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FIRST ANNUAL WORK PLAN AND LIFE OF PROJECT PLAN



APRIL 2005

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FIRST ANNUAL WORK PLAN AND LIFE OF PROJECT PLAN

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First Annual Work Plan and Life of Project Plan.

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FOREWORD

This First Annual Work Plan for the Environmental Services Program was collaboratively developed by the Consultant team members of the DAI Consortium of firms and resource partners. We would like to thank the Basic Human Services Office of the United States Agency for International Development in Jakarta for their reviews, inputs and suggestions during the development and vetting of this document. Likewise, we appreciate the collegial interaction with our partner Government of Indonesia coordinating and line ministries to the extent that we were able to arrange collaboration meetings, as well as the other partner programs of USAID under the other Strategic Objective programs. Our apologies to any organization, agency or program with whom we were unable to properly coordinate. In this vein, it should be noted that this document offers sufficient flexibility to be able to accommodate changes, additions or deletions as deemed appropriate during the course of this First Work Plan period.

ACRONYMS

The following is a list of acronyms common used in this report and on the project as a whole.

ADB	Asian Development Bank
AFTA	Yayasan Alumni Fakultas Pertanian Universitas Andalas
AIT	Asian Institute of Technology
APHI	Asosiasi Pengusaha Hutan Indonesia
AusAid	Australia Agency for International Development
Bapedalda	Badan Pengendali Dampak Lingkungan Daerah
Bappeda	Badan Perencanaan Pembangunan Daerah
Bappenas	Badan Perencanaan Pembangunan National
BM	Benchmarking
BHS	Basic Human Services Office of USAID
BKKBN	Badan Koordinasi Keluarga Berencana Nasional
BORDA	Bremen Overseas Research and Development Agency
BP DAS	Balai Pengelolaan Daerah Aliran Sungai
CB	Capacity Building
CBS	Community Based Sanitation
CP	Corporate Plan
COP	Chief of Party
CSS	Customer Satisfaction Survey
DAI	Development Alternatives, Inc.
DCA	Development Credit Authority
DCOP	Deputy Chief of Party
DEWATS	Decentralized Waste Water Treatment System
Dinkes	Dinas Kesehatan
DPRD	Dewan Perwakilan Rakyat Daerah
ESP	Environmental Services Program of USAID
FGD	Focus Group Discussion
FORKAMI	Forum Komunikasi Kualitas Air Indonesia
Forum DAS MP	Forum Daerah Aliran Sungai Multipihak
GIST	Geographic Information System Team
GNRHL	Gerakan Nasional Rehabilitasi Hutan dan Lahan
GOI	Government of Indonesia
GTL	Geologi dan Tata Lingkungan
GTZ	Gesellschaft Technische Zusammenarbeit
H&H	Health & Hygiene
HHT	Health and Hygiene Team
HPP	High Priority Provinces
ICRAF	International Center Research for Agro Forestry
IKK	Ibu Kota Kecamatan
Inc	In-cooperation
IPB	Institut Pertanian Bogor
IPLT	Instalasi Pengelohan Lumpur Tinja (Sludge treatment plant)
IWK	Indah Water Consortium
JBIC	Japanese Bank for International Cooperation
JHU	Johns Hopkins University
JICA	Japan International Cooperation Agency

JSI	John Snow International
LG	Local Government
LGSP	Local Government Support Program
MCK	Mandi Cuci, Kakus (community sanitation and water facility)
MFT	Municipal Finance Team
M&E	Monitoring and evaluation
MIS	Management Information System
MoU	Memorandum of Understanding
MPIS	Municipal Planning Information System
NGO	Non Government Organization
NRW	Non Revenue Water
NSIASP	Northern Sumatra Irrigated Agriculture Sector Project
NUS	National University of Singapura
O&M	Operation & Maintenance
OSM	Office of Surface Mining
PDAM	Perusahaan Daerah Air Minum
PEMDA	Pemerintah Daerah
PERPAMSI	Persatuan Perusahaan Air Minum Seluruh Indonesia
PLN	Perusahaan Listrik Negara
PMP	Performance Monitoring Plan
PLTA	Pembangkit Listrik Tenaga Air
POCT	Public Outreach and Communication Team
PPP	Public Private Partnership
PSDA	Dinas Pengelolaan Sumber Daya Air
PSP	Private Sector Participation
PU	Pekerjaan Umum
RA	Regional Advisor of ESP Team
RO	Reverse Osmosis Water Purification System
SDT	Service Delivery Team
SIA	Special Concern and Imperative Areas
SIL	Special Imperative Liaison
SME	Small Medium Enterprise
SO	USAID Strategic Objective
SODIS	Solar Disinfection
SOP	Standard Operating Procedures
SoW	Scope of Works
SSS	Small Scale Sewerage System
SSWP	Small Scale Water Provider
STTA	Short Time Technical Assistance
SWOT	Strength, Weakness, Opportunity, Threat
SWS	Safe Water System
TBA	To be assigned
TBD	To be determined
UGM	Universitas Gajah Mada
UNAND	Universitas Andalas
USAID	United States Agency for International Development
WASPOLA	Water and Sanitation Policy and Action Planning
WQ	Water Quality
WB	Worldbank
WBI	Worldbank Institute
WFI	Water Fund Indonesia
WMD	Water Maatschappij Drenthe
WSP	Water & Sanitation Program

WST
WSUIS
WTP

Watershed Team
Water Supply Utilities Information System
Water Treatment Plant

GLOSSARY OF COMMON TERMS

Appreciative Enquiry – an approach to community mobilization using participatory techniques that typically focuses more on identification of existing resources and development opportunities rather than identifying problems that constrain development.

Best Practices - Examples of field-based activities, operational procedures, or capacity building approaches that are successful and sustainable in social and environmental terms and can be readily adopted by other individuals or organizations.

Capacity Building - An approach to development that aims to instill commitment and improve fundamental management and technical skills within an organization, thereby making the institution more effective and sustainable.

Capital market development - The opening of long-term financing options through the capital markets. Specific activities involved include the development of a regulatory framework for the sale of general and revenue bonds, the evaluation of credit worthiness of potential issuers, and increasing the awareness of potential buyers.

Community - A collection of people living within a distinct area. It may be a social or a geographical grouping depending on the context.

Community-based Natural Resource Management - An approach to the use of renewable natural resources that relies on the empowerment of community groups to use those resources as they see fit using strategies arrived at through consensus. In an ideal situation, the use of the resources is sustainable in economic and ecological terms and the distribution of benefits occurs in a manner that is socially equitable. Many practitioners perceive a continuum ranging from strict government control of natural resources through co-management and collaborative management through to CBNRM at the other extreme.

Community-based Organizations - Groups of individuals within a village or group of villages or residential area with similar vested interests that have established an agreement to work together in a structured manner to achieve common objectives

Community Conservation Awareness Campaigns - Year-long campaigns to build awareness of and pride in local natural heritage. During the first phase, 5-7 community representatives undergo 10 weeks of intense coursework focused on strategies to increase community awareness. They then return to their communities to spend several weeks designing an awareness campaign focused on an environmental or health-related issue of importance to the community. This campaign is then implemented during the final nine months.

Community Mobilization - The process of building enthusiasm and commitment within a community or group of stakeholders to establish a formal working relationship in order to work together in order to accomplish a common goal.

Community Resource Mapping - The process of identifying the knowledge, skills and other human resources that are available within a community and the quantity and quality of natural resources that are present in the geographical area.

Conservation - A system that promotes the sustained existence of the natural resources.

Development Credit Authority Guarantee A financial tool to encourage private investment in which the US Government agrees to pay investors up to 50% of a given loan should a default occur.

Eco-regional planning - An approach to planning watershed management interventions that takes into account the influence of broader land-use patterns on ecology and biodiversity conservation. The aim is to raise rural incomes while promoting sound farming and forestry management practices; that is, to unite conservation and development.

Environment - the specific combination of natural resources in an area.

Farmer Field Schools – A training program for farmers to introduce integrated pest management (IPM) skills and technologies. The objective of these programs is to reduce pesticide usage and other agricultural inputs while increasing harvests.

Geographic Information System - A computer based system for capturing, managing, archiving, analyzing, querying and presenting spatial information.

Geo-Referencing - Use of coordinate geometry to locate points on the earth's surface.

Grant - Financial assistance provided, not as a loan that has to be repaid, for implementation of viable natural resource management proposals.

Grantees - Communities, Associations/Groups, Non-Governmental Organizations, Private Organizations, Entrepreneurs, Government agencies and others to whom a grant is made.

Grant Agreement - A written obligation on conditions for the operation of the grant endorsed by both a Representative of DAI and the Grantee.

Income-Generating Activities - ESP will support four types of income-generating activities that improve livelihoods while preserving the ecosystem: (a) conservation enterprises that are non-extractive and minimally disruptive (such as the harvesting of arboreal species); (b) natural resource-based enterprises (such as sustainable timber extraction); (c) agriculture (including horticulture, specialty tea, and spices); and (d) agro-industries (value-added processing including drying, juicing, fermenting, packaging, and machining).

