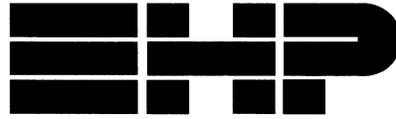# EHP

ENVIRONMENTAL HEALTH PROJECT

Creating an Enabling Environment for Community-Based Rural Water Supply, Sanitation and Hygiene Promotion Systems

Case Study: Reforming the Rural Department of the National Water Agency (INAPA) in the Dominican Republic

Eric Johnson and Eduardo A. Perez

USAID

ENVIRONMENTAL HEALTH PROJECT

Strategic Report 4

Creating an Enabling Environment for Community-Based Rural Water Supply, Sanitation and Hygiene Promotion Systems

Case Study: Reforming the Rural Department of the National Water Agency (INAPA) in the Dominican Republic

by

Eric Johnson and Eduardo A. Perez

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About the Authors

For the past 15 years, **Eric Johnson** has been involved in the fields of small-scale rural water supply, sanitation and alternative energy use. He has spent four years as a water/sanitation trainer with ENTRENA, based in the Dominican Republic, and currently works as an independent consultant in the Central American and Caribbean region. He has been extensively involved in the training of professionals, technicians and community leaders throughout Latin America. During the past two years, he has served as a representative of the Environmental Health Project (EHP) in the Dominican Republic, aiding in the implementation of several components of institutional assistance funded by the United States Agency for International Development (USAID) to the national rural water supply agency there. He also has recently served as an advisor providing guidance on economically rational use of renewable energy under funding granted by the U.S. Department of Energy.

Eduardo Perez has 25 years of experience in international development, engineering, policy and management and has achieved international recognition for his expertise in environmental services for the urban and rural poor including water supply, sanitation, solid waste and drainage. He is currently employed by CDM International and works for EHP. Mr. Perez also has significant experience and expertise in the related fields of municipal management of water supply and sanitation services, low-cost housing and urban upgrading, refugee camp planning and disaster management. In addition to these sector specific skills and experiences, Mr. Perez is skilled in a wide range of cross-cutting areas including policy analysis, evaluations, finance and credit, institutional and sector assessments, community participation, training and facilitation, program design, leading interdisciplinary teams, writing and management. He also speaks fluent Spanish.

Contributors

Contributions to the document were made by Dan Edwards, Andy Karp and Harold Lockwood, who have served as EHP consultants with responsibilities related to the work described here and whose reports were used as a basis for this document. All three reviewed the initial draft and made corrections and additions.

Fred Rosensweig and Chris McGahey of EHP and Kelva Perez of USAID also reviewed the document and provided valuable contributions to the final product.

Abbreviations

CAASD Corporación del Acueducto y Alcantarillado de Santo Domingo (Santo Domingo Water and Sewer Corporation)

CESDEM/USAID Centro de Estudios Sociales y Demográficos (Center for Social and Demographic Studies)

CORAASAN Corporación del Acueducto y Alcantarillado de Santiago (Santiago Water and Sewer Corporation)

EHP Environmental Health Project

ENDESA Health Demographic Survey (Encuesta Demografica de Salud)

GODR Government of the Dominican Republic

IDB Inter-American Development Bank (Banco Inter-Americano de Desarrollo or BID)

INAPA Instituto Nacional de Aguas Potables y Alcantarillados (National Water Supply and Sewage Institute)

INAPA/AR INAPA/Acueductos Rurales (Rural Water Supply, a department within INAPA)

INDRHI Dominican Institute of Water Resources (Instituto Domincano de Recursos Hidráulicos)

NGO nongovernmental organization (organización no gobermental or ONG)

O&M operation and maintenance

ONAPLAN National Planning Office (Oficina Nacional de Planificación)

PAHO Pan-American Health Organization (Organización Panamericana para la Salud)

PROCOMUNIDAD National Public Works Agency

RWSS rural water supply and sanitation

SESPAS Secretaria del Estados de Salud Publica y Asistencia Social (Ministry of Public Health)

TCP total community participation

UNICEF United Nations Children's Fund

| USAID | United States Agency for International Development |
| WSS | water supply and sanitation |

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Executive Summary

In 1996, a new Dominican president was elected who was a strong advocate for reform of the public sector. With advocacy and policy work by USAID and other external support agencies including the Pan-American Health Organization (PAHO), United Nations Children's Fund (UNICEF) and Inter-American Development Bank (IDB), the Government of the Dominican Republic recognized the need for reform of water supply and sanitation (WSS) sector policies and approaches. This period coincided with a USAID decision to phase out its funding for direct provision of new WSS services in rural communities. As part of its phase-out strategy, the USAID Mission in the Dominican Republic decided that the timing and conditions were right to work with the new government in seeking policy and sector reform; specifically, USAID wished to share the lessons it had learned in its "total community participation" (TCP) model. This model promotes community-based, -owned, and -managed rural WSS and uses nongovernmental organizations (NGOs) to implement projects. Although IDB was advocating its reform work on the WSS sector as a whole, USAID requested that EHP help with reform on the rural WSS portion. The receptivity of the GODR to reform, decentralization and new ideas for the WSS sector formed the basis for institutional assistance from the National Water Supply and Sanitation Institute (INAPA) conducted by EHP from 1996–2002. The main thrust of EHP work in the Dominican Republic in these six years has focused on creating an enabling environment at the national level through efforts to reform INAPA so that it would support and sustain community-based, rural WSS and hygiene promotion systems.

This report documents assistance given by EHP on behalf of USAID in this period and focuses on distilling lessons from the experience that may be useful in crafting interventions for creating enabling environments for the support of other community-based rural water supplies, sanitation and hygiene promotion. Enabling environments are those organizational and/or social structures that, when established, will sustain the implementation of programs and determine the scale of the public health impact of those programs.

INAPA is charged with responsibility for the thousands of small- and medium-sized rural water systems in the Dominican Republic, but it operates without adequate resources to carry out this broad mandate. In the shortfall, other players have moved into the sector, each with their own approach, standards, style and priorities. INAPA urgently needed to define a new role for the rural part of its work that was more in line with its resources and consistent with sector participation of a multitude of other agencies and organizations. Key concepts in the change agenda were community-based management, decentralization of agency work, a shift by INAPA from an implementation to oversight/normative role and integrated health interventions rather than water supply projects in isolation.

EHP provided assistance in creating an enabling environment that took the following forms:

? First, work to help INAPA accept significant policy change about how rural water supply and sanitation (RWSS) is or can be done.

? Second, specific tools developed with INAPA to aid it in carrying out a new community-based and more oversight-oriented role: technical norms for small rural water and sanitation systems, operation and maintenance (O&M) guidelines, and community interaction resources for rural water supply.

? Third, direct institutional support to INAPA staff to help create a more efficient and productive work environment, including workshops, advice to and consultation with management, joint planning and staff coaching over time.

? Fourth, an effort with INAPA to develop a strategy for an appropriate institutional role after water systems have been transferred to rural communities. This is a critical area that is not always appreciated, even by those who accept the principles of community management: although communities can take a leading rather than passive role regarding their water systems, they should not be later left to continue with no support at all.

? Fifth, throughout the intervention, a direct effort was made to facilitate the closer contact and engagement needed between INAPA and NGOs operating in the sector and between INAPA and rural communities.

Various constraints encountered during the six-year period affected the final results. The technical assistance delivered to Acueductos Rurales (AR or Rural Water Supply), a department of INAPA (INAPA/AR), took place during a period of major changes. These included a change of government and controlling political party, three major staff turnovers, a hurricane that caused a complete priority reorientation, and substantial shifts in levels of philosophical and financial support from INAPA's senior management for the principles of community-based management of small rural water systems. Nevertheless, changes were achieved between 1996 and 2002, including the following:

? Acknowledgement and embracement by INAPA of the validity of a community-based strategy for delivery of rural RWSS services and formalization of it into INAPA's mode of operation.

? Better engagement by INAPA with NGOs operating in the WSS sector.

? Better interactions by INAPA with rural communities that are managing their RWSS systems.

