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**CASE STUDIES ON DECENTRALIZATION
OF WATER SUPPLY AND SANITATION SERVICES
IN LATIN AMERICA**

by

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CONTENTS

ABOUT THE AUTHORS

ACKNOWLEDGMENTS

ACRONYM LIST

INTRODUCTION, by Fred Rosensweig

MANAGEMENT MODELS FOR SMALL TOWNS

Management Contract in Marinilla, Colombia, by Daniel Rivera

Community Water Board in Itagua, Paraguay, by Frank Fragano

Municipal Water Company in San Julián, El Salvador, by Carlos Linares

INSTITUTIONAL ARRANGEMENTS FOR RURAL COMMUNITIES

Municipal Promoter Program in Nicaragua, by Harold Lockwood

The SANAA Technician in Operation and Maintenance
Program in Honduras, by Andrew Trevett

PROSAR and AHJASA Programs in Honduras, by Andrew Trevett

REGULATION OF WATER SUPPLY AND SANITATION SERVICES IN SMALL TOWNS, by Guillermo Yepes

CONCLUSIONS, by Fred Rosensweig

ABOUT THE AUTHORS

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Carlos Linares is an architect and environmental planning specialist with 20 years of experience in the field of urban and regional environmental policy and planning. From 1984 to 1993, he worked for a private consulting firm and for environmental NGOs in Washington, D.C., conducting technical assistance missions to developing countries in Latin America, Asia and the Caribbean. For the past 10 years he has been a private consultant in San Salvador providing advisory services in the fields of health, water, and environment to international agencies including USAID, UNDP, IDB, and OAS. For the past two years, he has worked with the Environmental Health Project (EHP) in support of decentralization of water and sanitation services and sectoral reform in El Salvador.

Harold Lockwood, an independent consultant based in the U.K., specializes in water supply and sanitation. For over nine years he has provided technical assistance to projects in Central America, Asia, and Africa. He was a long-term advisor to the Nicaraguan government's Water Supply and Sanitation Authority and has worked for the British and Dutch governments as well as UN agencies, international NGOs, and the private sector. His particular area of expertise is in post-project institutional support for operation and administration. Previous to this endeavor, he has been a part of several EHP technical teams, primarily in Central America.

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has worked on programs examining issues around the decentralization of water and sanitation services in Slovakia, Ecuador, Tunisia, El Salvador, and Paraguay.

Andrew Trevett is an independent consultant in rural and peri-urban water supply and sanitation. His areas of specialization include drinking water quality management, community participation and sustainability of services, institutional support mechanisms for operation and maintenance, and environmental health management. Much of his 10 years' experience has been acquired in the NGO sector but he has also worked as a consultant for several international organizations including the World Bank, UNICEF, and the European Community. He has worked primarily in Latin America—in Guatemala, Honduras, El Salvador, and Peru—although he has also carried out short missions in India and Afghanistan.

Guillermo Yepes is an independent consultant with experience in the water and sanitation sector. For 24 years he worked for the World Bank in over 30 countries in Asia, Eastern Europe, Latin America, and the Caribbean, and his last position being Water and Sanitation Adviser before retiring in early 2000. His expertise includes policy and institutional analysis, private sector participation, and regulation. He has also worked extensively in the area of project design and implementation, tariff analysis, and benchmarking. He is the author of numerous articles and publications and has lectured worldwide on the above topics. Since “retirement,” he has worked as a consultant for the Inter-American Development Bank, the World Bank, and EHP.

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ACRONYM LIST

Introduction

AHJASA	<i>Asociación Hondureña de Juntas Administrativas de Agua y Saneamiento</i> (Honduran Water Board Association)
EHP	Environmental Health Project
ENACAL	<i>Empresa Nicaragüense de Acueductos y Alcantarillados</i> (National Water Supply and Sanitation Company, Nicaragua)
IDB	Inter-American Development Bank
KfW	<i>Kredit für Wiederaufbau</i> (German development bank)
NGO	nongovernmental organization
O&M	operations and maintenance
PROSAR	<i>Programa de Saneamiento Rural</i> (Rural Water and Sanitation Project in Honduras)
SANAA	<i>Servicio Autónomo Nacional de Acueductos y Alcantarillados</i> (National Water Supply and Sewerage Company, Honduras)
SDC	Swiss Agency for Development and Cooperation
TOM	<i>Técnico en Operación y Mantenimiento</i> (Technical Operation and Maintenance, Honduras)
USAID	United States Agency for International Development
WS&S	water supply and sanitation

San Julián, El Salvador

ANDA	<i>Administración Nacional de Aguas</i> (National Water and Sewage Administration)
COSERHI	<i>Comisión Coordinadora para la Reforma Sectorial de los Recursos Hídricos</i> (Coordinating Committee for Restructuring of the Water Resource Sector)
FISDL	<i>Fondo de Inversión Social para el Desarrollo Local</i> (Social Investment Fund for Local Development)
GDP	gross domestic product
GOES	Government of El Salvador
IDB	Inter-American Development Bank
MOH	Ministry of Health
NGO	nongovernmental organization
STP	<i>Secretaría Técnica de la Presidencia</i> (President's Technical Secretariat)
UCM	<i>Unidad Coordinadora de Modernización</i> (Coordinating Unit on Modernization, COSERHI's technical arm)
WS&S	water supply and sanitation
WS&S-SJ	Municipal Water and Sewerage Company of San Julián