Indicator - A feature or phenomenon that can be objectively measured in quantitative or qualitative terms as a means of gauging progress toward achieving a goal or measuring the impact of a specific intervention

Milestones - Watershed events or achievements that help verify that progress toward accomplishing goals and objectives is on track and on schedule.

Monitoring and Evaluation - A management tool that is built around a formal process for evaluating performance and impact using indicators that help measure progress toward achieving intermediate targets or ultimate goals. Monitoring systems comprise procedural arrangements for data collection, analysis and reporting.

Natural Resources - Forests and woodlands, fisheries and water resources, wildlife (flora and fauna) and soil resources. In the broadest sense, natural resources include rocks and minerals, land, air and wilderness. The last two of these are typically regarded as "common resources", being freely available to all.

Participatory Monitoring and Evaluation - A monitoring and evaluation approach that ensures active involvement of stakeholders and beneficiaries in identifying targets, appropriate indicators, data collection procedures and reporting.

Participatory Rural Appraisal – an approach comprising participatory techniques and tools that facilitates interaction with and within a community or stakeholder group with a view to establishing collective goals and objectives, constraints and opportunities and begins the process of action planning. The techniques are widely used to help identify possible projects though the typical PRA toolkit has a wide variety of additional applications.

Partners/Partnerships - Different levels of partnership can be identified:

- Co-operation is characterized by informal relationships that exist without any commonly defined mission, structure or planning effort. Resources and rewards are separate.
- Co-ordination is characterized by more formal relationships and understanding of compatible missions. Some planning and division of roles are required and communication channels are established. Resources are made available to all participants and rewards are mutually acknowledged.
- Collaboration implies a more durable and pervasive relationship. It brings previously separated organizations into a new structure with full commitment to a common mission. Requires comprehensive planning and well-defined communication channels operating on many levels. Resources are pooled or secured jointly, as are benefits.

Point-of-use water purification - The purification of water at the household level through filtration, boiling, or the addition of chemicals.

Public Awareness Campaign - A structured approach to transmitting and disseminating information, knowledge and understanding to the populace in general or specific interest groups using a variety of communications media.

Remote Sensing - Techniques for viewing and recording conditions and resources on the earth's surface without having direct contact. It emphasizes use of aerial photographs and satellite imagery.

Service Provider - An agency providing managerial and technical assistance to a community in a process of building the capacity of the community to become self-reliant.

Short-term Technical Assistance - Consultants or home office support staff engaged by ESP for periods not exceeding six months to provide support in a variety of technical areas.

Social Marketing – The adaptation of commercial marketing technologies and techniques to inform, persuade and motivate behavior changes which improve social welfare, i.e. for the public good.

Stakeholders - Individuals, communities, non-governmental organizations, private organizations, parastatals, government agencies, financiers and others having an interest or a

“stake” in a project or activity and its outcome. Primary stakeholders are those ultimately affected, either positively or negatively. Secondary stakeholders are the intermediaries in the process of carrying out the program/project. They may be winners or losers, involved or excluded. Key stakeholders are those who can significantly influence, or are important to the success of the program/project.

Strategic Plan - A road map that outlines the long-term goals of an organization or program and details how these will be achieved by adopting specific strategies, approaches and methodologies.

Sustainability - The ability to continue effectively once direct project/program support has been taken away. Sustainability can be at many levels but the main focus for COMPASS is on the institutional sustainability of natural resource management initiatives.

Sustainable Development - Progress measured in social or economic terms (or both) that has been or will be accomplished without irreversible environmental degradation or social disruption. The benefits should not only outweigh the social and ecological costs but should also be founded on a rational use of resources (human and natural) that can be maintained indefinitely or perpetuated based on future conditions that can be reasonably anticipated.

Training of Trainers - Building of technical knowledge and training skills of a cadre of individuals charged with disseminating technical information to field practitioners.

Watershed – A geographically defined area characterized by a common hydrological drainage network.

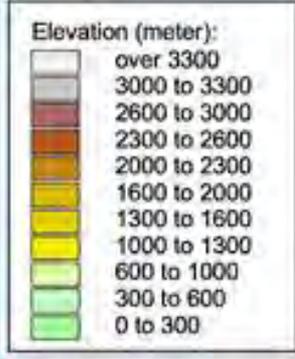
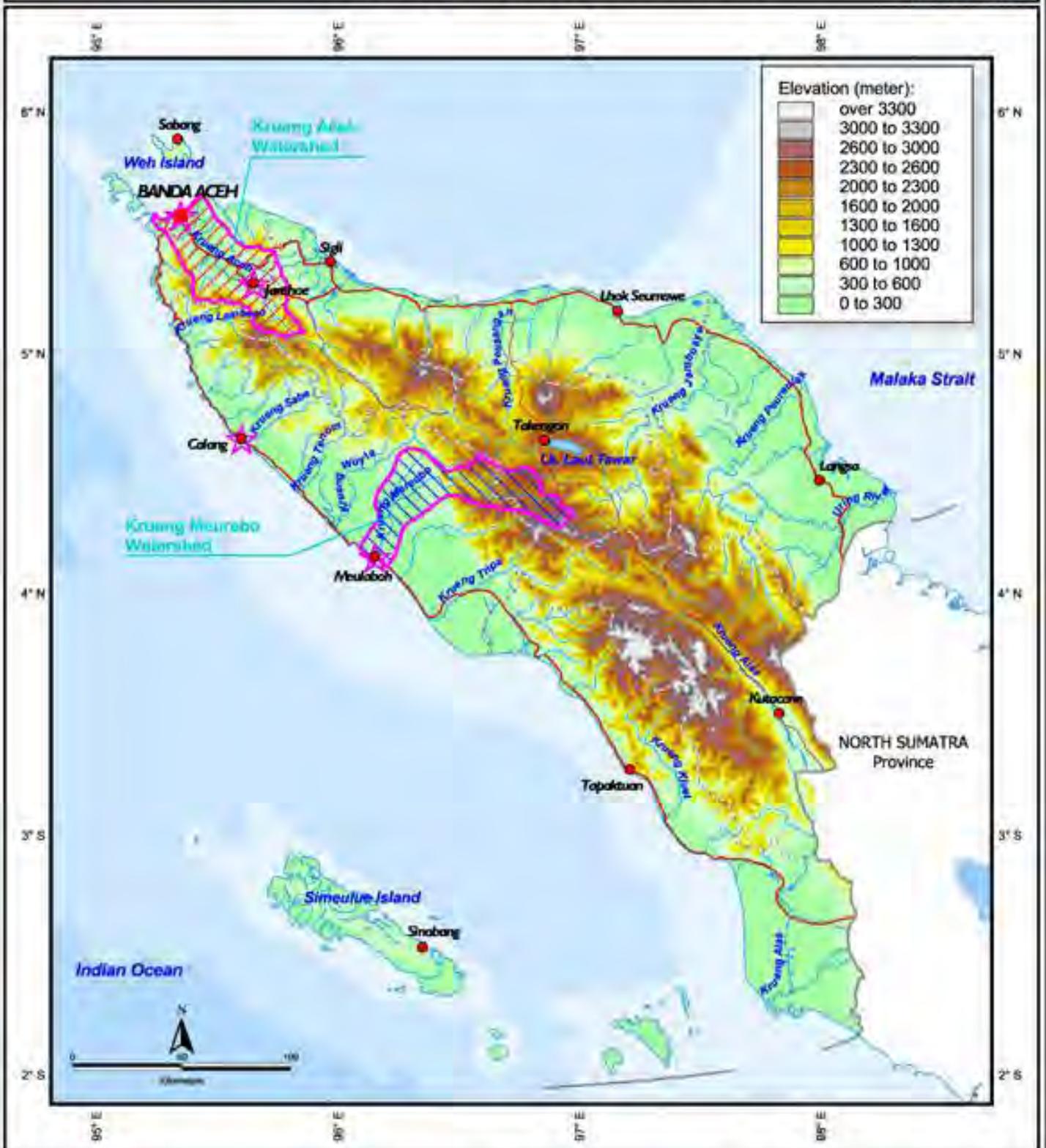
Watershed Management Plan – Iterative plan that presents information, analysis and decision making on ecological, social and economic aspects of watershed management. Such a plan includes action plans, resource budgets (financial and otherwise), and monitoring and evaluation mechanisms.

Watershed Management Forum – A group of stakeholder representatives from government, communities, private sector, universities, NGOs working together to plan and manage a particular watershed for mutually-determined sustainable use. Such stakeholders represent aspirations of stakeholders from the upper, lower and middle watersheds.