? Increased understanding of the principles of integrated water/sanitation/hygiene projects and how these pieces fit into a health improvement framework, as opposed to the approach of seeing water projects as simply an isolated engineering issue.

Various lessons can be drawn from this experience, which may be relevant to other similar efforts:

? As might have been expected, achieving policy reform that is supported by the president of the country and his high-ranking political appointees was relatively simple. Translating the new policy into changes in institutional behaviors and functions in INAPA, however, proved more difficult than expected and required more resources and time than originally planned. The technical assistance skills required for this effort related more to organizational development and change than WSS sector expertise.

? Successes achieved in reforming the rural WSS sector and INAPA/AR were constrained by lack of success in reforming the urban WSS sector, including the majority of the work done by INAPA. EHP has long advocated that reform of the WSS sector in countries needs to look explicitly at the rural sector. It also appears that the inverse is true: reform of the rural sector without also reforming the urban sector is very difficult.

? Although NGOs in the Dominican Republic were pioneers in promoting community-based approaches to rural WSS and provided many good examples, the quality and effectiveness of the range of NGOs turned out to vary significantly and some projects were of poor quality. Recognition of this served to validate the role of INAPA as providing standards and monitoring project implementation. This in turn required a reform of sorts on the part of the NGOs to recognize and accept INAPA in a normative role, through which it would seek to ensure quality in the projects reaching the rural communities.

? The institutional and individual skills needed by INAPA to support community-based rural water systems were not synonymous with the skills and approach that were required to support sanitation and hygiene education and behavior change at the household level. Future efforts should seek to distinguish clearly between creation of enabling environments that support *community* water systems from enabling environments that support *household* sanitation and hygiene-related behavior change.

Although progress was made and real results achieved, it is fair to say that much still needs to be done in the Dominican Republic to reach the goal of creating an enabling environment that effectively promotes, supports and sustains community/household-based and -owned rural water supply, sanitation and hygiene promotion efforts. The Government of the Dominican Republic is not facilitating funding for investments to increase WSS coverage in the rural areas, nor are international support agencies (including USAID) providing the required financial resources. Within INAPA, significant institutional change and skill development and related tools have been developed, but the extremely limited operational budget for INAPA's rural department results in limited outreach and impact in the rural sector. Nevertheless, compared with many other countries in Latin America, it also is fair to conclude that the Dominican Republic has been a pioneer in reforming its approach to and support

for community-based rural WSS systems. To build on the progress made to date, suggested next steps include the following:

?   Additional training and "coaching" of INAPA staff to develop and strengthen skills needed to play an effective role in supporting community-based rural water supply, sanitation and hygiene systems.

?   Continued advocacy by USAID, IDB and other external support organizations to motivate senior INAPA decision makers to provide the rural WSS department with adequate financial and human resources consistent with their mandate and responsibilities to increase WSS coverage in rural areas and develop an O&M program to support the communities to sustain their existing systems.

?   Financial and technical support to INAPA to develop and maintain a national database of rural water systems.

?   Financial support by the GODR and international support agencies so that INAPA can implement its strategy to support communities in O&M of their systems.
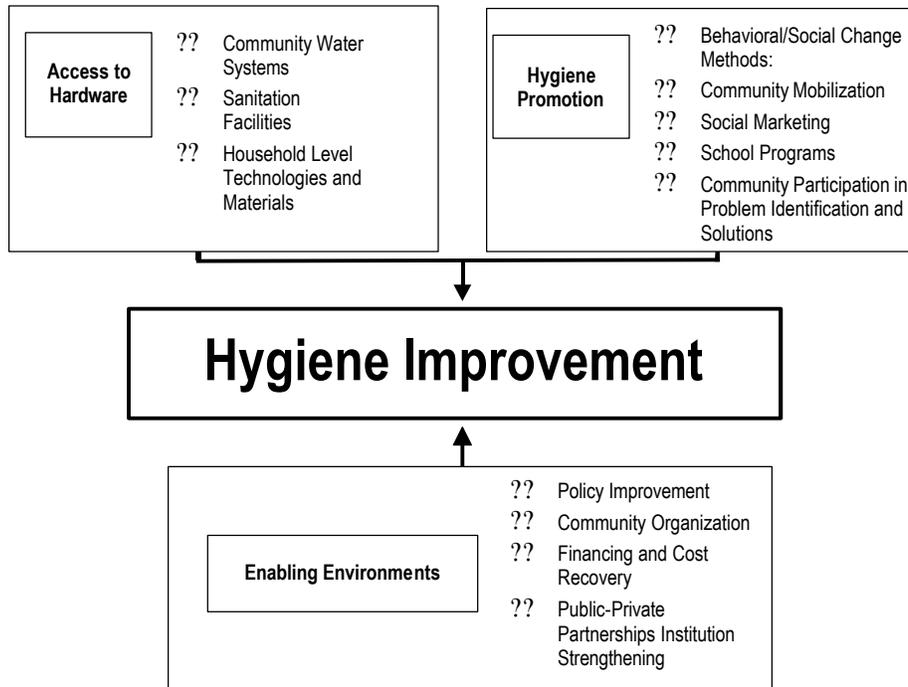
1.   Introduction

1.1. Purpose of Report

The Environmental Health Project (EHP) has recently concluded six years of work funded by the United States Agency for International Development (USAID) in the Dominican Republic with the National Water Supply and Sewage Institute (INAPA). This work was intended to help create an environment of support at the national government level for community-based rural water supply and sanitation (RWSS) and hygiene. Although the path followed has not been what was visualized at the outset given the changing of attitudes, personnel and governments, along with the repercussions of a major hurricane, the effort achieved significant results.

The purpose of this report is to document EHP technical assistance efforts to INAPA and provide conclusions about results and lessons learned that may be useful not only in the Dominican Republic, but also in other countries that are sorting out how best to support rural communities in managing their water supply and sanitation (WSS) systems. The intended audience of this document is USAID mission staff worldwide and their counterparts in other bilateral and multilateral aid agencies responsible for supporting community-based water supply, sanitation and hygiene improvement programs, especially in creating enabling environments that help sustain these community-managed systems.

1.2. The Environmental Health Project and the Hygiene Improvement Framework

In the past 20 years, it has become increasingly clear that the relentless building of civil works alone will not lead to improved health in rural areas or, more specifically, to sustained improvement in water delivery. The sector as a whole has moved away from narrowly focused engineering and physical infrastructure solutions toward broader public health and social interventions. This shift has been driven on one level by the failure of infrastructure projects executed in isolation (and not just megaprojects) to achieve desired and anticipated impacts on health. The legacy of countless well-built latrines that are unused and seemingly robust handpumps that are broken speaks to the flaws of the approach. In addition, it is increasingly recognized that improved water supply by itself does not confer the health benefits that it once was widely assumed to provide. It is now understood that hygiene-related behavior change and improved sanitation are necessary complements to maximizing the health benefits from improved water supply projects (Esrey 1991).

Although improved water delivery has been shown not to be the silver bullet of rural health when done by itself, the same research indicates that better results come from improved water, improved sanitation and hygiene behavior change, taken together, than any intervention alone. EHP promotes an integrated approach, combining access to improved water supplies and sanitation *(hardware)* with targeted efforts to change hygiene-related behaviors *(hygiene promotion),* all occurring in an environment in which underlying goals, institutional stability, coherent policy and economic sustainability for interventions *(enabling environments)* are well understood. EHP refers to this as the Hygiene Improvement Framework (HIF) (see figure below).

