A major constraint in improving environmental health services is lack of capacity among national and local institutions. The capacity-building activities of the Environmental Health Project (EHP) initially focused on improving service delivery but quickly expanded to also address broader questions of institutional arrangements, including decentralization.

Institutional arrangements needed for successful environmental health programs are inherently complex. Unlike programs in many other sectors, environmental health involves a large number of stakeholders from diverse sectors, including governmental institutions at the national, regional, and local levels, as well as nongovernmental organizations (NGOs) and private sector companies. These institutions fall into five functional areas:

- regulatory — to develop and enforce rules and regulations for compliance with environmental health standards,
- service delivery — to provide environmental health services such as vector control, water supply, wastewater, and solid waste collection,
- educational/communication — to provide skilled workers and convey accurate and understandable information on problems and solutions,
- advocacy — to bring about policy innovations and social change, and
- financial — to provide the resources for implementing interventions.

Institutions in all or most of these functional categories may be involved in an environmental health program. For example, EHP provided technical assistance to a program for improving sanitation in peri-urban neighborhoods of Montego Bay, Jamaica. The activity involved an NGO to facilitate the interaction between the communities and the formal private and public sectors, a public credit institution to supply consumer loans, private contractors to construct the sanitation facilities, the Ministry of Health to address public health concerns, the Ministry of Environment to monitor the effect on coastal areas and groundwater, and the municipality to issue permits. The need to define the roles and coordinate the efforts of a varied mix of institutions makes institutional development in environmental health especially challenging.

**EHP Goal:** Increase the capacity of national and local governmental and nongovernmental institutions to promote and deliver key environmental health services.

Institutional development is either the primary focus or a significant component of a large number of EHP activities.

Sometimes a health problem has been the starting point of an activity and a key factor in determining which institutions should be involved. For example, in Egypt, EHP was asked to develop a lead exposure abatement plan for Cairo. The health problem had been identified several years earlier in a comparative risk assessment. Attention...
was paid to both the technical and the institutional aspects of the plan. Two analyses were conducted: an in-depth environmental analysis of the sources of exposure and the potential magnitude of the problem and an institutional analysis identifying all stakeholders and assessing their potential for participating in the plan.

In Zlatna, Romania, EHP also addressed the problem of lead exposure, as well as occupational health and safety. The activity had three components: reduction of exposure of young children, improvement of air quality monitoring, and occupational health and safety measures at the copper smelter. From an institutional perspective, the activity was noteworthy for its comprehensive process to bring together stakeholders from several sectors in developing goals and a strategy.

Some activities have focused on developing capacity for improved service delivery. For example, EHP assisted local governments in Bushbuckridge, South Africa, to select the most appropriate option for managing their water supply and sanitation services and worked with them to develop a long-term institutional strengthening project.

In Nepal, EHP trained laboratory staff for the recently expanded Vector-Borne Disease Research and Training Center in Hetauda and recommended a long-term financial and management plan to assist the center to develop autonomously. Currently EHP is planning and implementing the initial stages of a five-year effort to dramatically strengthen the center’s capacity to conduct comprehensive surveillance and control activities for vector-borne diseases with potential for regional scale-up. (The photograph on page 1 was taken in 1998 during a ceremony to inaugurate the Center. U S A I D Deputy Administrator H arriet Babbitt addresses remarks to Dr. M annandar, Additional Secretary of the Nep al Health Ministry.)

In Egypt, EHP’s assistance to the water and wastewater sector has included project design and evaluation and the identification of institutional options to bring greater autonomy to these utilities.

Decentralization has been the focus of numerous EHP institutional strengthening activities. In the Dominican Republic, EHP is assisting INAPA, the national water supply agency, to adopt a decentralized approach to the management of rural water supply systems, using NGOs as intermediaries and reshaping INAPA’s role to one of monitoring and facilitation.

Over a five-year period, EHP has given policy guidance to Slovakia in transferring responsibility for water and wastewater services from state-owned companies to municipalities.

In El Salvador, EHP is addressing two issues critical to the government’s decentralization effort: the institutional arrangements for rural water supply and the potential options for management of municipal water supply and wastewater services.

These and other EHP activities have built on lessons learned under the earlier USAID-sponsored Water and Sanitation for Health (WASH) Project, and EHP has also developed several new lessons about the more complex topic of institutional strengthening in environmental health.

