oxford University Press, Oxford.

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Table 2

SUSTAINABILITY		
Installed and functioning systems	**Confident/competent individuals/committee**	**Strong organisation**
Community decisions in installation Water quality/quantity at source Operation and maintenance Cost recovery	Decision, execution and management abilities Knowledge and skills Confidence/self concept	Autonomy Supportive leadership Systems for learning and problem solving Collaboration in planning and activities