Access to Hardware	?? Community Water Systems ?? Sanitation Facilities ?? Household Level Technologies and Materials	**Hygiene Promotion**	?? Behavioral/Social Change Methods: ?? Community Mobilization ?? Social Marketing ?? School Programs ?? Community Participation in Problem Identification and Solutions

Hygiene Improvement

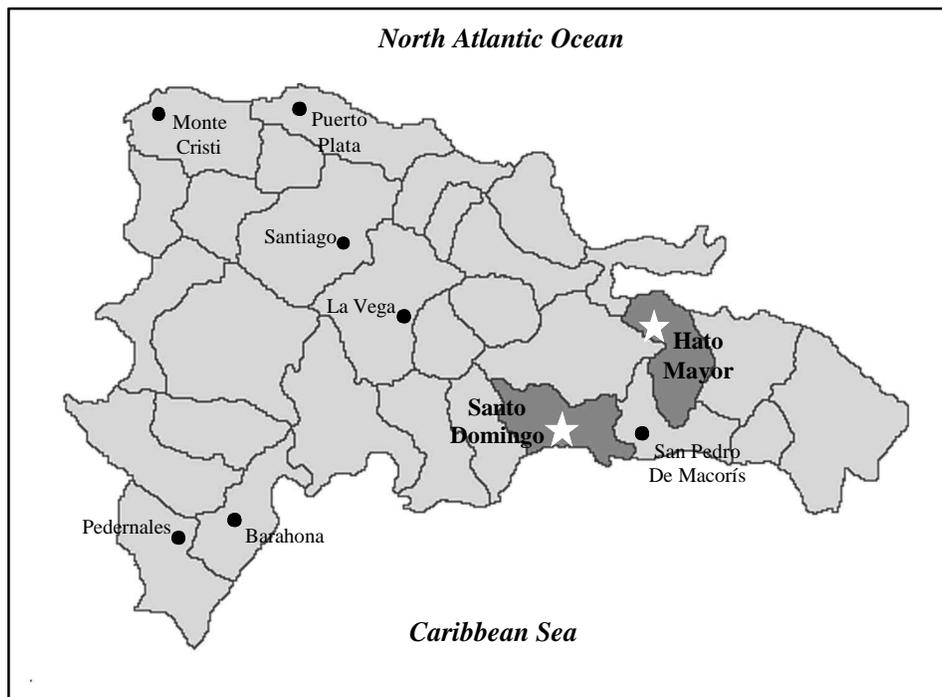| **Enabling Environments**	?? Policy Improvement ?? Community Organization ?? Financing and Cost Recovery ?? Public-Private Partnerships Institution Strengthening

To implement the field portion of this integrated approach, EHP advocates a community-based effort—working with local communities and other partners to identify risk factors associated with diarrhea transmission in a target area, as well as developing and implementing strategies to address the factors selected. These are primarily the highly visible hygiene promotion and hardware inputs.

Enabling environment inputs play a key role in helping hardware and hygiene work effectively to reach the intended target groups and in establishing organizational support focusing on long-term sustainability. At a broader level, investment in the enabling environments can help move project thinking in hygiene promotion and hardware from individual activity implementation to development of models and their replication. This approach toward an enabling environment was the underlying framework of EHP work in the Dominican Republic in the past six years.

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2. Background

2.1. Overview of the Dominican Republic and the Rural Water Supply and Sanitation Sector

North Atlantic Ocean

Monte Cristi
Puerto Plata
Santiago
La Vega
Hato Mayor
Santo Domingo
San Pedro De Macorís
Pedernales
Barahona

Caribbean Sea

Demographics

The Dominican Republic, which occupies approximately two-thirds of the Caribbean island of Hispaniola, currently has a population of 8.2 million. Of this, 36% or about 2.9 million inhabitants live in rural areas. In the past 25 years, the Dominican Republic has shifted rapidly from a primarily rural to primarily urban nation. The population of the country as a whole continues to grow at roughly 2% a year, although this growth is now occurring entirely in urban areas. Apart from the relative decline of the rural, compared with urban, percentage of the country, it appears that the absolute rural population of the Dominican Republic also is in slight decline, as the country changes from an agrarian to an industry- and information-based economy (Abreu 1999).

The Dominican Republic economy falls in the middle range of Latin American nations; with a per capita income of US$1,770, it is distinctly better off than neighbors Nicaragua and Haiti (each around US$400), but still well below reference point countries such as Costa Rica and Mexico (US$2,770 and US$3,840 respectively) (World Bank 1998). During much of the past decade, the Dominican Republic has enjoyed solid economic growth, including several years when it led the Latin American and Caribbean region in percentage growth of gross domestic product.

Data from different sources regarding the rural WSS sector in the Dominican Republic are not entirely consistent, but a middle ground estimate of improved rural water supply coverage is at 50% or about 1.4 million people (Abreu 1999). This estimate covers all improved water supply interventions providing access at 500 meters or less, including handpumps, public standpipes, yard taps and household connections.

The range of data for adequate sanitation is much wider. Estimated coverage varies from a low of 37% (Secretariat of Public Health and Social Welfare [SESPAS] 1995) through 77% (CESDEM/USAID 2001) to a high of 83% (Gleick 1998), translating into coverage of from 1.1 million–2.4 million people.

Recent levels of investment in the sector have been well below those of the early 1990s; thus, it is unlikely that coverage for either water or sanitation has moved up significantly in the few years since 1998.

Infant mortality in the Dominican Republic stands at 45 per thousand live births. An additional 11 deaths occur between ages 1–4, for a total early childhood mortality of 57/1,000. Prevalence of diarrhea for all young children (0–5 years) has been documented in a national health study: 16% of respondents indicated an occurrence of diarrhea within two weeks prior to the interview and 6% within 24 hours. (ENDESA 1996, 2001).

INAPA

The National Water Supply and Sewage Institute (INAPA) is the agency responsible for all potable water supply other than in the capital city and a handful of the largest cities. It has under its control all of the medium- and small-sized towns in the Dominican Republic, which have bona fide urban characteristics, plus all of the truly rural areas throughout the country. Although technically a sub-entity of the Secretariat of Public Health, the agency in practice functions independently, with its chief officer in direct contact with the president of the country.

IDB is sponsoring a major reform of the water sector, with a significant change of identity proposed for INAPA along with other stakeholders. The reform package is tied to approximately US$70 million in aid (mostly in loans) and has been in the legislative pipeline for several years. As currently structured, less than 10% of the aid provided under the reform package would be directed to the rural portion of the sector. The reforms proposed for the Dominican Republic are consistent with reform

work sponsored by IDB elsewhere: they focus on transformation of operators into more efficient water service providers "acting in competitive markets." In the specific case of the rural portion of the sector, plans call for INAPA (or regional decentralized entities derived from INAPA) to maintain a role, but to be re-engineered from agent and owner of the water systems to RWSS sector planner, regulator, monitor and possible funder as well. Even with the financial incentives offered, the reform process is still in the discussion stages, and no immediate passage of legislation is expected.

The process of modernization of the sector and INAPA has been slow. INAPA is currently still a highly centralized structure, and decisions and subsidy money still flow from the capital. User fees cover only 30% of the budget; the difference comes from the central treasury. Most of INAPA's water systems, including the urban ones under its control, operate with deep deficits.

INAPA offices in small towns are responsible exclusively for the town in which they occur. The rural systems are all handled through a special centralized department in INAPA's headquarters in Santo Domingo. This department, with a staff of approximately 20, two vehicles and three computers, is technically responsible for the thousands of small communities around the country.

The NGOs and Rural Water Supply and Sanitation

In the shortfall of central government financial resources and institutional capacity to build and maintain rural water systems and provide sanitation service and hygiene promotion, a wide range of donors and both international and local NGOs have stepped into the void. An estimated 1,500 water supply systems built by NGOs and other agencies currently exist, compared with the estimated 1,000 communities served by INAPA. However, the NGO systems are usually more remote and smaller, so INAPA systems serve a substantially greater population. Because of constraints on INAPA's budget and staff, the NGOs operating in the sector have traditionally done so with only limited technical regulation, programmatic cooperation, oversight or logistical coordination from INAPA. Each NGO has brought its own organizational culture, approach, standards and priorities to the sector. Although a comprehensive database or documentation of NGO presence in RWSS does not exist, the number of NGOs actively involved in the sector probably stands at two to three dozen.

The Rural Communities

In rural areas, small, single-story, gable-roof houses of palm board still predominate, but the trend is clearly toward concrete homes, which offer better security and do not deteriorate as palm board does. The poorest houses have roofs of a broad leaf-like material called *yagua,* found abundantly, but requiring replacement every year or two. Most rural houses of palm board or concrete construction now have roofs of galvanized metal. Some concrete houses also have poured concrete roofs. All but the poorest houses have a poured concrete floor. The typical rural community has a two-room primary school, sometimes a clinic and a number of small rural stores that sell staple items.