LESSONS LEARNED

Lesson One: There is no single institutional home for environmental health programs; they must be implemented by multiple institutions working together.

Nine different technical areas are covered in the scope of work for EHP: water supply, sanitation, solid waste, air pollution, tropical diseases, occupational health and safety, hazardous waste, food hygiene, and injury. Unlike agriculture or education, no one ministry or agency provides a home for this broad discipline. Ministries of health and environment usually play a principal role in environmental health, while primary responsibility for service delivery is located in many different institutions. For example, utilities are typically responsible for water supply and sanitation in urban areas, municipalities for solid waste, and ministries of health for control of vector-borne diseases. As a consequence of the split between service delivery and regulation and the range of technical specialties, carrying out environmental health programs requires close intersectoral or interinstitutional collaboration.

For example, the lead exposure abatement plan for Egypt developed by EHP cannot be carried out without collaboration between the Ministry of Health and the Egyptian Environmental Affairs Agency (EEAA), which has primary responsibility for coordination of the plan. Several other institutions, both public and private, also have key roles in implementation. The success of the activity depends on the ability of the EEAA to bring together the various actors.

Intersectoral collaboration requires strong leadership and the ability to identify and address the interests of different stakeholders. A useful starting point for collaboration and setting a common goal is a clear understanding of the health consequences of environmental problems. In Zlatna, one of the first activities in the effort to reduce the negative environmental effects of the local copper smelter was an open discussion of the less obvious effects of lead exposure. When it was demonstrated that blood lead levels, such as had been found in children in Zlatna, could cause serious neurological and developmental problems, the stakeholders were able to work together quickly to develop and implement a plan to reduce lead exposure.
Institutional Strengthening: Lessons Learned

Leadership for environmental health will vary from program to program and country to country. Depending on the nature of the environmental health problem and the institutional setting, the locus of leadership could be at the national, regional, or local level.

Lesson Two: Mobilizing institutional stakeholders to take action requires convincing data.

Reliable data which carefully define the problem to be addressed are the catalyst for mobilizing key institutional stakeholders to collaborate and take action. Too often, stakeholders with entrenched interests are expected to make fundamental changes in their institutional arrangements and behavior based on general principles and what has worked in other countries. Institutions will not give up their interests that easily. Even in the face of solid evidence that change is needed, it is difficult to bring about.

EHP’s decentralization work in Slovakia began with an extensive data collection effort to examine the current operational and financial situation in the water and wastewater sector. Data were collected on a national level and in-depth in one of the regional state-owned companies. After analyzing the data, EHP compared the performance of the water and wastewater sector in Slovakia to neighboring countries and to the United States. This analysis was presented in a national-level workshop in Slovakia and disseminated through a series of workshops for mayors and staff of the state-owned water and sewer companies. The data pointed out that the financial performance of the state-owned companies was poor, that capital investment needs in wastewater were extensive, and that the state-owned companies were inefficient. Ultimately, the Association of Towns and Cities, the main municipal association in the country, found the data and analysis persuasive and formally adopted a decentralization policy and negotiated its terms with the national government.

Lesson Three: For community involvement to take place on a large scale, enabling institutional conditions must be established.

Increasing community involvement in environmental health programs is an EHP priority (see “Community Involvement: Lessons Learned”). EHP has learned that community involvement will not occur on a significant scale unless there is an enabling institutional environment. Such an environment is created through policy changes and capacity-building activities:

- assigning primary responsibility for working with communities at the municipal or local level,
- transferring to lower governmental levels financial resources and decision-making on how to use those resources,
- building support from local decision-makers,
- creating a new organizational unit with responsibility for community promotion,
- training staff in techniques for working effectively with communities and for viewing communities as partners rather than as recipients of services, and
- providing staff with resources for community work (transportation, educational materials, and other supplies and equipment).

Lesson Four: Decentralization offers the potential for more responsive, efficient, and sustainable environmental health services.

The worldwide trend to decentralization is affecting the provision of environmental health services in a major way. Many countries are shifting responsibility from the central government to municipalities and are improving environmental health services in the process. This shift makes sense because environmental health problems and their solutions are generally local in nature. But decentralization cannot work unless the financial and institutional capacity of the local government is strengthened. Often central governments are reluctant to delegate financial control, not trusting the local level to make the right decisions. It is true that many local governments do not have the capacity to effectively manage services, but they can and should develop it.