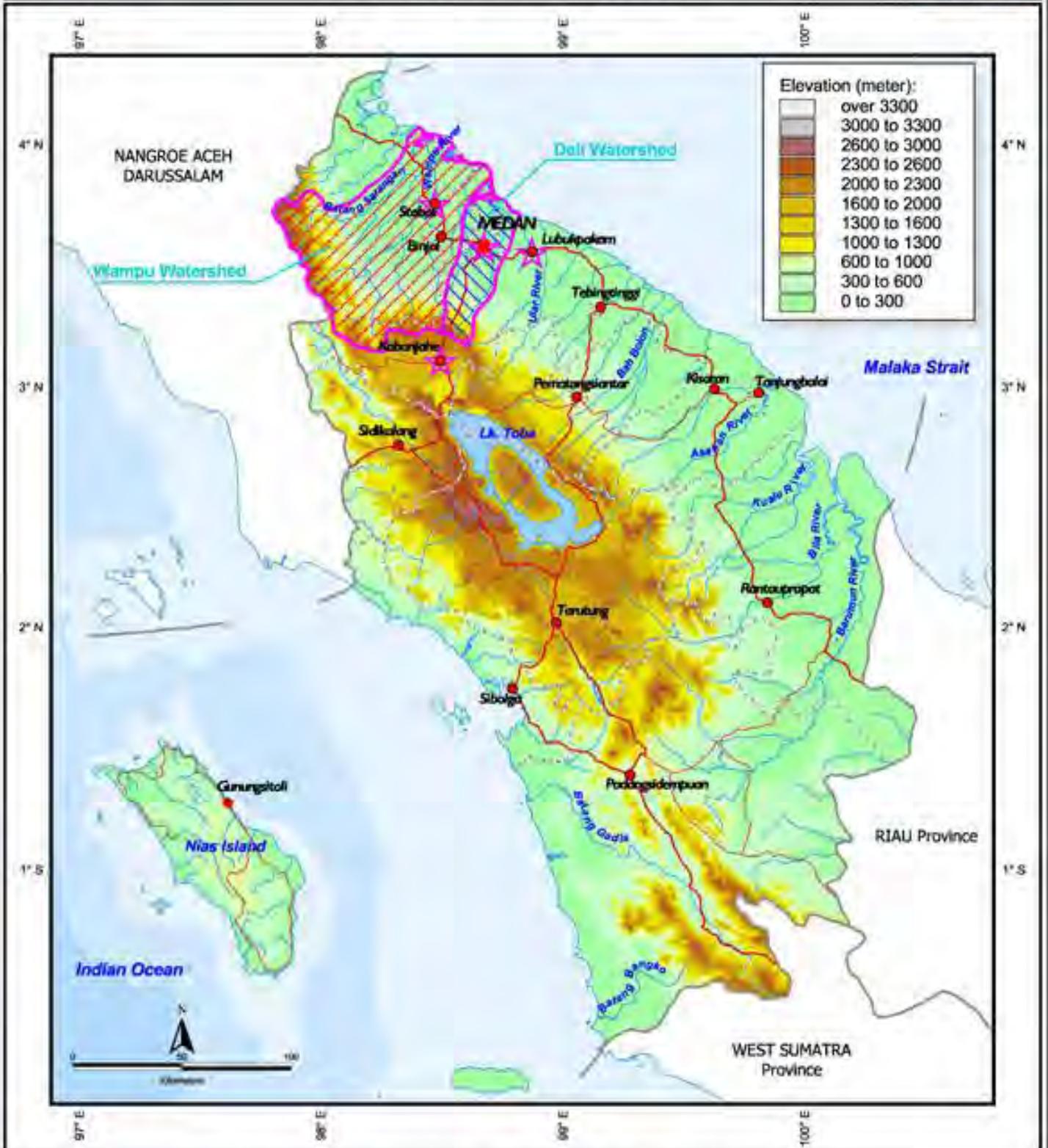
ESP Program Location Map



ESP Program Location Map for Nanggroe Aceh Darussalam



- | | | | | | |
|----------------|--|----------------------------|--|---------------------------|--|
| Legend: |  Provincial Capital | Priority Watershed: |  Krueng Aceh Watershed
 Krueng Meureubo Watershed | ESP Work Plan Site |  Banda Aceh Municipality
Aceh Besar District
Calang District
Meulaboh District |
| |  District Capital/ Municipality | | | | |
| |  Primary Road | | | | |
| |  Secondary Road | | | | |
| |  Provincial Boundary | | | | |
| |  District boundary | | | | |
| |  River | | | | |



Legend:

- Provincial Capital
- District Capital/ Municipality
- Primary Road
- Secondary Road
- Provincial Boundary
- District boundary
- River

Priority Watershed:

- ▨ Wampu Watershed
- ▨ Deli Watershed

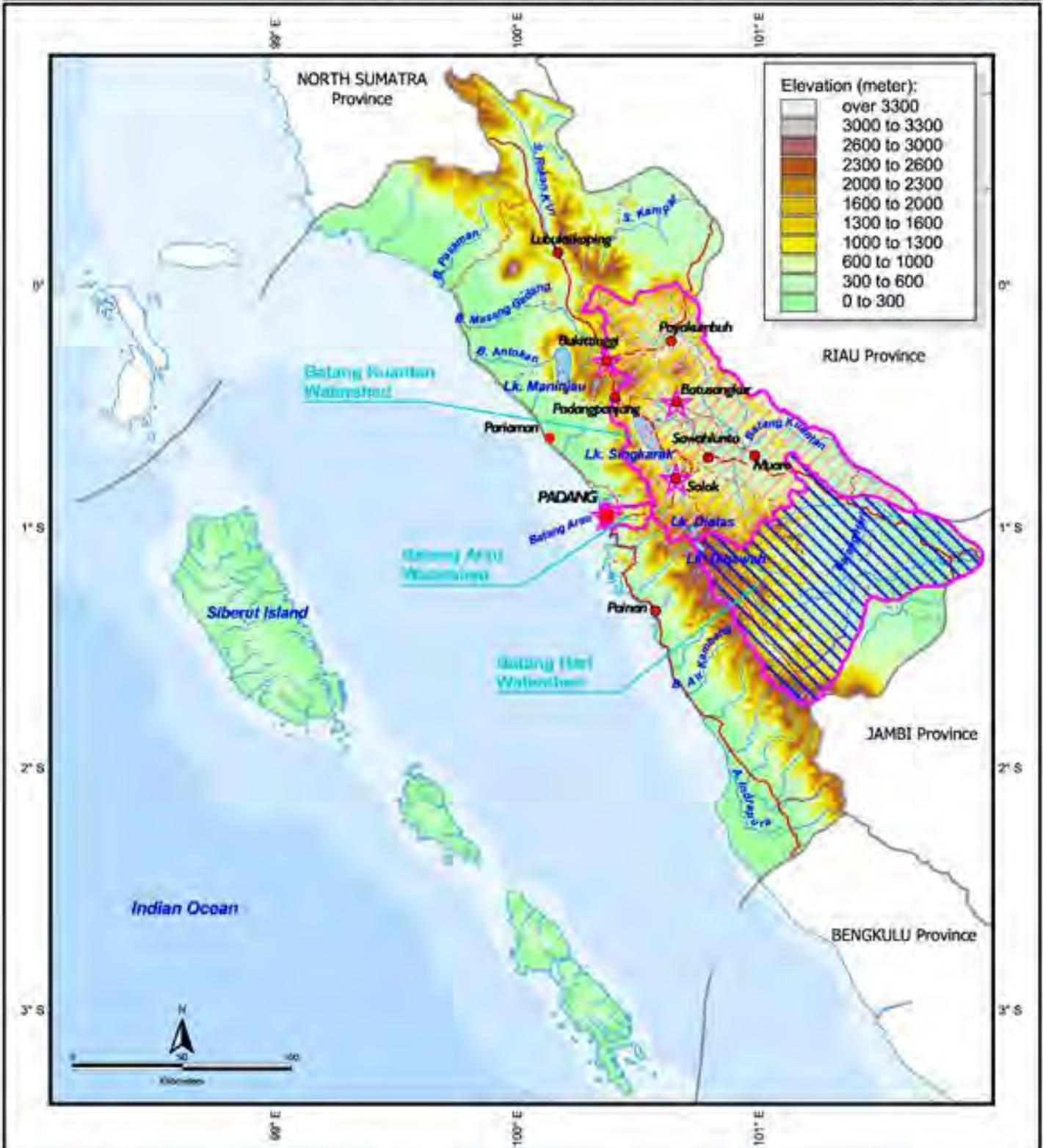
ESP Work Plan Site

- ★ Medan Municipality
- ★ Karo District
- ★ Deli Serdang District
- ★ Langkat District



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ESP Program Location Map for West Sumatra Province



Legend:

- Provincial Capital
- District Capital/ Municipality
- Primary Road
- Secondary Road
- Provincial Boundary
- - - District boundary
- River

Priority Watershed:

- Batang Arau
- Batang Hari
- Batang Kuantan

ESP Work Plan Site

- ★ Padang Municipality
- ★ Bukittinggi Municipality
- ★ Solok District
- ★ Tanahdatar District



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ESP Program Location Map for JAKARTA Special Capital City



Legend:

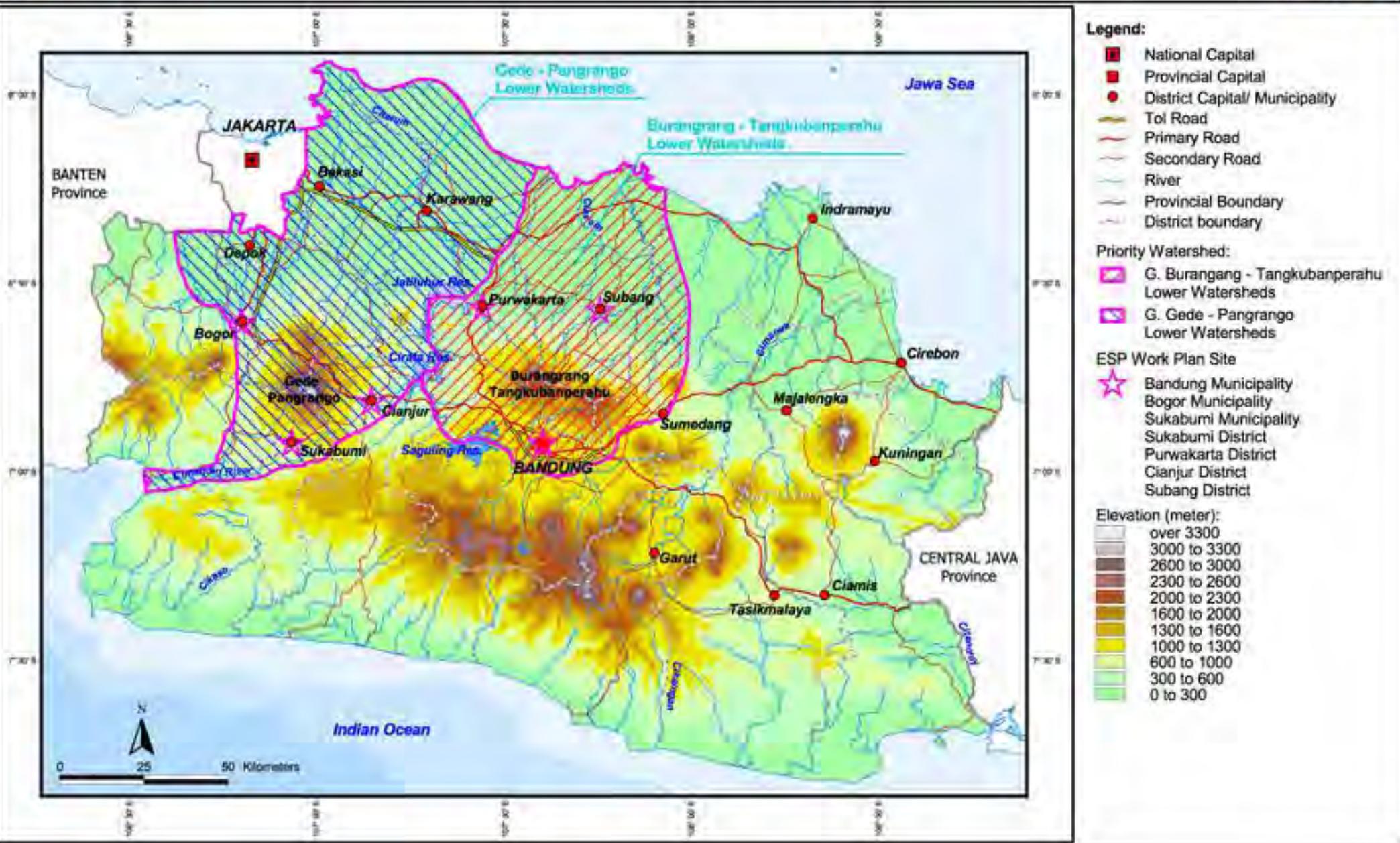
- Toal Road
- Arterial Road
- Collector Road
- Rail Road
- River
- Provincial Boundary
- District/ Municipality Boundary

Municipality Distribution:

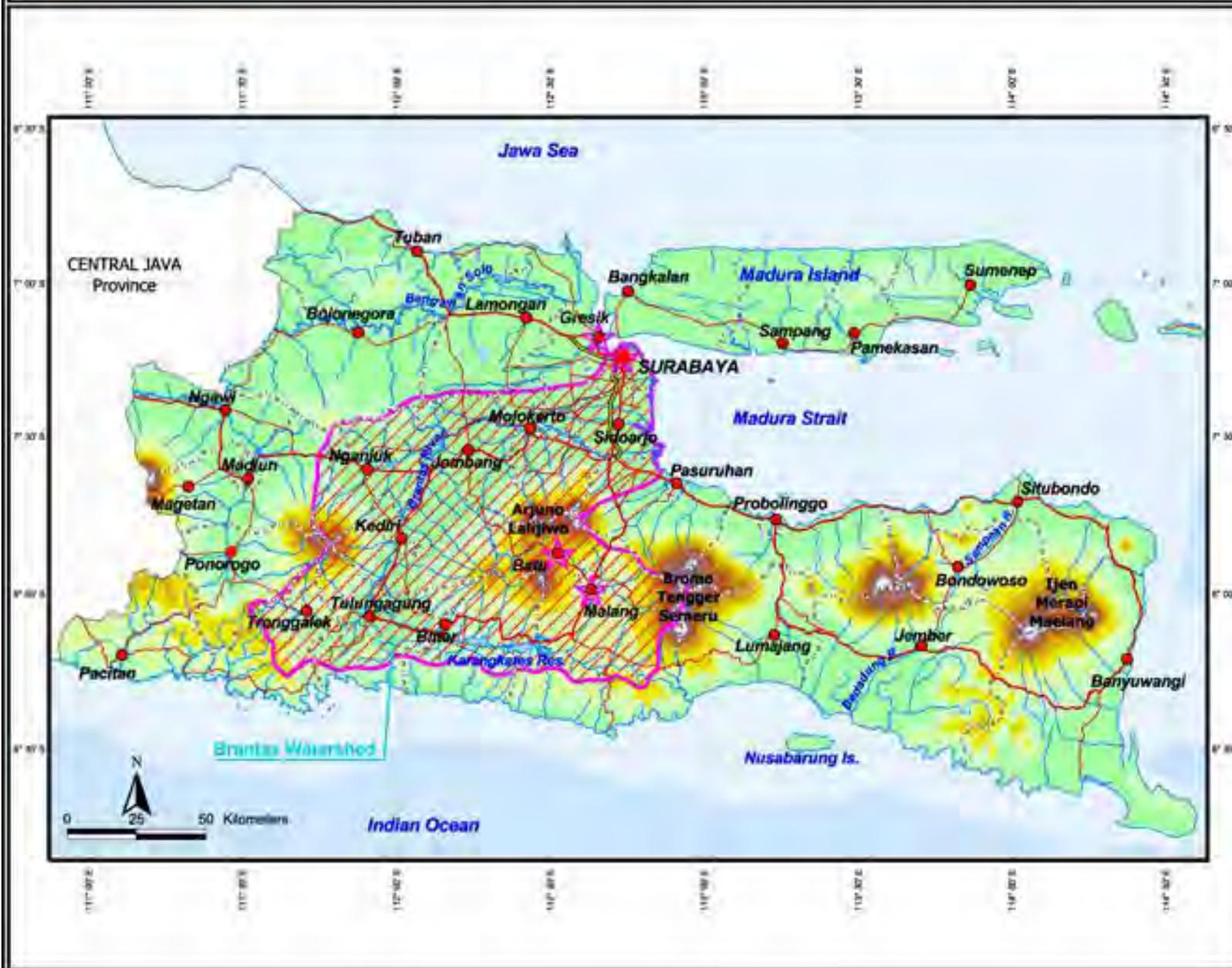
- East Jakarta
- South Jakarta
- West Jakarta
- Central Jakarta
- North Jakarta

- ESP Head Quarter
- USAID - USA Embassy

ESP Program Location Map for West Java Province



ESP Program Location Map for East Java Province



Legend:

- National Capital
- Provincial Capital
- District Capital/ Municipality
- Tol Road
- Primary Road
- Secondary Road
- River
- Provincial Boundary
- District boundary

Priority Watershed:

- Brantas Watershed

ESP Work Plan Site

- ★ Surabaya Municipality
- ★ Gresik Municipality
- ★ Batu Municipality
- ★ Malang Municipality
- ★ Malang District

Elevation (meter):

- over 3600
- 3300 to 3600
- 3000 to 3300
- 2600 to 3000
- 2300 to 2600
- 2000 to 2300
- 1600 to 2000
- 1300 to 1600
- 1000 to 1300
- 600 to 1000
- 300 to 600
- 0 to 300

CHAPTER I

INTRODUCTION

I.0. INTRODUCTION

The *Environmental Services Program (ESP)*, Contract No. 497-M-00-05-00005-00, is a program of the United States Agency for International Development in Jakarta, Indonesia. ESP is one of several major programs under the Basic Human Services (BHS) Office of USAID. The Basic Human Services Office covers in general the areas of food, safe water provision, and health. Although ESP impacts all three of these areas in various ways, the basic focus of ESP is related to clean water and other urban environmental services and how these services relate to the overall watershed environment and upstream and downstream stakeholders.