In most rural communities, agriculture is the main occupation, although it is questionable if it is the largest source of income. Many families have at least one member who works in a city job, bringing in a far higher salary than would be possible in agricultural work. In many other communities, remittances from family members in the United States are the most significant income. Among agriculture workers, the majority are day laborers; a smaller, but still sizeable number work their own plots or land rented in a sharecropping arrangement.

Many rural communities in the Dominican Republic have long been accustomed to a passive role regarding water supply and nurture the expectation that water service someday will be provided free or at nominal cost by the government.

USAID and Rural Water Supply and Sanitation

USAID has a long history of involvement in rural water supply, sanitation and hygiene improvement in the Dominican Republic. Private voluntary organization (PVO) co-financing work from 1992–1998 represented a conscious decision by USAID to use NGOs, rather than government to build infrastructure and engage with communities. USAID gravitated naturally toward NGOs, considering them better equipped to reach the poorer rural areas and more receptive to a community-based methodology. Projects funded under the PVO co-financing project included a focus on community-owned and -managed projects (which USAID called "total community participation"), in which beneficiaries participated in all phases of the project planning and implementation process with the goal of inculcating a strong sense of community ownership of the projects.

2.2. Constraints to Creating a Supportive, Enabling Environment

Engaging with INAPA involved a number of key challenges, some responsive to intervention and others to be worked around. Other challenges arose in the rural communities in which INAPA was to implement its new role, and still others concerned the NGOs responsible for a large portion of water systems built in the rural areas. A summary of the most salient challenges follows:

?? *Access to rural areas.* The existing environment at INAPA was quite centralized, and few understood the steps toward decentralization. No INAPA municipal "hub and spokes" system was possible under the existing institutional organization. INAPA has municipal offices around the entire country, but these report to the subdirector of operations, not to Acueductos Rurales (INAPA/AR or Rural Water Supply), an INAPA department that covers all rural systems at the agency. The term "aqueduct" is used to mean piped water supply.) Municipal governments were generally in no position to take responsibility for rural water systems under their political jurisdiction. INAPA and the public health department (SESPAS) only interacted in a limited way, and little direct coordination existed between WSS interventions or other integrated work.

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?? *Scale of need.* More than 8,600 communities exist in the Dominican Republic, most of them small and rural. It was impossible with the limited resources available to meet the demands of all through a direct service model. Approximately 1,000 rural populations are currently served through INAPA systems, plus perhaps 1,500 by non-INAPA systems, leaving a high number of small remote populations unserved.

?? *NGO challenges.* No uniform WSS standards apply to NGOs, and INAPA is not in a position to provide oversight or control of NGO-built systems, although by law INAPA is responsible for all of them as soon as they are built. Some key INAPA staff distrust and lack confidence in the technical ability of the NGO sector. Likewise, NGOs distrust INAPA. Coordination of resources and sharing of information from NGO to NGO and NGO to INAPA is insufficient. Contractor/engineering skill sets dominate INAPA management, which is not intuitively receptive to a more community-oriented approach to water supply.

?? *Information.* Little organized data are available on rural water systems, whether INAPA or NGO built or the demographics of the areas in which they are located. Change is impeded by low computer literacy in INAPA/AR. It is difficult for some staff to conceptualize and appreciate the benefits of badly needed systemization of data.

?? *Uncertain future.* The staff is changing because of shifts in political terrain and priorities. An environment of uncertainty exists regarding sector reform at the legislative level. A Senate bill proposes far-reaching changes for INAPA as an institution, but there is no reliable indication of if, when and how the bill will become reality.

?? *Resources.* Physical and logistical constraints reduce the potential reach of INAPA/AR, given the limited resources available to it. Investment by the Government of the Dominican Republic (GODR) in the sector is declining. Limited U.S. government resources for investment in the sector means limited ability to influence players and events or to leverage other resources.

?? *Rural community issues.* The expectation of rural communities for basic services from government at little or nominal cost is well established. Extraordinarily high water consumption levels occur in many rural communities, combined with a resistance to metering. Communities need some defined level of ongoing technical and administrative support from an outside entity, even in the context of decentralization, autonomy and self-management. Easily accessible/attainable legal status is lacking for potential community-managed systems.

3. Description of EHP Activities in the Dominican Republic

3.1. Introduction

In 1996 a new Dominican president who was clearly open to reform of the public sector was elected. With advocacy and policy work by USAID and other external support agencies including the Pan-American Health Organization (PAHO), United Nations Children's Fund (UNICEF) and Inter-American Development Bank (IDB), the GODR recognized the need for reform of WSS sector policies and approaches. This period coincided with a USAID decision to phase out funding for direct provision of WSS services. As part of its phase-out strategy, the USAID Mission in the Dominican Republic decided that the timing and conditions were right to work with the new government in seeking policy and sector reform; specifically, USAID wished to share the lessons it had learned in its "total community participation" (TCP) model. This model promotes community-based, -owned and -managed rural WSS and uses nongovernmental organizations (NGOs) to implement projects. Although IDB was advancing its reform work on the WSS sector as a whole, USAID requested that EHP help with reform on the rural WSS portion. The receptivity of the GODR to reform, decentralization and new ideas for the WSS sector formed the basis for EHP-conducted institutional assistance to INAPA from 1996 onward. The main thrust of EHP work in the Dominican Republic in the past six years has focused on creating an enabling environment at the national level through efforts to reform INAPA to support and sustain community-based rural WSS and hygiene promotion systems.

Although INAPA also has a significant role with medium and small town systems, the work by EHP specifically targeted its assistance to INAPA/AR, which was responsible for the small isolated rural communities also targeted by USAID efforts through NGOs.

EHP was to provide the following areas of major technical assistance:

?? Assisting INAPA to develop technical and procedural norms and standards appropriate for providing WSS services in rural areas.

?? Assisting INAPA's rural WSS department to "re-engineer" its functions from implementers/builders of water supply systems to regulator, supervisor and promoter of rural WSS systems.

?? Assisting INAPA's rural WSS department to strengthen its internal management capability and team as well as its ability to manage NGO and private sector contracts.

?? Assisting INAPA in designing and implementing a monitoring and evaluation program for the Hato Mayor pilot project to analyze and document the experience and incorporate the lessons learned into decentralizing rural WSS services on a national scale.

?? Assisting INAPA and SESPAS (the Ministry of Health) in assessing existing approaches and institutional roles and responsibilities in rural sanitation at the household level and making changes as appropriate to ensure maximum preventive health impact.

3.2. Activities Carried Out by EHP to Help Create/Support an Enabling Environment at the National Level for Community-Based RWSS in the Dominican Republic

EHP goals were successful in the creation of capacity within INAPA/AR to manage NGOs and the private sector in all developmental phases and follow-up for community-based management of rural water supply. This would require that INAPA/AR develop new, skills, procedures and documentation to be able to carry out a substantially different role than it has previously. A key portion of the EHP work concentrated on aiding the transformation of this department from project-implementing work to taking a more supervisory and normative role consistent with its resources and the principles of local control and management. EHP also worked to help INAPA/AR develop skills to be more efficient in carrying out its work and to interact meaningfully and appropriately with rural communities. A description of the major activities carried out from 1996–2002 follows:

Advocacy and Policy Change

EHP's initial work involved advocacy- and policy-related efforts with the GODR in general and INAPA specifically. Although the new president of the Dominican Republic was reform- and "modernization-" minded, this view did not always translate down to the operational levels of government—where much resistance to change still existed. The first key advocacy effort by USAID and EHP was to document successes in the country of a community-owned and -based approach to rural WSS and actually demonstrate these successes to INAPA and other GODR agencies. The advantages of a community-based (often termed TCP in the Dominican Republic) approach are not intuitively obvious to a large swath of individuals involved in the WSS sector. To have the concepts critical to TCP and the TCP model available in an easily accessible form, EHP adapted a Water, Sanitation and Health (WASH) document to the circumstances of the work being undertaken in the Dominican Republic (see Karp, WASH Informe Técnico 62). This document

enumerates the advantages of a community-oriented approach and lays out the steps for implementing a rural WSS project under a TCP model. Site visits were organized to various community-owned and -managed rural water systems, in which government staff were able to interview community members and inspect the infrastructure. The success of these examples—especially when compared with other existing INAPA-owned and -maintained rural water systems—proved a compelling argument for senior GODR decision makers.

