

1. The Use of a Task Oriented Network to Enhance Environmental Management Capability for Development

The rapid evolution of environmental problems, and greater public awareness and concern, have generated increasing pressure on governments to unify policies and develop more credible environmental management systems. The main human resource constraint is lack of skills and confidence in indigenous abilities in environmental management, which invariably involves mediation among conflicting economic, social and environmental goals. A main organisational constraint is fragmentation, in policy and institutional terms, in societies which remain, on the whole, compartmentalised.

That such fragmentation exists is no surprise, it is a common condition in modern societies. But it is the scarcity of skills and will to overcome this condition which is the critical issue:

A widely recognised 'managerial gap' exists between the demand for and supply of indigenous management talent at nearly all levels, and this gap constitutes a major, if not the major, constraint in achieving economic, social and agricultural development in LDCs (Kerrigan and Luke, 1987).

This report analyses an experimental action research programme to enhance local management capability for addressing serious environmental problems in developing countries. The programme is called IDEA – Institutional Development for Environmental Action. IDEA consists of core project teams and networks led by senior scientists or public administrators in Malaysia, Mauritius, Zimbabwe, Zambia, Ghana, Nigeria and Guyana. There is also a small, worldwide interdisciplinary support team.

IDEA is part of, and administered by, the Commonwealth Consultative Group on Technology Management (CCGTM), recently established by the Commonwealth Heads of Government within the Commonwealth Secretariat. The experimental programme has been

funded by the Natural Resource and Environment Division of the Overseas Development Administration (ODA Research grant R4516A, September, 1989 – August, 1991).

Outline of this report

There are four chapters. The remainder of this chapter summarises the IDEA Programme and its approach. The next chapter describes the generic constraints on good environmental management in developing countries, with reference to the literature of development and public administration, and the experience and contributions of the IDEA projects to overcoming these constraints. Chapter 3 describes in more detail the IDEA philosophy and methodology. Chapter 4 considers the main lessons to be derived from the programme. An Annex describes each of the seven pilot projects, in terms of problem, action and outcome.

The IDEA programme

IDEA is an action research programme which is being carried out by a small, *task oriented network*. The programme is intended to generate solutions to specific, difficult environmental problems in seven countries, and to analyse these processes to generate transferable learning about environmental management. In this task orientation, the IDEA network is quite different, and more multi-functional, than the growing number of information or scientific networks, most of which are intended mainly to disseminate information and possibly to stimulate discussion (Farrington, 1991). Unlike the loose linkages in these more common information networks, the IDEA Network is highly organised towards the goals of its environmental management and research tasks for development.

The original objectives of the programme were:

- To examine both institutional frameworks, and management strategies and techniques, which constrain or enhance the implementation of developmental programmes with major environmental concerns;
- to identify pilot projects in African, Asian and Caribbean Commonwealth countries. Each project is to be an example of a clear cut, current environmental problem which requires institutional mechanisms for mediation at the policy, strategy and project levels. Each case study to represent an environmental issue

- sufficiently important that a failure to promote such mediation mechanisms could seriously hinder development objectives; and
- to identify lessons at both country and overall generic levels for management and assessment of developmental programmes which will assist in a review of current management practice in light of current patterns of institutional frameworks.

The IDEA Programme has taken a broad view of the components of institutional frameworks as encompassing organisational, legal and human resources development. The areas of critical concern in institutional development as identified by many international agencies are relevant to IDEA: the host country policy environment, the potential of various forms of organisation, the importance of institutional learning capacity, the problem of transferring knowledge, coordination and linkage among agencies, the improvement of management systems, and the role of local initiative and participation (American Consortium for International Public Administration, 1986).

To this list the IDEA team would add: the importance of parallel local and international networks to support initiatives in sustainable environmental management. We would also emphasise within IDEA the paramount importance attached to local initiative and participation.

The current programme consists of seven projects, each of which represents a challenging environmental management task. There are three in watershed management, two in urban waste management and two in resource management. IDEA addresses the organisational and human resource constraints which operate on government policy and implementation systems, in the specific context of the tasks identified. These constraints are often a major stumbling block to integrating national requirements for production and environmental quality, even where scientific knowledge and financial resources are sufficient. The constraints are discussed in this report.

Although many developing countries face environmental problems of enormous magnitude, the IDEA team finds it is of little practical value to begin at the grand scale when management capability is limited. IDEA projects therefore initiate action at the managerial/scientific level and 'enroll' stakeholders in a process of problem resolution, the very process of which builds up management

capability and confidence. IDEA is neither top-down nor bottoms-up, but encompasses both approaches as relevant to the country task.

The IDEA projects take their authority and credibility from addressing obvious environmental challenges, and the transferable learning reported here is grounded in those. However, the benefits of IDEA projects are not confined to those task-related outcomes, but spillover into other tasks and diffuse to other environmental stakeholders in the host countries and to members of the international support network.