This document comprises an overall view of the Five Year Program of ESP, and more specifically the First Year Work Plan, which for reasons explained below will cover the first 21 months of the project and then annually thereafter based on the fiscal year of the U.S. Government.

This document contains detailed information of the management plan for the project, as well as the three major Components of the project, as follows:

Program Management

We will discuss the mobilization process, management and implementation plans, grants and subcontracts, public outreach and communications programs, gender issues, geographic information systems and project monitoring and evaluation.

Component 1 Watershed Management and Biodiversity Conservation

In this section, we describe the WSM and Biodiversity Component, outline targeted outcomes and describe the tasks which will lead to achieving these results. Public outreach and user group activities will also be discussed.

Component 2 Environmental Service Delivery

This Component most directly reflects the target focus of the project, that is, increased access to clean water and sanitation services in urban and suburban areas. Results will be achieved not only in areas currently serviced by PDAMs but also will focus on those who do not have access through piped water systems.

Component 3 Environmental Services Finance

This section of the Work Plan will describe those tasks related to traditional and innovative financing mechanisms which will lead to increased services or infrastructure for the provision of services, with sustainability and, where practical, cost recovery in mind. Targets include working with PDAMs to improve their financial management with the aim of improving their credit worthiness.

Although these components are described in separate sections for clarity purposes, it must be emphasized that the tasks involved are not independent, but intricately integrated with other components and with other programs within the USAID portfolio. Task integration includes issues of management of forests and biodiversity, reforestation, protection and sustainability of sources of water in upstream watersheds, issues of users of water in urban, industrial, residential and agricultural settings, as well as collection, treatment and disposal of wastewater and solid waste downstream of the users and the financing considerations therein. A major goal of the program is to increase awareness, capability, and understanding of how the use of water impacts surrounding

environments, as well as to change behavior patterns and attitudes toward preservation and conservation of water and related environmental issues.

This document will describe some general background of how the Environmental Services Program came about, the approach to this work plan, the overall long-term, five-year vision for the work, the initial first year work plan, as well as detailed work task descriptions and/or discussion regarding the following:

- **Program Management and Implementation**
- **Watershed Management and Biodiversity Component**
- **Environmental Service Delivery Component**
- **Environmental Services Finance Component**
- **Regional Work Plans** for North Sumatra, West Sumatra, East Java, West Java/DKI Jakarta, and Aceh Province.
- **Discussion on Special Concern and Imperative Areas** of Balikpapan, Manado, Manokwari, and Jayapura.

I. I. ENVIRONMENTAL SERVICES PROGRAM OVERVIEW

The Environmental Services Program (ESP) is a five-year program which was developed by USAID/Indonesia in response to the Presidential Initiative of 2002 to improve sustainable management of water resources. This initiative supports activities in the following three key areas:

- Access to clean water and sanitation services
- Improved watershed management
- Increasing the productivity of water

In response to the decentralization of many government responsibilities in recent years in Indonesia, the ESP program was developed as part of the FY2004-2008 country strategy to strengthen a moderate, stable and productive Indonesia. USAID will be implementing the country strategy around four major **strategic objectives** (SO):

1. Improved quality of decentralized basic education,
2. Higher quality basic human services utilized,
3. Effective democratic and decentralized governance, and
4. Effective systems of economic governance to increase trade and investment and drive new job creation.

The ESP program provides technical assistance and related services to impact **Strategic Objective No. 2** above, **Higher Quality Basic Human Services Utilized (BHS)**. BHS focuses on the interdependence of health and the environment and their impact on health outcomes. To achieve this, USAID will increase access and utilization of key health and environmental services, particularly to those currently underserved or not served at all.

Building capacity at the local government level to better deliver these services will assure sustainability of the technical assistance. The services considered integral to this objective include water, food/nutrition, and health services. Three *intermediate results* support the achievement of the SO:

- Governments, communities and private sector mobilized to advocate for improved health, water and sanitation services;
- Essential services delivered effectively at the local level; and
- Improved practices and behaviors adopted at the community and household levels.

Objectives of the ESP Program. In accordance with Section C of the Contract, ESP will work with the Government of Indonesia, the private sector, NGOs, community groups and other stakeholders to strengthen watershed management and the key environmental services through four interrelated project objectives:

1. Strengthen the capacity of communities, governments, the private sector, local institutions, and NGOs to advocate for expanded delivery of key environmental services through improved water resources and protected areas management;
2. To expand opportunities for communities, NGOs, private sector and universities to participate more effectively in local management of water resources and delivery of key environmental services;
3. To strengthen biodiversity conservation through improving understanding and appreciation for the linkage between protected and forested areas and the delivery of key environmental services; and
4. To improve health and livelihoods of Indonesians through improved and expanded access to key environmental services (water, sanitation, solid waste) through the use of appropriate technologies, innovative financing, environmentally sustainable best practices, and sustainable market oriented activities.

Central to the above-described program will be a coordinated, collaborative and integrated approach involving all of the programs of the Basic Human Services Offices of USAID. In order to more effectively impact the success rate of BHS programs, it makes eminent sense to assure as much synergy within the program as possible. The ESP project is committed to work closely with and in parallel to other relevant BHS programs such as, but not limited to:

- The BHS Health Flagship Project
- The Development Assistance Programs (DAP)
- The Safe Water Systems (SWS) Project

In addition, the ESP program intends to collaborate very closely with other relevant programs of related USAID Strategic Objectives, such as the Local Government Support Program under SO 3 above. In particular, the ESP program will make every endeavor to coordinate site selections in the two prime areas of the BHS program, namely, *High Priority Provinces* and *Special Concerns and Imperative Areas*.

I.2. APPROACH TO ESP WORK PLAN

The approach that DAI and its partners have taken in preparing this work plan was based on the following considerations:

- the original proposal and clarifications of the proposal for the project,
- the subsequent contract (No. 497-M-00-05-00005-00) and its scope of work issued by USAID to undertake the ESP project,
- the advice and opinions of the initial group of local and expatriate professional staff assembled to discuss and write up the work plan, and
- several guidelines and parameters that were established in consultation with USAID.

Message or Theme. In early discussions and meetings with USAID and client agencies of the Indonesian Government, it has been decided that the basic theme of message of the ESP program can be summarized succinctly as follows:

USAID's Environmental Services Program promotes better health through improved water resources management and expanded access to clean water and sanitation services.

Fiscal Year or Calendar Year? One of the most important initial determinations to be made was whether to base the time frames and annual reporting on a "calendar year" basis or a "fiscal year" basis. The fiscal year of the US Government runs from October 1 of the previous calendar year to September 30 of the fiscal year in question. There are advantages and disadvantages to using either system, however, it was agreed that it would be more conducive to USAID reporting to base the work plans on the fiscal year of the US Government. That being the case, and the fact that the initial mobilization, start-up activities, and the work plan development took place during the months of January through March 2005, it was further decided to make the first year work plan longer than the 9 months or so that would be covered by ending on September 30, 2005. Therefore, in consultation with the Environment Office of BHS, it was decided that this first work plan would cover a 21 month period, in other words, beginning January 1, 2005 to September 30, 2006.

Classification of Program Activities by Component, Task, and Subtask. Due to the size and complexity of the program, activities

Targeted Results. During this extended period of the first ESP work plan, the Team will still be responsible for achieving results which could reasonably be expected at the conclusion of FY2005 as well as at the conclusion of FY2006. It is understood, however, that in the initial 9 months of the program, the team is still building networks and foundations upon which success will be had in achieving or impacting various indicators.

Collaboration. Also, the approach to the work plan was as collaborative as it could be given the short time frame available for creating this plan. As many of the ESP team's professional staff, subcontracting partners and resource firms were consulted, as well as introductions and meetings conducted with central, provincial and local government agencies and NGOs.

I.3. ESP FIVE YEAR VISION

The long term nature of the ESP program enable the project team to undertake short term as well as medium and longer terms measures in order to achieve the overall objectives of the program. This is highly beneficial as there are immediate needs in the High Priority Provinces and Special Concern and Imperative Areas, particularly with the advent of the earthquake/tsunami in December 2004 which virtually destroyed the northwestern areas of Aceh province. On the other hand, there are goals and objectives which need desperately to be achieved, such as decreasing incidence of childhood diarrhea or providing clean water to those without access, that will require behavioral change, capacity building and related infrastructure improvements which must take place over the longer period.