In the Bushbuckridge area in South Africa, EHP has been working on this very issue: increasing capacity for successful decentralization. Five local government authorities have been

<table>
<thead>
<tr>
<th>Performance of the Water and Wastewater Sector in Slovakia in 1993</th>
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<tbody>
<tr>
<td>Slovakia WW Sector</td>
<td>U.S.A. Example</td>
</tr>
<tr>
<td>Operating costs as a % of revenues</td>
<td>96.4%</td>
</tr>
<tr>
<td>% of revenues available for capital investment</td>
<td>-26.3%</td>
</tr>
<tr>
<td>Water tariffs as a % of GDP per capita ($1000)</td>
<td>13.5%</td>
</tr>
<tr>
<td>% unaccounted-for water</td>
<td>27.7%</td>
</tr>
</tbody>
</table>

Comparative data on performance, such as those shown above, identified issues that decentralization of the sector in Slovakia would have to address.
formed from a former black homeland. Although they have no prior experience in managing government services, they are expected to manage a soon-to-be-completed water supply system. The potential for efficient management of services is present, but much work will be required to develop it.

Similarly, INAPA, the national water agency in the Dominican Republic, has decided to shift its role from direct provider of services to regulator and facilitator as it implements a national community management program for rural water supply and sanitation. The communities themselves will also have to undergo a transformation—from dependency to self-sufficiency—as they learn to manage their own systems. Although the concept is clear and compelling, such dramatic changes do not happen overnight. Fortunately, INAPA realizes that it must revamp the way it does business and has embarked on a focused program of technical assistance and training.

Provision of environmental health services by central government institutions has not worked very well, but it should not automatically be assumed that local governments and communities will immediately be able to do a better job. A period of transition and capacity-building for decentralization is needed. In some countries this process will take considerable time.

OUTSTANDING ISSUES

Two complex issues, discussed briefly below, should be explored in connection with future work in institutional development for environmental health.

Institutions involved in environmental health typically do not focus on health as a goal. Although most service delivery institutions may list “improving health” among their objectives, they typically use other criteria for setting priorities. For example, water and wastewater utilities often prefer to improve service in formal urban areas since cost recovery will be an easier task there, even though the health problems caused by lack of water and sanitation are far more severe in informal, peri-urban, and rural areas. Similarly, many municipalities focus on improving collection of solid waste while giving scant attention to safe disposal at landfills and the health of the garbage collectors.

Another factor that constrains environmental health institutions from focusing on health is the lack of tools and techniques that can be used to bring health considerations to the forefront of priority-setting and decision-making. Use of epidemiological data, risk assessment, community surveys, and techniques for setting priorities need to be adopted for use in developing country settings.

The allocation of roles and responsibilities in environmental health is still evolving. Although every country has its own unique historic, economic, and political context, some important generalizations may be made about how to allocate roles and responsibilities in environmental health. The major advances in decentralization and privatization in the past five years have altered the way governments do business and have opened up new financial resources. For example, countries are increasingly separating regulatory from service-delivery functions. There is much to be learned from the different methods used to effect this separation. It is also important to track the way responsibilities for key environmental services are split up between municipalities and the central government in different countries.

As USAID increases its vector-borne disease control efforts, it should reach out beyond ministries of health to a wider range of actors. Unlike many areas of environmental health, vector-borne disease control has remained the primary responsibility of ministries of health with little involvement of other ministries, NGOs, and the private sector. USAID’s new focus on infectious disease will provide an impetus to develop innovative institutional approaches that involve a larger number of institutions than has been the case in the past.

The control of dengue is an especially good example, since it requires community-level measures that are often best taken by NGOs or municipalities. Similarly, ministries of water resources and agriculture can become partners in controlling vector-borne diseases.

—Fred Rosensweig, EHP Technical Director for Institutional and Human Resources Development

Reports Available from EHP


“Institutional Assessment for Lead Exposure Abatement and Reduction in Cairo” (EHP A.R. 31).

“Institutional Lessons Learned in Environmental Health Programs” (EHP A.S. 8).


“Recommended Options for Decentralizing the Water and Wastewater Sector in Slovakia” (WASH F.R. 444).