In IDEA's seven pilot projects constraints are gradually overcome by an iterative process of problem redefinition, and a gradual widening of awareness and participation in problem resolution among major stakeholding agencies and individuals, at a pace which is politically and socially sustainable. The major areas of integration addressed are between i) government departments, ii) central and local government, iii) public and private sectors, iv) government and university/scientific community, and v) government policy level and community level, particularly small scale, 'backyard' businesses and agriculturalists.

Of particular interest to development research is the fact that IDEA, through the empirical assessment of innovative responses to the environmental management tasks set, validates a number of recent concepts for improving performance in the management of environment and development planning. These concepts, particularly that of the non-hierarchical, task-oriented network as a complement to traditional bureaucratic structures, arise from the recent literatures of development, public administration and business management. They are cited accordingly in chapter three. Because of its grounding in real time environmental challenges, IDEA makes some significant contributions to an understanding of a practical methodology for generating what have been called 'unconventional, evolving network' approaches to environmental management (Sagasti, 1988).

IDEA also validates the usefulness of the action research methodology to learning about the parameters of good management and the means to attain those. The benefits of this learning are relevant to:

- the pilot project countries, who now have local nodes of professional experience in innovative problem assessment and management of environment for development;

- transnational linkages between countries, to share this knowledge and experience;
- the entire CCGTM/IDEA Network which provides the opportunity for diffusing this knowledge in and outside the Commonwealth, and which channels new knowledge back to the local nodes of professional experience; and
- funding and bilateral aid bodies, who can use the knowledge as part of criteria to assess the degree of good management in the use of their funds for development.

Summary of the IDEA methodology

IDEA is a multi-faceted programme of systematic, participatory learning, here called action research, among an operational network of interested persons from diverse backgrounds and professions. In short, IDEA is a network of people engaged in a process of learning about good practice in environmental management for development.

A strength of IDEA is that it grounds transferable learning about environmental management strategies in the practical, real time development challenges, thus fulfilling a basic criterion of the action research methodology (Winter,1987). In taking this approach IDEA accords with Hirschman's (1990) advice that 'uniform solutions to development problems invariably lead us astray'. The environmental problems have been redefined into a series of positive 'management and action' projects, supported by IDEA's network and information services, environmental advisory services, and training and research methodology.

The main concepts behind the IDEA approach are:

- An individual to serve as a catalyst, called the Team Leader, selected for his/her ability to take a broad, process-oriented perspective on local environmental problems.
- The selection of a serious environmental problem of national or regional significance, but one capable of significant progress towards its amelioration. The problem provides a case study for learning about the environmental management process and for developing new skills.
- A local project advisory group, which provides relevant stakeholding agencies and individuals the opportunity for participation in the definition of the problem and in its resolution.

- An IDEA researcher, hired locally, to develop the project under the guidance of the team leader and advisory group. These three, taken together, make up the local IDEA team.
- A facilitating and/or a mediating role for the team. These will be defined later. The process is one of iterative problem definition to broaden the perspective, and the gradual building of consensus and commitment to the resolution of the problem.
- The development of a local network around the problem, and support, advice and peer review from the international IDEA/CCGTM network.

Of particular importance are the local networks, which are the key to environmental problem solving, but which also at first glance may appear threatening to existing institutional arrangements and individuals in positions of power. A strength of IDEA is that these are developed only at a pace which is politically and culturally sustainable, by a process much akin to traditional community development, but at a regional scale. These and other important IDEA concepts are explored in more depth in chapter four.

The IDEA programme has consisted of two phases. Phase I (1988-89) was initiated at a meeting in London, and its output was the identification of themes for individual country tasks and a research team leader in each country. The agreement of the relevant authorities (for example, the Office of the Prime Minister or the Financial Ministry) in each country was also secured during this period.

Phase II (September, 1989-August, 1991) consists of implementation on each of the environmental management tasks identified, and a series of joint meetings of all the IDEA country team leaders and representatives to review the progress of the research teams and to offer guidance on possible future steps.

In addition to the tangible outputs of each country task, reported below, both phases of IDEA have been subject to monitoring and analysis. This provides both a vehicle for additional learning for IDEA teams, and a means of generating transferable learning from the overall process.

The IDEA projects

The following are the IDEA projects. These are described in some detail in the next chapter.

Watershed management

Ghana The development of mechanisms to reduce pollution and promote coordinated watershed management in the Densu River Basin and Weija Reservoir.

Zimbabwe Improved institutional coordination to reduce pollution in the Harare watershed.

Zambia Improved management of the lower reaches of the Kafue River.

Waste management

Malaysia The establishment of an innovative cooperative arrangement for common wastewater treatment facilities among small metal finishing industries in the vicinity of Kuala Lumpur.

Nigeria The development of policy guidelines and institutional arrangements to reduce unregulated waste disposal in the Lagos region.

Resource management

Mauritius Institutional collaboration to promote the use of replacement construction materials as an alternative to coral sand depletion.

Guyana The development of a legal and policy framework for management of the mineral exploitation process.