It is critically important to build foundations of communication and networks of concerned, involved or affected stakeholders from government, the NGOs, interest groups and private sector, but at the same time are able to provide some services which will produce rapid results and to get people engaged from the outset. A program as large as ESP must consider initial tasks and medium term (6-12 month horizon) tasks in the first year work plan, but must also have a coherent plan of action that will generate the longer term results and sustainability of the technical assistance that is provide through this program.

During this five year period, ESP plans to have an impact on significant numbers of people in the HPPs and the SIAs, as well as leverage investment from other funds, donors and private sector to achieve results compatible with the goals of ESP. ESP will be able to provide much of what many “hard” infrastructure programs are not able to do, and that is informed, trained or environmentally conscious people who understand that they have a stake in improving and maintaining their environment. The current political and increasingly improving economic environment in Indonesia makes it more possible to achieve these results *than at any time in the past 35 years*. For a graphic summary of program targets, please refer to the chart titled **Annual Targets, Years 1 through 5** on the next page.

FIRST ANNUAL WORK PLAN AND LIFE OF PROJECT PLAN

ANNUAL TARGETS, YEARS 1 THROUGH 5
ENVIRONMENTAL SERVICES PROGRAM

Project Components:

PM	Program Management	SD	Environmental Service Delivery
WSM	Watershed Management & Biodiversity Conservation	FN	Environmental Services Finance

Component of Project	Tasks or Outcomes	Description	Indicator	Cumulative Targets by:				
				End Year 1 Sept. 2005	End Year 2 Sept. 2006	End Year 3 Sept. 2007	End Year 4 Sept. 2008	End Year 5 Sept. 2009
PM	Task	1. Leveraging other financial support for Environmental Services Program	Level of Funding to support ESP Activities	N/A	1,000,000	3,000,000	5,000,000	7,000,000
PM	Task	2. Collaborative Program to support the Strategic Objective (SO) of Basic Human Services (BHS)	# of integrated programs between ESP and other USAID programs	2	4	6	8	10
PM	Task	3.a Public Outreach and Communication	# of campaigns supported	8	20	40	60	80
	Task	3.b Public Outreach and Communication	# of campaigns supported by ESP partners/stakeholders	4	10	15	20	40
	Task	3.c Public Outreach and Communication	# of communities exposed to campaigns	24	60	120	120	120
PM	Task	People participation in ESP trainings and workshops	# of people participating in ESP trainings and workshops	1,000	4,000	8,000	10,000	12,000
WSM	Outcome	1. The formation of adequate policies at the local level to recognize the tenure and/or access rights of communities to manage their forests and watershed areas, and implement transparent and participatory district-level management of forests, thus reducing conflict and illegal logging.	# of new policies in place and adopted at the local level	0	0	0	3	4
WSM	Outcome	2. Improvement of watershed function in areas supplying water to urban centers and PDAMs as measured by a 50% increased in rehabilitated land (total area of degraded land where trees, commercial or non-commercial are planted).	% increase in rehabilitated land	5	10	25	40	50
WSM	Outcome	3. Area of forest with high biodiversity conservation value under improved, local management increases by 50%.	Increase forest area with high biodiversity value under improved management	0	200,000	400,000	700,000	1,000,000
WSM	Task	WS1 - Development of WSM Plans	# of WSM plans with actual funds for implementation	8	16	24	32	40
WSM	Task	WS2 - Implementation of WSM Plans	# of WSM plans implemented by stakeholders	8	16	24	32	40
WSM	Task	WS3 - Scale up and Achieve National Impact	# of policy for integrated WSM	0	2	3	4	5

FIRST ANNUAL WORK PLAN AND LIFE OF PROJECT PLAN

**ANNUAL TARGETS, YEARS 1 THROUGH 5
ENVIRONMENTAL SERVICES PROGRAM**

Project Components:

PM Program Management SD Environmental Service Delivery
 WSM Watershed Management & Biodiversity Conservation FN Environmental Services Finance

				Cumulative Targets by:				
Component of Project	Tasks or Outcomes	Description	Indicator	End Year 1 Sept. 2005	End Year 2 Sept. 2006	End Year 3 Sept. 2007	End Year 4 Sept. 2008	End Year 5 Sept. 2009
SD	Outcome	1. Technical operation and financial management of at least 30 PDAMs are improved	# of PDAM providing better services	N/A	10	15	20	30
SD	Outcome	2. 20% increase in revenues from existing water production	# of PDAM with increasing revenues from existing water production	N/A	10	15	20	30
SD	Outcome	3. Population with access to clean water is increased by 20%	Percent of household/population that uses an improved water source	N/A	5%	10%	15%	20%
SD	Outcome	4. At least 20 small scale sanitation plans are developed and implemented	# of small scale sanitation plans developed and implemented	N/A	5	10	15	20
SD	Outcome	5. At least 10 solid waste management plans are developed and implemented	# of community-based solid waste systems developed and implemented	N/A	2	4	7	10
SD	Outcome	6. The precursors needed to impact childhood diarrheal disease (clean water and sanitation) are contributed to the BHS effort to reduce the incidence of childhood diarrheal disease and mortality	Proportion of household that adopts adequate health and hygiene practices	N/A				
SD	Task	SD1 - Improve PDAM technical and operational management	# of PDAMs with improved technical and operational management	N/A	10	15	20	30
SD	Task	SD2 - Increase PDAM with improved financial position	# of PDAMs with improved financial position	0	4	10	20	30
SD	Task	SD3 - Access to Clean Water	% of household/population that practices clean water management, which includes improved water source, quantity, safe storage and treatment					
SD	Task	SD4 - Improved Sanitation System	# of improved sanitation system developed and implemented	N/A	5	10	15	20
SD	Task	SD5 - Develop community-based solid waste system	# of improved community-based solid waste system in place	N/A	2	4	7	10
SD	Task	SD6 - Behavior change intervention	Proportion of household that adopts health and hygiene practices	N/A				

**ANNUAL TARGETS, YEARS 1 THROUGH 5
ENVIRONMENTAL SERVICES PROGRAM**

Project Components:

PM Program Management SD Environmental Service Delivery
 WSM Watershed Management & Biodiversity Conservation FN Environmental Services Finance

				Cumulative Targets by:				
Component of Project	Tasks or Outcomes	Description	Indicator	End Year 1 Sept. 2005	End Year 2 Sept. 2006	End Year 3 Sept. 2007	End Year 4 Sept. 2008	End Year 5 Sept. 2009
FN	Outcome	1. Thirty (30) PDAMs to operate on a full cost recovery	# of PDAM operating on full cost recovery	0	5	12	20	30
FN	Outcome	2. Ten (10) loans reliant on the Development Credit Authority (DCA) guarantee	# of PDAM that executes a guarantee agreement with USAID/DCA and a loan agreement with a bank/lender institution	0	1	5	8	10
FN	Outcome	3. Five (5) PDAM to achieve an international credit rating	# of international credit rating certification	0	0	2	4	5
FN	Outcome	4. Provide advise on best method to create independent provincial regulatory boards and implement process to do so	1. White paper providing recommendation 2. Independent provincial regulatory board is created	0	1	0	0	0
FN	Outcome	5. Five (5) PDAMs form financing relationship with micro-credit institution(s)	Loan agreement related to micro-finance	0	1	2	4	5
FN	Outcome	6. One (1) Local Government province, or its PDAM, to issue successfully a revenue or General Obligation (GO) bond after Law 35 and its implementing rules and regulations is in place	Proportion of household that adopts adequate health and hygiene practices	0	0	0	1	0
FN	Outcome	7. Three (3) watershed managements to access external finance for conservation purpose	# of watershed receiving alternative finance	0	1	2	3	3

I.4. FIRST YEAR WORK PLAN – JANUARY 2005 TO SEPTEMBER 2006 (21 MONTHS)

As stated earlier, this First Annual ESP Work Plan will actually cover a 21 month period, namely from the time the actual contract was signed by Development Alternatives, Inc., which was on January 11, 2005, until September 30, 2009 (the end of the Contract period). In this section, we present several charts and schedules for ease of review.

First Year (21-Month) Task Chart:

Presented on the following pages, this chart covers the period of **January 2005 to September 2006** and lists all of the primary tasks for program management as well as all three components of the project.

Project Organization Chart

After the First Year Task Chart you will see a Project Organization Chart. This chart delineates the geographic organization of the ESP Team (vertical orientation), with notations highlighting the technical organization of the various technical skill groups (horizontal orientation), which together makes up the matrix management concept of the program. Matrix Management of this project is discussed in Chapter 2 under Program management.