Based on the systematic advocacy work described above, the GODR made a concrete policy decision to promote and support a community-owned and -managed approach to rural WSS and mandated INAPA to restructure its rural efforts accordingly. Once reaching agreement on the principles, it was necessary to then develop the strategy for devolving ownership and management of the rural water systems from INAPA to the communities. The work required participation at all levels within INAPA and resulted in a "transformation document," essentially a road map for moving forward with a transition to the role envisioned (Edwards 1997). Key policy elements called for in transforming or re-engineering INAPA's rural efforts included the following:

? Create a separate department within INAPA to focus on decentralizing ownership and management of existing rural water supply systems to the communities.

? Re-engineer INAPA from an institution that implements rural water systems to a national institution that plays a sector monitor and planner role.

? Provide training and new skills and scopes of work for existing INAPA staff.

? Delegate or contract out implementation of rural water supply systems to the private sector, especially NGOs.

? Develop a national information system showing the location and status of existing rural water supply systems.

? Develop and document technical norms and standards that are appropriate for rural communities.

? Develop and document an integrated approach to rural WSS that includes household-level sanitation and hygiene promotion.

The substance of these policy reform elements was developed in a couple of years with the active participation of INAPA leadership and staff and with input from the NGO community. Processes and procedures were developed, documented and supported with training and team building through EHP technical assistance.

Given the historically long paternalistic relationship between the government and Dominican rural communities, the transfer of responsibilities for water systems presents some special challenges for INAPA/AR. It was considered important to communicate a clear message to the communities to counteract initial suspicion and hostility and to reframe the discussion from one of abandonment and abdication of responsibility by the government to one of self-determination and freedom from

dependence for the community. This would convincingly illustrate the benefits of community management and spell out in concrete terms the new role of the community. To do all this work at the level of individual interaction would be far beyond INAPA's staff resources. EHP responded to this situation by developing a plan in collaboration with INAPA for efficiently getting the message to rural communities in target areas. It involved a combination of direct and mass communications techniques and criteria for determining the success of community communication efforts.

At one point during the course of the early work on developing the decentralized, normative-role, community-oriented strategy, the INAPA directorship abruptly changed hands. The new director, an engineer with little appreciation of the process of community development or knowledge of NGOs, immediately raised questions about the quality and durability of NGO-built systems. This doubt placed the whole effort in jeopardy. To regain the absolutely essential acceptance of the director, a study was commissioned to compare INAPA and private sector–built systems with those done by selected NGOs. The idea was to see how the NGO systems compared in reality and whether the new director's concerns were justified. The study (Karp and Daane 1999) was undertaken by a team of three INAPA and two EHP engineers and covered a sampling of 22 water and sanitation projects. All selected projects were inspected in the field, and the scope of work called for a focus on the quality of design and construction without evaluating community participation. Three approaches were compared: *(a)* design and construction by INAPA staff, *(b)* design by INAPA staff with construction by a private sector construction contractor, and *(c)* design and construction by an NGO. The study concluded that INAPA, the private sector and NGOs were all capable of designing and building good, as well as poor, systems depending on the circumstances and that one could not conclude a priori that one group was necessarily better than another.

This work and the dialogue that followed served to re-engage the new INAPA management in the process. A fortunate parallel development also contributed to greater open-mindedness by the new INAPA management: IDB was negotiating with INAPA on a US$71 million loan for modernization of the water sector. Although almost the entire sum was for medium and large towns, IDB insisted on the condition of decentralizing rural water supply activities with major involvement by NGOs. The EHP study mentioned above, combined with this pressure from IDB helped reverse the INAPA management's attitude toward NGO involvement.

WSS Tools for an INAPA Normative Role

EHP worked with INAPA/AR to develop three staff and collaborator tools, which were seen as key support documents for INAPA's proposed new role as an oversight, rather than implementing, agency and especially important for better interaction with NGOs and communities. The transformation document mentioned above provided direction for the new role of INAPA/AR. The following documents provided more direct how-to information.

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Technical norms. Existing norms for design and construction at INAPA seriously impeded INAPA engagement with the NGO sector, which was and is constructing more aqueducts a year than INAPA itself. Oriented toward urban conditions and based on conventional expensive engineering, the norms did not reflect what NGOs were doing with good success in rural areas. NGOs argued that following INAPA norms would make projects prohibitively expensive, and they were not inclined to follow them. Even if INAPA staff recognized the deficiency of the norms, they could not for their part unilaterally dismiss the rules of their own institution. In a collaborative effort, EHP, INAPA, SESPAS, the National Public Works Agency (PROCOMUNIDAD) and a dozen of the most prominent NGOs came together to create a completely new set of norms geared toward rural systems.

The final document had three stated objectives:

- Guarantee the quality of the designs.
- Facilitate design work.
- Facilitate coordination between entities, such as NGOs that are responsible for the design and construction of projects, and the government institutions that are responsible for regulation of the sector.

The document was divided into 18 chapters covering the following areas:

- Presentation of project documentation
- Preliminary studies
- Basic design parameters
- Selection of appropriate technology for water supply
- Wells and other types of groundwater capitation
- Rainwater collection
- Conduction by gravity flow
- Pumped conduction
- Storage tanks
- Distribution networks
- Pumping stations
- Water quality
- Surface water capitation
- Handpumps
- Water treatment
- Estimation of O&M costs
- Rural sanitation
- Procedures for amending and updating norms and guidelines

This work had several features worth mentioning:

?? NGOs active in WSS from all parts of the country were invited to contribute to the new norms to promote stakeholder and end user buy-in and to take advantage of their knowledge and experience.

?? The norms borrowed heavily from previously created materials, in this case Bolivia.

?? The norms included household sanitation. This was new ground for INAPA, which had previously not dealt with sanitation unless water was involved and then only for large systems. It helped INAPA move one step closer to envisioning smaller integrated health projects, rather than just water supply interventions.

Sanitation was perhaps the most contentious of all the chapters, given the sensitivities of various NGOs regarding the superiority of this or that latrine design. Although EHP coordinated preparation of the design norms, the final product was an INAPA document: *Normas y Guias de Diseño de Proyectos de Abastecimiento de Agua Potable y Saneamiento Rural (Design Norms and Guidelines for Rural Water Supply and Sanitation)* (Karp 2001).

O&M post-construction technical and policy guidelines. INAPA did not have user-friendly documentation suitable for community operation of small systems, including coverage of technical aspects and the critical policies on which entities would be responsible for various aspects of post-construction O&M and management of the systems. O&M post-construction technical and policy guidelines were conceived to help in the process of transferring administration of the water systems to community water associations. They outlined a scheme for the different institutional responsibilities and provided O&M information on various technologies used in small rural systems.

Community-based RWSS (TCP) manual. The "Manual de Recursos para la Participación Comunitaria en Proyectos de Agua Potable, Saneamiento, y Cambio de Comportamiento en la Higiene" (Unidad Ejecutora de Acueductos Rurales, INAPA 2002a–d) was created to support INAPA staff in understanding and engaging in the TCP process. Although the manual started out as a single volume, many already-written materials of high quality about various aspects of community participation that staff did not have at their disposal interested INAPA. The resulting document turned out to be a small reference library on a whole range of topics falling under participatory project work for a water supply agency. This included material useful for work on integrated projects with sanitation and hygiene behavior change components. Comprising four volumes and organized by topic, the manual contains some of the best materials available in the region, many of them sponsored by USAID in other countries. In addition, it contains material that INAPA/AR created over the years to support participatory community work. The document has evolved into something of an employee orientation manual as well as a reference.