For each of these projects, management issues have been addressed at the policy, strategy and project levels by both direct and indirect actions (Figure 1). Direct actions include the development of better policy and legislation, for example, to control the environmental effects of gold mining in Guyana; new institutional arrangements, for example, a new co-operative of small scale industrialists for pollution control in Malaysia; and direct links to community leaders and NGOs, for example, in the towns and villages of the Densu Basin in Ghana. Indirect action includes the building of awareness in field visits and meetings, for example, meetings of industrialists, local government officials and the IDEA team in the lower Kafue Basin in Zambia, and the use of various media such as newspaper articles, posters and slide presentations. Other indirect action focusses on building management and technical skills, usually by network linkages, for example, with the Science Council of Zimbabwe or the National Council for Oceanographic and Marine Research in Nigeria.

In each of the projects, appropriate actions are only initiated after a very careful process of analysis of the true nature and dimensions of the environmental problem at hand, and the institutional, organisational and human resources constraints which inhibit successful management. Some of the categories of these constraints, and options for overcoming them are discussed in the next chapter.

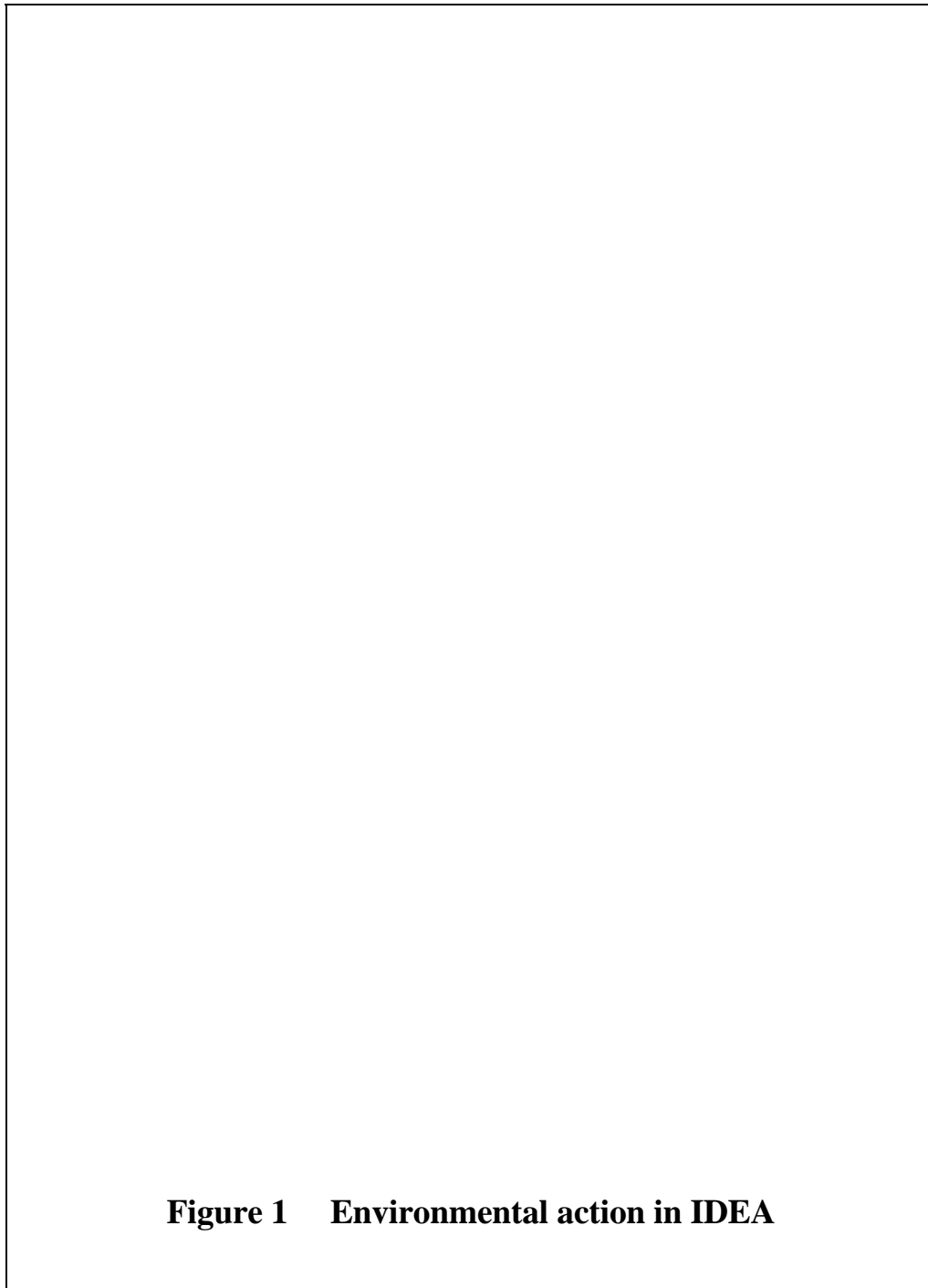


Figure 1 Environmental action in IDEA