FIRST YEAR (21-MONTH) TASK CHART
ENVIRONMENTAL SERVICES PROJECT

Legend: **█** Prime Task **▬** Subtask **■ ■ ■ ■ ■** Intermittent Task **●** Individual Event or Meeting

Task No.	Month of Project Task Description	Jan. 2005	Feb. 2005	Mar. 2005	Apr. 2005	May 2005	June 2005	July 2005	Aug. 2005	Sept. 2005	Oct. 2005	Nov. 2005	Dec. 2005	Jan. 2006	Feb. 2006	Mar. 2006	Apr. 2006	May 2006	June 2006	July 2006	Aug. 2006	Sept. 2006	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
PM Program Management																							
PM1	Mobilization	█																					
PM1-1	Mobilize Long Term Advisors	█																					
PM1-2	Establish Regional Offices and SIA Offices	█																					
PM1-3	Conduct Introductory Workshops and Team Building Sessions	█				█			█														
PM1-4	Develop Annual Work Plan	█		█																			
PM1-5	Develop Performance Monitoring Plan	█																					
PM1-6	Design and Operationalize ESP TAMIS (Tech. Assistance MIS)	█																					
PM1-7	Design and Operationalize ESP Website	█																					
PM1-8	Develop ESP Gender Plan with Partners	█																					
PM1-9	Roll Out Training on Gender/Field Techniques to ESP Staff	█				■ ■ ■ ■ ■																	
PM2 Project Implementation																							
PM2-1	Submit ESP Procurement Plan to USAID	█																					
PM2-2	Prepare Bi-weekly Electronic Newsletters	●																					
PM2-3	Submit Monthly Financial Report to USAID	█																					
PM2-4	Hold Management Meetings with SO Team	●	█	●	█	●	█	●	█	●	█	●	█	●	█	●	█	●	█	●	█	●	
PM2-5	Conduct Coordination Meetings	●																					
PM2-6	Periodic Meetings with Key Partner Organizations	█																					
PM2-7	Quarterly Reports to USAID and GOI	█																					
PM2-8	Annual Inventory Report of ESP Property	█																					
PM2-9	Annual Performance Report to USAID and Key Partners	█																					
PM3 Small Grants and Subcontracts Program																							
PM3-1	Prepare Small Grants Program Mechanisms	█																					
PM3-2	Implement ESP Small Grants Program	█				■ ■ ■ ■ ■																	
PM3-3	Monitor and Evaluate ESP Small Grants Program	█				■ ■ ■ ■ ■																	
PM4 Public Outreach and Communications																							
PM4-1	Public Outreach and Communications Field Activities	█				■ ■ ■ ■ ■																	
PM4-2	Program Communications Activities	█				■ ■ ■ ■ ■																	
PM5	Gender	●																					
PM6	Geographic Information Systems and Mapping	●																					
PM7 Project Monitoring and Evaluation																							
PM7-1	Design ESP Performance Monitoring Plan	█																					
PM7-2	Baseline and Initial Data Collection	█																					
PM7-3	PMP Annual Data Collection	█				■ ■ ■ ■ ■																	
PM7-4	PMP Annual Reporting	█				■ ■ ■ ■ ■																	
PM7-5	Participatory Monitoring and Evaluation	█				■ ■ ■ ■ ■																	
WS Watershed Management and Biodiversity Conservation																							
WS1 Development of Watershed Management																							
WS1-1	Identify Watershed Areas	█																					
WS1-2	Map Watershed Target Areas	█																					
WS1-3	Facilitate Development of Watershed Management Forums	█																					
WS1-4	Build Awareness/Support for Watershed Mgm't. Planning	█																					

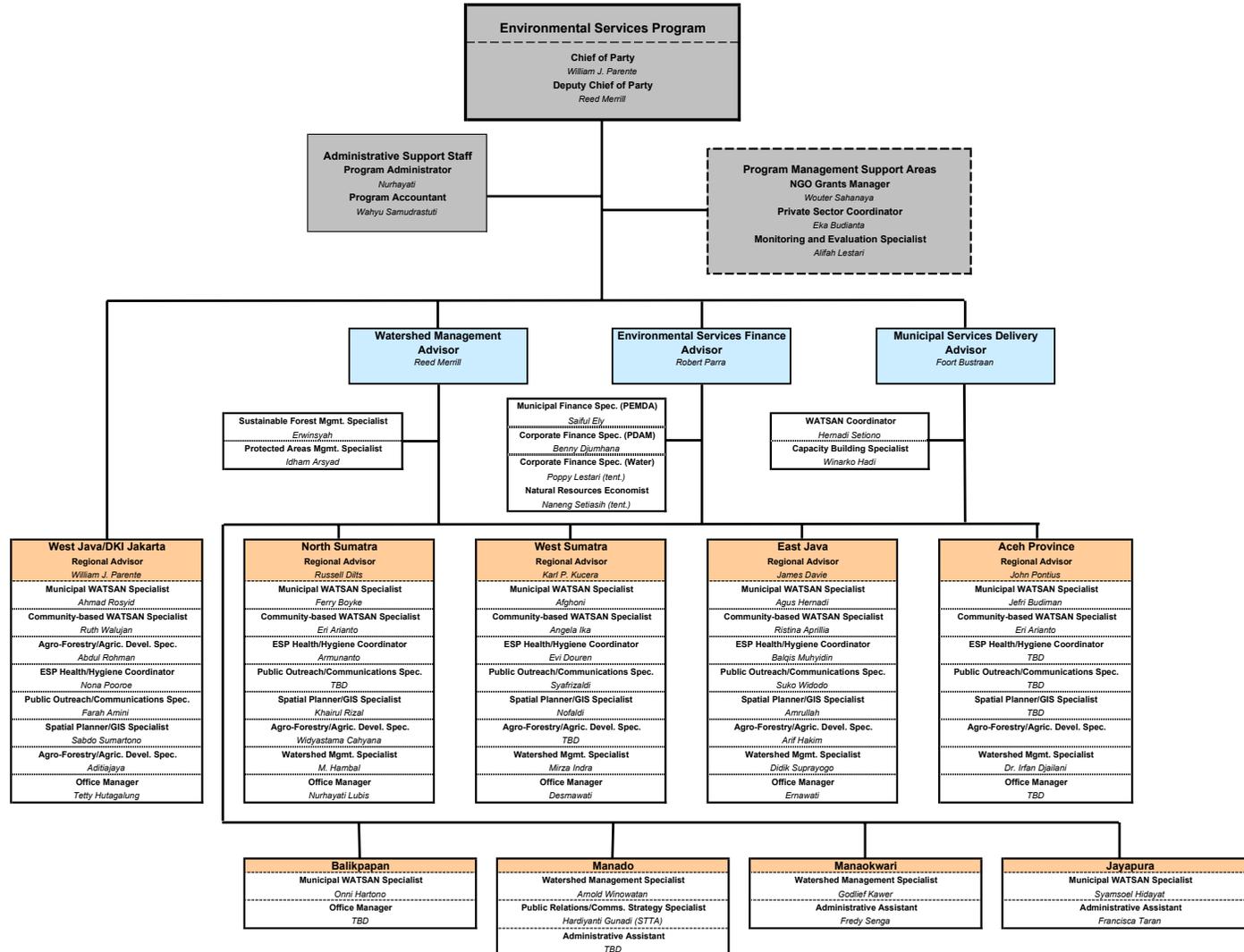
Legend: Prime Task Subtask Intermittent Task Individual Event or Meeting