Development of a Strategy for National Support to Community-Based O&M

Initial policy work to help INAPA move toward a more decentralized, normative and community-oriented approach centered on getting essential buy-in to the main ideas and on presenting a plan of how this transformation might begin. In community-managed systems, the O&M burden on the central agency (that is, INAPA) can be expected to be much reduced, but it is unrealistic to imagine that it will be eliminated entirely. Rural communities face a number of difficult issues where outside help is necessary, whether to provide impartiality or expertise or to locate resources unavailable in the community. This effort was concentrated on helping INAPA to:

?? Analyze the needs and challenges facing communities after systems have been finalized.

?? Identify what could realistically be achieved given the resource constraints in which INAPA operates.

?? Define the roles and responsibilities of different actors involved in working with communities in the long term, taking advantage of similar experiences in the region.

?? Develop a medium-term strategy for O&M in INAPA/AR with several components, including the start-up of an operational O&M pilot phase on a limited basis (see Lockwood 2001).

Institutional Development

The environment in INAPA/AR presented a number of issues critical to the success of any initiative for change, regardless of its content. Staff worked in split shifts, often with little contact with staff in succeeding shifts. INAPA investment in development of staff commitment was limited. Teamwork skills needed support. Lack of delegation of responsibility and authority created situations in which workloads were intolerably heavy at the top and where lower echelon employees had time on their hands. To help improve the operating environment, institutional assistance was provided over several years and continued after a change of most of the personnel in the department when a new government came to power. The departure of staff in whom investment has already been made was discouraging, but did not derail the effort. Additional investment was made in repeating some of the work for new personnel. The activity focused on improving basic skills necessary to the efficient operation of a department:

?? Team-building exercises

?? Development of job descriptions for all department personnel

?? Definition of individual roles and responsibilities, focusing on delegation wherever possible

?? Problem solving practice

?? Planning and critical analysis exercises.

A manual was produced with staff in INAPA/AR on policies and procedures, entitled *Estructuración de la Unidad Ejecutora de Acueductos Rurales; Manual de Políticas y Procedimientos del Marco Administrativo (Structuring INAPA's Rural WS Implementation Unit: Policy and Procedures Manual)* (Edwards and Menier 2001).

Participation in Hato Mayor Project as Model of the Community-Based RWSS Approach and Pilot for How INAPA Could Appropriately Support NGOs and Communities

Early on, it was envisioned that INAPA would fund NGOs to implement projects in the department of Hato Mayor to gain experience and demonstrate the approach in one department, before extending it to other departments. This work, done through local NGOs, provided an opportunity for INAPA to test drive some of the principles being worked toward with EHP: community participation during planning and construction, a normative/oversight role for INAPA, community management after construction and engagement with NGOs during the entire process. A concentrated effort was made to expose INAPA staff to the project and to illustrate how to incorporate themselves into the new approach. ENTRENA, the intermediary for USAID funding to the NGOs, occupied a supervisory role not dissimilar in some respects to what was envisioned for INAPA, and arrangements were made to foster contact between the two entities (ENTRENA and INAPA) as ENTRENA went about its supervisory job for the NGO projects.

Methodologies

The sections above provide summary descriptions of the technical assistance that EHP provided to INAPA in the past six years. The following describes the methodologies used in carrying out EHP's technical assistance:

Field activities at rural communities. EHP and USAID worked together to provide INAPA staff with field exposure to TCP approaches and contact with NGO staff. These activities were key to helping INAPA visualize how TCP worked and to fostering dialogue between NGOs and INAPA.

Workshops. For many INAPA staff, employment in the agency was their first job out of school. To develop and communicate elements of the strategy to transform INAPA/AR to carry out specific pieces, EHP conducted numerous workshops in the course of five years of technical assistance. Much of this training, provided in retreat-like settings, gave staff maximum opportunity to bond as a team, something difficult to achieve in the day-to-day work environment. Staff training focused on essential management and communication skills and project planning.

Short-term technical assistance. A significant portion of EHP assistance involved intermittent visits by international experts in the areas of institutional development, norms and engineering for small water systems, communication and social marketing and O&M strategy. To make the best use of resources, these visits were relatively short (2–3 weeks), but long enough to communicate key points and resolve doubts or problems and were then followed by return visits to gauge progress or review problem areas. To ensure continuity, the same consultant team was used during the six years of the activity.

Ongoing coaching of INAPA staff. Along with international expertise provided at intervals, EHP maintained an in-country presence throughout the latter half of the project to give continuity to the various components of work underway. This activity was designed to help keep INAPA staff and other players engaged and to resolve problems as they arose. It consisted of a part-time consultant who was based in the Dominican Republic and was available as needed to promote and facilitate relevant work.

4.   Results in Terms of Enabling Environment

4.1. Where Was INAPA Then? Where Is INAPA Now?

In 1996, INAPA was a centralized institution with little connection to rural areas. Its resources were overextended in tending the small town and metropolitan systems under its control. It had in effect ceded its mandate for rural Dominican Republic. NGOs involved with WSS in the Dominican Republic operated largely without supervision, guidance or even contact from INAPA. Indeed, some NGO staff regarded any incursion into "their" territory and projects by INAPA as a nuisance, and they made little effort to keep INAPA informed of their water-related activities. Practice of community-based water project implementation or management did not exist at the government level. Additionally, water project work was conceived in complete isolation. The concept of partnering with other organizations, i.e., integrated health interventions, was not part of INAPA's strategy.

In 2002, INAPA remains a centralized institution, and its resources are still overextended. In its work with medium-sized towns, to which it dedicates most of its staff, INAPA continues on a path indistinguishable from the past. However, significant changes have taken place within the part of INAPA devoted to rural water systems. The following points briefly summarize these changes:

?? *Acceptance of a community-based (TCP) strategy for implementation of water projects.* INAPA/AR is now fully aware and has documented its acknowledgement that, although a need for water supply for thousands of isolated, remote and dispersed populations exists, current institutional resources cannot possibly cover all the rural zones of the country. The agency also is aware that a TCP strategy represents a way out of the impasse.

?? *Institutional structure more favorable to community-based strategy.* The INAPA/AR team is divided into three groups, one of which is now specifically assigned to community work (The three groups cover engineering and design, administration and community participation and promotion).

?? *Some understanding of how to carry out a community-based methodology.* Both community development and engineering staff have been involved in numerous interactions with communities under a TCP methodology.

?? *Engagement with the NGO sector on both formal and informal levels.* Friction points still exist, but within a context that recognizes the contribution of NGOs to

the sector and the need for collaboration. The general attitude is that NGOs are providing valuable input and easing INAPA's burden.

?? *Understanding of the importance of integrated project concepts for rural communities.* INAPA has traditionally tackled only water supply and water-based sewerage projects. Latrine construction has never been the realm of INAPA, but rather SESPAS (Secretariat of Public Health). The ice has been broken on this limitation in the past year. INAPA/AR for the first time in 2001 linked one of its rural water supply projects with latrine construction and community hygiene.

?? *Institutional memory and documentation.* Even though much was lost in terms of time and effort during two *en masse* staff changes, some surprising departmental retention of new ideas occurred. As new staff came on, they seemed to become aware of at least a few of the concepts developed earlier with departed staff. In addition, not all staff lost to the department were lost to the institution as a whole. Some were only transferred to other departments. Although the investment made in these persons is not apparent when only looking at change in INAPA/AR, better awareness of TCP and integrated project approaches suffusing through the institution has been a benefit. Documentation developed, also helps anchor the changes made over time, even as old staff move on and new staff arrive. Not all the documents produced in the five years are in frequent use, but what is important is that at least some are.

?? *Community perceptions.* Where INAPA/AR has made repeated visits under the new community-based approach and where "the software has been followed by hardware," communities have been reasonably realistic about and receptive to the message brought by INAPA staff. The risk in any endeavor by a government agency proposing self-management is that the message will be interpreted as shedding a social obligation, rather than building a more sustainable mechanism for water delivery. INAPA/AR staff are acutely aware of this risk and have made true efforts to deal sincerely with communities.

5.   Lessons Learned

5.1. Policy-level Lessons

Reflecting on the past six years, various lessons are apparent that may be relevant in other countries attempting similar efforts.