Marinilla, Colombia

ACUANTIOQUIA	a regional agency created in 1960 to manage water systems in over 40 municipalities in the province of Antioquia
CONHYDRA	a domestic private sector company that operates WS&S services in seven municipalities, Marinilla being one
CORNARE	<i>Corporación Autónoma Regional</i> (Regional Environmental Agency)
CRA	<i>La Comisión Reguladora de Agua Potable y Saneamiento</i> (National Water Regulatory Commission)
GDP	gross domestic product
INSFOPAL	<i>Empresa nacional de agua potable</i> (the national water company, liquidated in 1987)
lps	liters per second
PSP	private sector participation
WS&S	water supply and sanitation

Itagua, Paraguay

CORPOSANA	<i>Corporación de Obras Sanitarias</i> (National Water Supply and Sewage Company)
ERSSAN	<i>Ente Regulador de Servicios Sanitarios</i> (newly established regulatory body for WS&S services; responsible to the Executive Branch)
IDB	Inter-American Development Bank
SENASA	<i>Servicio Nacional de Saneamiento Ambiental</i> (National Environmental Health Service)
WS&S	water supply and sanitation

Municipal Promoter Program, Nicaragua

AOS	Swiss Workers Aid
CNAA	National Commission for Water Supply and Sanitation
ENACAL	<i>Empresa Nicaragüense de Acueductos y Alcantarillados</i> (National Water Supply and Sanitation Company)
FISE	<i>Fondo de Inversión Social de Emergencia</i> (Social Investment Emergency Fund)
GAR	<i>Gerencia de Acueductos Rurales</i> (national-level directorate for rural WS&S, part of ENACAL)
GoN	Government of Nicaragua
INAA	<i>Instituto Nicaragüense de Acueductos y Alcantarillados</i> (Nicaraguan Institute for Water Supply and Sanitation)
KfW	<i>Kredit für Wiederaufbau</i> (German development bank)
MARENA	<i>Ministerio de Recursos Naturales y Ambiente</i> (Ministry of Environment)

MOH	Ministry of Health
O&M	operations and maintenance
RWSS	rural water supply and sanitation
SNV	The Netherlands Development Organization
UNOM	<i>Unidad de Operación y Manenimiento</i> (Operation and Maintenance Unit in each regional government)
WS&S	water supply and sanitation

Honduras

AHJASA	<i>Asociación Hondureña de Juntas Administrativas de Agua y Saneamiento</i> (Honduran Water Board Association)
APP	<i>Agua para el Pueblo</i> , a Honduran NGO
APTOS	<i>Agua para Todos</i> (a private firm which provides water and sanitation backup support to communities in the department of Yoro)
CNSP	<i>Comisión Nacional de Servicios Públicos</i> (National Commission of Public Services)
CODEM	<i>Comité de Desarrollo Municipal</i> (Municipal Development Committee)
FHIS	<i>Fondo Hondureño de Inversión Social</i> (Honduran Social Investment Fund)
IRWA	International Rural Water Association, a committee of NRWA
MOH	Ministry of Health
NRWA	U.S. National Rural Water Association
O&M	operations and maintenance
PROSAR	<i>Programa de Saneamiento Rural</i> (Rural Water and Sanitation Project in Honduras)
PROPAR	<i>Proyecto de Pozos y Acueductos Rurales</i> (a rural water and sanitation project, 1986-1997, supported by MOH and SDC)
SANAA	<i>Servicio Autónomo Nacional de Acueductos y Alcantarillados</i> (National Water Supply and Sewerage Company)
SDC	Swiss Agency for Development and Cooperation
SIAR	<i>Sistema de Información de Acueductos Rurales</i> (Rural Water Information System)
TSA	<i>Técnico de Salud Ambiental</i> (Environmental Health Technician)
TOM	<i>Técnico en Operación y Mantenimiento</i> (Technician in Operation and Maintenance)
WS&S	water supply and sanitation

Regulation

CC	commercial code
CNSP	<i>Comisión Nacional de Servicios Públicos</i> (National Commission of Public Services), Honduras
CORFO	<i>Corporación de Fomento</i> , Chile

CORPOSANA	National Water Supply and Sanitation Company , Paraguay
ENACAL	<i>Empresa Nicaragüense de Acueductos y Alcantarillados</i> (National Water Supply and Sanitation Company, Nicaragua)
ERSSAN	<i>Ente Regulador de Servicios Sanitarios</i> (newly established regulatory body for WS&S services; responsible to the Executive Branch, Paraguay)
PC	price cap
PSP	private sector participation
RoR	rate of return
SANAA	<i>Servicio Autónomo Nacional de Acueductos y Alcantarillados</i> (National Water Supply and Sewerage Company, Honduras)
SIRESE	<i>Sistema de Regulación Sectorial</i> , a multi-regulatory agency in Brazil
WHO	World Health Organization
WS&S	water supply and sanitation