

DEVELOPING PARTNERSHIPS FOR EFFECTIVE KNOWLEDGE SHARING ON INNOVATIVE TECHNOLOGIES

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Summary: *This paper presents a historical review of how existing networks in Africa have helped information sharing and acceptance of new technologies, and their limitations. It looks at what it would take to improve capacity at field level and what has to happen to place innovative technologies like ecosan within the framework of policies in African countries. The role of the Water and Sanitation Program in these efforts is also discussed.*

Introduction

Appropriate technology, available at an appropriate price within an efficient and effective market and institutional structure is a key requirement of scaled up sanitation service delivery. The development of low-cost technologies was one of the major achievements of the International Water and Sanitation Decade (1980-1990).

During the Decade, and in the period which followed, the Water and Sanitation Program (WSP) and its predecessor the Technology Advisory Group (TAG) and a number of collaborating agencies undertook valuable research in low-cost technologies. A number of institutions were created at national and regional level to disseminate information on these technologies and offer practical training at field level. The Hand-pump Technology Network (HTN) and the International Training Networks (ITNs) for water and waste management are among the main institutions which evolved from efforts of the decade.

Africa was a focus for much of the work on appropriate technology development, in part because the need for solutions was so apparent, and also because indigenous solutions provided the framework and starting point for much of the new thinking. At the same time many African countries were implementing water and sanitation projects supported by donor-funding using these "*appropriate*" technologies made popular through the ITNs and HTN, and through World Bank publications.

Despite these efforts large scale impact has proved elusive, and this may in large part be due to the *supply driven "project" approach* which neglected institutional, regulatory and legal frameworks to support gains made in delivery of improved services. One key constraint is the lack of capacity in implementing agencies to function in a demand responsive and flexible manner; this problem is likely to grow in line with increasing populations and more decentralization of responsibilities.

Fortunately, there is still great (and increasing) demand for knowledge sharing and capacity building at field level - there is a growing recognition of the need for capacity building in lower-tiers of government and management .

The question remains, however, *what is the most effective way to build this capacity at scale?*

Presentation and Findings (Capacity Building Experience in Africa)

The African ITNs (examples include IWSD, NETWAS, CREPA, TREND) have "graduated" from their original "birth-places" in universities (and research institutions)

to become "*specialized*" institutions providing professional training and consultancy at a fair price. The capacity of institutions to deliver world class research outputs and to disseminate findings internationally is constrained however by limited resources, and a related tendency to become distant from international debate and development thinking.

The Hand-pump Technology network, (founded in 1983) has done world class work in standardization and field investigation of pumps. However, in many African countries "supply-chain" issues still limit effective operation and maintenance management of pumps, an area which is beyond the current scope of the HTN to tackle in an effective manner.

There are a few institutions in Africa currently doing applied research in innovative technologies although this is clearly an area which will continue to need support. It is particularly disappointing that a major thrust to develop technology further has not come from the private sector; this is clearly an area which needs further consideration. Meanwhile some specific research areas, such as ecosan, are spearheaded by a few dedicated individuals supported by limited external funding. While there is a need to support a network of these "*exceptional*" individuals to continue with research, we need to understand the wider capacity building and research framework within Africa and move to building robust regional capacity to lead thinking on the many technological and other issues which drive change in the sanitation sector. Research into ecological sanitation must be placed within this broad and robust frame and not be allowed to remain on the periphery of the debate.

Discussion of Findings

The experiences, of the ITNs and HTN highlight some lessons about how to build an effective regional research and training capability that can respond to new ideas and drive the next generation of solutions.

- creating of networks per se is inadequate - we need to examine and draw parallels from how professional institutions render practical on-the-job sharing and upgrade of knowledge to build and sustain capacity in the field;
- to enable innovative technologies like ecosan to become part of matrix of technology options supported by regional/country-level policy we need to provide practical information to demonstrate the economic and environmental costs (both current and future) of not implementing such innovative technologies; and
- the circle of stakeholders in the promotion of any concept (such as "*Closing-the-Loop*") must be broadened so as to place new ideas such as ecosan within the policy agenda of countries and cities.

Conclusions

Africa's two-decades-history of networking, training and capacity building in the water and sanitation sector is now seriously challenged to bring new ideas to scale within the region. Lessons have however been learned about how to support innovation and promote new thinking. These lessons could be brought to bear now to improve the network of support to sanitation and provide a platform for a major new thrust in sanitation.

WSP will aid the process of capacity building and helping place innovative technologies more on the map by:

- i. examining existing country-level (also regional) professional institutions of environmental sanitation, and creating the platform of providing on-the-job professional training with support of existing ITNs and HTN, and establish links to international organizations with expertise on innovative technologies;
- ii. build effective network(s) of key stakeholders and place important new ideas such as ecological sanitation within a broad based and effective process of policy reform.