Given the high-level support by the country's president for reform of the government and the related support by the politically appointed director of INAPA, it was relatively easy to achieve changes in policies—specifically for the reform of INAPA's role in WSS. These policy changes provided a framework for INAPA to transform from a centralized agency with a mandate to build and own rural water systems to a decentralized agency with a mandate to support NGO-built, community-based and -owned rural water supply systems.

Despite early success in reforming INAPA's rural water supply and sanitation policy and in obtaining related high-level support for new policies, it proved quite difficult to achieve real changes in INAPA's institutional behavior and in developing skills at the individual staff level to implement the new policies effectively. Resistance to change was significant and constituted a real factor in the slow pace—six years—at which real and still partial reform was achieved. In retrospect, significantly more resources needed to be invested in working with the existing staff of INAPA to achieve effective institutional reform.

The work carried out by EHP in the past five years took place in the relatively small INAPA/AR department. Setup of this department resulted from the special interest of the previous president of the country with the support of the then-director of INAPA and a few of his lieutenants. The department was initially staffed by seconding personnel from other departments and was assigned new vehicles along with a substantial budget. This preferential treatment in an institution starved for cash and equipment created strong enmity in other departments.

Despite many years of advocacy by the international WSS community, community-based approaches to rural water supply and sanitation were not very well known or supported by the WSS sector in the Dominican Republic (with the exception of the NGO community), and even at the community level, the concept and approach were foreign and not inherently accepted. A significant amount of advocacy was required. The most effective form of advocacy was to provide real evidence (through field trips and interviews with community members) that a community-based and -sustained approach was effective at developing rural water supply systems. This was not only true for the Dominican WSS sector professionals, but also for community members

who had long believed that provision, operation, maintenance and payment of water supply systems was the responsibility of the national government.

Broad consensus existed among NGOs working in the WSS sector in the Dominican Republic (which included international as well as Dominican NGOs) in support of a community-based approach to water supply. In fact, the NGO community led pioneering efforts to introduce and implement community-based and -owned rural water supply systems. The capacities of the NGOs to provide the technical, financial and "software" support to the communities varied widely—from quite good to poor. In advocating the community-based approach to INAPA, the EHP team discovered an important constraint: a significant number of the community-based systems supported by NGOs were not, in practice, being operated and maintained well. NGOs had either been providing inadequate engineering support or inadequate community organization and training for the community water committees. As the EHP activity evolved, it became increasingly clear that an NGO-built and -facilitated project was not synonymous with good community-based or -owned water supply systems. This contributed to INAPA's recognition of the important role the agency needed to play in not only providing standards, but also monitoring project implementation to ensure that communities receive the best services from the implementing agency (whether an NGO or private sector company).

The institutional and human resource skills and approaches to create an enabling environment for community-based rural water systems is effectively not synonymous with those needed to create an enabling environment for household-level sanitation and hygiene-related behavior changes. From a technical point of view, INAPA was quite experienced with rural water systems, but their experience with sanitation had always been with community-based sewage systems, mostly in small towns. INAPA had almost no experience with household-level sanitation and no experience with hygiene education and behavior change. Initial efforts to address this involved attempts to get INAPA to work in an integrated and coordinated fashion with the Ministry of Public Health (which did have experience with household sanitation and, to a lesser degree, hygiene education and behavior change in rural areas). This approach did not prove very effective, largely because the ministry did not have the mandate nor the interest to coordinate with INAPA. This approach to coordination might still make sense in the Dominican Republic and other countries but would require significantly more technical and financial resources to engage a second large government organization in the reform process. Absent those resources (and the willingness of the Ministry of Public Health), INAPA chose instead to try to build those skills in-house. That process is still in its early stages, and it is not yet clear how effective it will prove to be.

Key to the community-based approach is that INAPA withdraw from the business of building rural water systems itself and assume a more supporting, normative role. This strategy, however, fails to take into account the function of INAPA in a spoils system of politics. INAPA is a powerful tool in providing needed services in rural districts, and it has proved unrealistic to expect management to ignore political priorities. From a political perspective, even with limited resources, only through

implementing projects is INAPA relevant as an institution. Over time, INAPA/AR appears to have grown more comfortable with the idea of a normative role, though it would be reluctant to discuss a future role that excludes implementation.

Apart from the discussion of implementation compared with normative roles, a potential role exists for INAPA as a planner, facilitator and coordinator of funding resources—something beyond a normative role, but not in the direction of implementation. The "broker/allocator" role is one that can emerge only with time and with the established trust of implementers and donors, but INAPA has a natural advantage in assuming this position that no other entity has—it is in the end the sole mandated authority for rural potable water.

5.2. Implementation-level Lessons

Change

A precarious political and institutional landscape should be anticipated. Favorable alignments and circumstances will not remain stationary, and if work is initiated at a particularly propitious moment then a likely scenario is that change will bring some deterioration of those circumstances. Planning interventions is important as one has to take into account that strategic supporters will leave, staffs will be replaced and committed resources will disappear.

In pragmatic terms, assistance may be better planned with repetitions that would not be contemplated in a more stable environment or with more tangible interventions. Frequent "pulse readings" (with changes able to be made as a result of those inputs) should be part of the overall strategy for institutional change. For example, for a key buy-in workshop to lead off an intervention, it may make sense to program the event twice from the outset. The first event is planned to reach the majority of targeted personnel (though there are almost always those who can't make a given event for medical reasons, schedule conflicts, etc). If the climate stays favorable, the second event can be a smaller pick-up activity for those who missed the first, along with expected new staff from normal turnover. If a pulse reading shows significant problems in accepting the content, the second event can be made larger to re-take the key points necessary for the intervention. If a pulse reading shows a major political change with new staff, the second event becomes the needed chance to re-initiate the intervention.

Plans for an intervention can reasonably be formulated to take into account the possibility of three or four different developments over time. The first is smooth sailing, which is the easiest possibility to plan for but not always the most likely to occur. Second would be a politically stable environment, but where departmental level changes jeopardize work in progress and require re-establishing bases with large contingents of new staff (who come board in the context of overall support for the work). The third possibility is that support from above is withdrawn, which jeopardizes the effort more broadly, and where strategic work needs to be done before

an intervention can feasibly continue forward. There is a fourth development that may be worth planning for: unforeseen catastrophic events, which can significantly change social priorities.

During the course of the intervention in the Dominican Republic, all four of the above circumstances presented themselves at one point or another—some more than once. What is clear, is that unlike interventions in the hardware or hygiene promotion areas, enabling environments work involves more uncertainties and thus needs more contingencies in planning.

Time Horizons

Enabling environment interventions require substantial time in order to be effective. In the face of uncertainties and changing circumstances, more time should be allowed, and the tendency to rush to complete tasks before changes occur should be resisted. With the work carried out in the Dominican Republic, activities were on some occasions pushed to occur before an anticipated uncertainty such as an election or the departure of a key person. It is a natural response to uncertainty to restrict horizons, but in the context of enabling environment work it is probably more beneficial to struggle to overcome this—to embrace the uncertainty and in the face of impending change attempt to specifically draw out the activity so that it can bridge to the new situation, even if this carries some risk that tasks will have to be modified or reprogrammed. In order for involved staff and contractors to be open to this, SOWs need to have sufficient flexibility, more than would be the case in a straight-forward programmatic intervention.

Investing in People

Institutional strengthening by making investments in the capacity of individual people is a worthwhile and necessary intervention, even realizing that many of the "investments" may be soon gone. This is a policy that can make sense if one is willing to acknowledge that:

1. It is a long-term approach and one with some risks, which may or may not express itself in change or benefit in the near or intermediate future.

2. It will require multiple iterations of education and messages to change any collective institutional landscape.

3. Some of the value provided will go to people who will use the knowledge gained in activities elsewhere, and that the value will be virtually impossible to document or quantify, even as it is still a worthwhile contribution to the individual involved and country as a whole.

Technical Assistance in Creating an Enabling Environment and Complementary Resources

Where resources are highly constrained in the institution receiving assistance, the very help offered may be impaired by the lack of basic infrastructure hardware, e.g., For example, giving assistance in developing a database when adequate computers are not available or trying to engage staff in community contact when vehicles are not available for transport to the rural areas. In these situations, having small amounts of "enabling hardware" resources linked to the main enabling environment work to ensure efforts are not wasted or spent with low efficiency. To determine whether enabling hardware is necessary for a particular piece of work, a quick review of the relevant physical circumstances of the institution or department would be required, but such information would emerge quickly or more likely be manifestly visible. Better to invest 90% in expertise and 10% in tools if no tools are available rather than 100% in expertise. This does present a challenge when categories for channeling assistance are restricted—it is sometimes easier to provide a block of T.A. than a computer, but effort to overcome or work around this challenge is certainly justified.

Coordination with Complementary Projects

Having at least a small amount of hygiene promotion or hardware construction project resources linked to the enabling environment work can serve as 1) an opportunity for field work inculcating the concepts of a community-based approach and of integrated projects and 2) enticements for skeptical audiences to tentatively accept or work with proposed ideas under an enabling environment effort.

Technical Norms and Reaching for Perfection

Solid technical norms can help convey credibility to the issuing institution and help create an atmosphere of respect for standards and a normative authority. Their creation or improvement should be considered a central part of any enabling environment effort. Good quality technical norms not only facilitate design work and improve the quality of design and construction, but also can facilitate coordination between a government institution with normative responsibilities, and other institutions, such as NGOs, with project implementation responsibilities.

The technical norms created in the project were not considered perfect, even at the time of production. Time on the part of the 50 people who participated in preparing these norms was limited, as was the production budget and the time available before an anticipated change of government. A good set of documents containing the rural water norms of Bolivia was used as a starting point, with each aspect of the content reviewed and adapted for the Dominican context to the extent that time and resources allowed. But in their imperfection they have served as impetus for INAPA in pushing to get them further "Dominicanized" and to develop various improvements—their very imperfection has helped in the end to gain INAPAs engagement on them. Norms should be living rather than stationary documents, and this result fostered the living

document idea better than a more nearly perfect set of norms would have. Important points were:

1. The norms themselves included a section which presented a process for periodically amending them.

2. The document containing the design norms was formatted in a manner that facilitates amending one section at a time (each section of the design norms has its own page numbering sequence, and the document is kept in a loose-leaf binder).

3. A common error with norms in some other countries was avoided: norms are sometimes "packaged" and formatted such that making even a single correction or modification requires that the entire document be reviewed, revised and agreed upon, and such a task is so onerous that it may be delayed for several decades! This was at least part of the reason that the previous Dominican design norms for rural water systems had not been revised in more than 20 years, in spite of their being very incomplete and problematic.

For any future similar effort however, adequate international staff time should be allocated to obtain not just the norms from one reference country, but from several countries, before starting the project, in order to proceed in the most efficient manner and to benefit fully from collective world experience. The complete documents should be gathered in electronic form, and the selected norms should be free from copyrights, or with authorizations secured. If not available electronically, the budget should include a line item for data entry or OCR scan.

Providing Institutional Hard-copy Memory of Changes for New Staff

It is a challenge to preserve institutional memory at major staff change events, but it is not hard to predict that staffs will change in many situations. Good documentation is a key deliverable that can be provided through outside assistance. Many staff members treat any documents received as if it were their personal possession, such that new staffs often have little written record of what occurred before their arrival. Also, the likelihood of a particular document surviving a staff change is inversely proportional to its quality and usefulness, making a response doubly important. A practical measure in any intervention of this nature would be to have copies of all relevant documents ready to present to new staff. It also would be useful to give personal copies of documents to staff members, especially to those who helped create the documents, so that they would not be tempted to raid copies in the institutional files.

It is reasonable to argue that it should not be the role of the donor or assistance entity to either produce distribution copies or preserve documentation, but this position should be checked against the realities of the institution being targeted for assistance. In the best circumstances, document production is a mundane, routine and operational issue hardly worthy of mention. However, if the receiving institution has a poor record on internal preservation of documentation and allocation of resources for document production, then leaving preservation and production in its hands can

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jeopardize the benefits of an effort whose value is many times that of the printing costs.

Building Capacity for O&M

Developing a strategy for O&M presented a real challenge in attempting an overall change in the institution. O&M is clearly linked to the main community ownership and management strategy. Addressing O&M early on can be a problem. If it is too wrapped into the original decentralization/transformation work then it can get confused with project execution when it is really a separate issue. It also is hard to develop the O&M strategy until there is buy-in on the idea of community ownership/management. On the other hand, if it is not connected to the transformation strategy, then whatever approach adopted is incomplete. In the case of this effort, an O&M strategy was developed early on, but this knowledge was lost to INAPA as a result of poor retention of documents and staff turnover.

An O&M manual developed during the project tried to cover both institutional roles and technical material. The institutional material is linked to overall strategy, dependent on current policy and sensitive to political shifts. The technical materials are neutral in nature and not affected by political considerations. Such a manual could probably be better broken into a purely technical manual with an institutional role document done separately. The audiences for the two parts are different.

Legal Status and the Experience Base of Community Water Associations

The legal status of most Dominican community water associations is still ambiguous, which contributes to difficulties in administration of water systems. What is now clearer among actors is that communities will not actually own water systems but will exercise control through delegated authority. Under Dominican law, assets of the state, which include any community rural water system even if it was privately built, cannot be passed on to other hands without an act of the Dominican Congress. Issues that remain are:

1. How to make the process of formalizing the status of the individual water associations more streamlined.

2. How to ramp up the actual transfer of water systems from INAPA to community water associations.

3. How can INAPA best support the exchange of experience among individual community water associations.

This is seen as a valuable activity by many—though not all—stakeholders.

Availability of Reference Materials Is Part of an Enabling Environment

It is easy to be unaware of how limited the exposure is in some places to high quality documentation. At INAPA, there was an almost complete absence of information on

community-based RWSS. In developing a resource manual, EHP provided a large selection of materials from around the region to INAPA staff from which they were able to choose the most appropriate to their situation and the best quality. It was considered important to not simply create a massive volume of material that had not been carefully edited down.

Support from Other Institutions

When work on creating an enabling environment began, the responsible Dominican government agency, INAPA, was very receptive, and EHP, with USAID funding, took the lead in its promotion. However, during the course of undertaking this work, the leadership at INAPA changed and was no longer receptive. At this point it was extremely fortunate that INAPA was negotiating a loan with the Interamerican Development Bank (IDB), and the IDB took the initiative of convincing the new INAPA leadership of the importance of the concepts being promoted by EHP. The combined effect of EHP/USAID and IDB promotion resulted in the work continuing to move forward.

6.   Conclusions and Next Steps

Although progress was made and real results achieved, it is fair to say that much still needs to be done in the Dominican Republic to reach the ultimate goal of creating an enabling environment that effectively promotes, supports and sustains community/household-based and -owned rural water supply, sanitation and hygiene promotion efforts. The Government of the Dominican Republic is not facilitating funding for investments to increase WSS coverage in the rural areas, nor are international support agencies (including USAID) providing the required financial resources. Within INAPA, significant institutional change and skill development and related tools have been developed, but the extremely limited operational budget for INAPA's rural department results in limited outreach and impact in the rural sector. Nevertheless, compared with many other countries in Latin America, it also is fair to conclude that the Dominican Republic has been a pioneer in reforming its approach to and support for community-based rural WSS systems. (This is in stark contrast to similar efforts in the Dominican Republic to reform the urban WSS sector, which, despite significant investments and incentives from IDB, is completely stalled with little, if any, reform.) To build on the progress made to date, suggested next steps include the following:

? Additional training and "coaching" of INAPA staff to develop and strengthen the skills needed to play an effective role in supporting community-based rural water supply, sanitation and hygiene systems.

? Continued advocacy by USAID, IDB and other external support organizations to motivate senior INAPA decision makers to provide the rural WSS department with adequate financial and human resources consistent with their mandate and responsibilities to increase WSS coverage in rural areas and develop an O&M program to support the communities to sustain their existing systems.

? Financial and technical support to INAPA to develop and maintain a national database of rural water systems.

? Financial support by the GODR and international support agencies so that INAPA can implement its strategy to support communities in O&M of their systems.

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