Task No.	Month of Project Task Description	Jan. 2005	Feb. 2005	Mar. 2005	Apr. 2005	May 2005	June 2005	July 2005	Aug. 2005	Sept. 2005	Oct. 2005	Nov. 2005	Dec. 2005	Jan. 2006	Feb. 2006	Mar. 2006	Apr. 2006	May 2006	June 2006	July 2006	Aug. 2006	Sept. 2006
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
WS1-5	Identify Specific Activities to Support WSM																					
WS1-6	Prepare Watershed Management Plans																					
WS1-7	Assist with Watershed Management Plan Financing																					
WS2	Implementation of Watershed Management Plans																					
WS2-1	Support Local Forums in WSM Implementation																					
WS2-2	Support Protected Management Areas Agencies and others																					
WS2-3	Support Organizations through Restoration/Rehabilitation Projects																					
WS2-4	Leverage Biodiversity Conservation & Ecosystems Funds																					
WS2-5	Build Capacity of ESP Partners to Improve Stewardship/Conservation																					
WS2-6	Promote Participatory Monitoring & Evaluation of WSMs																					
WS3	Scale Up and Achieve National Impact																					
WS3-1	Deepen Impact of WSM Plans in Existing ESP Sites																					
WS3-2	Expand Impact of ESP WSM Best Practices in HPPs																					
WS3-3	Expand Impact of ESP WSM Best Practices at National Level																					
WS3-4	Policy Support for ESP WSM Best Practices																					
SD	Environmental Service Delivery																					
SD1	Improve PDAM Tech/Oper/Fin. Management																					
SD1-1	PDAM Baseline and Priorities Assessment																					
SD1-2	Develop and Implement PDAM Corporate Planning																					
SD1-3	Improve PDAM Customer Orientation																					
SD1-4	Implement Training and CB for PDAM, PEMDA & DPRD																					
SD1-5	Raise Key PDAM Inter-regional Policy Issues																					
SD1-6	Implement PDAM Benchmarking																					
SD1-7	Implement PDAM Water Quality Monitoring Prog.																					
SD1-8	Develop and Use PDAM GIS and MIS																					
SD2	Improve PDAM Financial Condition																					
SD2-1	Reduction of Non-Revenue Water (NRW)																					
SD2-2	Implement Tariff Review																					
SD2-3	Improve Efficiency of PDAM Branch Systems (IKK)																					
SD2-4	Optimize Meter-Reading and Billing Systems																					
SD2-5	Introduce Energy Reduction and Pressure Control Systems																					
SD2-6	Improve Production and Distribution Cost Management																					
SD3	Increase Access to Clean Water																					
SD3-1	Encourage/Increase Piped (PDAM) Water to Urban Poor																					
SD3-2	Increase Production and Distribution Capacity																					
SD3-3	Increase Point-of-Use Drinking Water Systems																					
SD3-4	Improve Quality of Individual Household Water Sources																					
SD4	Increase Access to Improved Sanitation Systems																					
SD4-1	Prepare Sanitation Concept to Local Government																					
SD4-2	Optimize Existing and Develop New Sewage Systems																					
SD4-3	Prepare and Construct 8 DEWATS-SME and CBS Systems																					
SD4-4	Study Sludge Collection and Treatment Systems																					
SD4-5	Improve Individual Septic Tank Systems																					
SD4-6	Support Public Awareness Campaign on Sanitation																					

FIRST YEAR (21-MONTH) TASK CHART
ENVIRONMENTAL SERVICES PROJECT

Legend: **█** Prime Task **▬** Subtask **■ ■ ■ ■ ■** Intermittent Task **●** Individual Event or Meeting

Task No.	Month of Project Task Description	Jan. 2005	Feb. 2005	Mar. 2005	Apr. 2005	May 2005	June 2005	July 2005	Aug. 2005	Sept. 2005	Oct. 2005	Nov. 2005	Dec. 2005	Jan. 2006	Feb. 2006	Mar. 2006	Apr. 2006	May 2006	June 2006	July 2006	Aug. 2006	Sept. 2006
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
SD5	Increase Use of Community-based Solid Waste Systems																					
SD5-1	Identify Existing Community-based Solid Waste Systems																					
SD5-2	Introduce and Promote Options for Community-based SW Systems																					
SD5-3	Implement Community-based Sanitation Management Systems																					
SD6	Behavioral Change Intervention																					
FN	<i>Environmental Services Finance</i>																					
FN1	Assess Willingness to Pay Full Recovery Cost Tariffs																					
FN1-1	Organize Municipal Finance Team and Resources																					
FN1-2	Classify PDAMs into Tier 1/Tier II/Tier III Groups																					
FN1-3	Develop a Tailored Training Program for Tier I PDAMs																					
FN1-4	Develop a Tailored Training Program for Tier II PDAMs																					
FN2	Resolution of Key Water Policy Issues																					
FN2-1	Policy Initiatives to Improve PDAM Creditworthiness																					
FN3	Improve Creditworthiness PDAMs & Local Gov't.																					
FN3-1	Agreement to Micro-finance Water Connections																					
FN3-2	Assist 4 Watersheds in Raising Alternative Finance																					
FN3-3	Assist 1 PDAM to Raise Funds from Bank/Pubic Private Partnership																					
FN3-4	Study Possibility of Bond Bank																					
FN3-5	Financing Plan Designed for 1 BHS Project																					



CHAPTER 2

PROGRAM

MANAGEMENT

2.0. PROGRAM MANAGEMENT

Program Management for a large, five year program such as ESP is complex and critically important to the smooth and effective operation of the program. This section covers the approaches and tasks to be undertaken in various aspects of managing this program. In this section, we cover that areas of mobilization, matrix management, project implementation, grants and subcontracts, gender issues, public outreach programs, geographic information systems, and project monitoring.

TASK PM-I:

MOBILIZATION

The Environmental Services Program was awarded to Development Alternatives, Inc. and its subcontractors on November 26, 2004. Shortly thereafter, an Approval to Incur Costs was issued to enable the Contractor to execute early handover and related tasks which needed to be accomplished while final details were being negotiated. These tasks included accepting offices and inventory from the previous Natural Resources Management Project, which was one of the predecessors of ESP.

The task of mobilization includes not only the recruitment and appointment of expatriate and local professional staff and local support staff, but all the procurement of required equipment and furnishing, vehicles, establishment of offices, communications and other related tools and resources necessary to the execution of the project. Initial mobilization tasks, such as mobilizing expatriate staff to Indonesia, have been completed. Other tasks, such as establishing the Jakarta and outlying offices, procurement and shipping of computer equipment, installation of Local Area Networks, installing internet capability, setting up of the TAMIS are either underway or shortly to start.

ESP was very fortunate to be able to begin establishing its technical and management team rather quickly, and in mid-January 2005, all seven long term advisors were available for initial kick-off meetings with USAID. By mid-February 2005, all of the long term expatriate advisors had arrived to settle in and begin work. The following chart outlines the major tasks of mobilization:

Activity Description	Resources	Outputs	Time Frame
Hand-over Activities	DCOP, miscellaneous support staff	Accept offices/equipment from NRM. Transfer Inventory of equipment & vehicles to BAPPENAS.	Nov.-Dec. 2004
Mobilize Long Term Advisors	DAI Home Office & Subcontractors; DCOP	All seven LTTA mobilized by mid-February.	Jan.-Feb. 2005

FIRST ANNUAL WORK PLAN AND LIFE OF PROJECT PLAN

Activity Description	Resources	Outputs	Time Frame
Establish Regional Offices and SIA Offices	Regional Advisors for North Sumatra, West Sumatra, East Java, West Java & Aceh.	Padang, Medan operational mid-February 2005 Surabaya operational end-March 2005 Banda Aceh & Meulaboh operational end April 2005 SIA offices transferred/ maintained.	Nov. 2004-April 2005
Consultation Workshop with USAID/BHS Team	ESP Senior Advisors	Meeting between ESP Consultant Team and BHS Team at USAID	Mid-January 2005 plus ongoing on a periodic basis.
ESP Consultant Team Building	All LTTA expatriate and local professional staff meeting in Jakarta ESP Office.	Introduce Team. Develop friendship/camaraderie through team building. Also, initiate work on First Year Work Plan.	March 2005
National & Regional Start-up Workshops & Introductions	COP, DCOP, respective RA, regional professional staff, USAID/BHS reps	Briefing sessions for central, provincial and local Gov't. officials and partners	Feb.-Apr. 2005
Work Plan Development	COP, DCOP, all technical and regional advisors, partner firms and organizations, GOI at all levels.	First year (21-month) Work Plan Life-of-Project Work Plan	Feb.-Mar. 2005
Project Monitoring Plan Development	COP, DCOP, PMP Specialists	Project Monitoring Plan for ESP	April 2005
ESP TAMIS Designed and Operational	IT Expert, DAI TAMIS Specialist, TAMIS Trainers	Operating Technical Assistance Management Information Systems (TAMIS)	Apr.-May 2005
ESP Website Designed and Operational	IT Expert, Graphics Specialist	Operational Website and Portal	Apr-May 2005
Training of ESP Staff in Operational and Management Systems	COP, DCOP, Project Administrators, Project management Specialists	Staff Trained and Knowledgeable in Project management Systems	Apr.-May-Jun 2005
Develop ESP Gender Plan with partners	COP, DCOP, Gender Training Specialist	Gender Training Manual, Staff Trained in Gender Issues and Procedures	April 2005
Roll-out Training on Gender and other field techniques to field staff and partners	All Professional Staff LT and ST.	Field professionals consistently knowledgeable on project techniques to be utilized.	Apr.-June 2005 and ongoing.

MATRIX MANAGEMENT

Due to the technical and geographical complexities of the ESP project, the need to maximize the utility of resources, and the desires to apply reasonably consistent approaches and techniques to the implementation of the project, it is necessary to adopt what is known as “Matrix Management” techniques.

Matrix Management in a corporate setting is often fraught with problems when profit centers or other competitive goals are involved. However, in a project management sense,

and certainly in the technical management area known as “program management” it is desirable. Indeed, it is absolutely necessary that we make maximum use of the wealth and variety of talent and resources assigned to the ESP project.

In a geographic sense, ESP must deal effectively and efficiently with five (5) High Priority Provinces” and with at least four (4) Special Concern and Imperative Areas. This includes an expanse which covers the nearly 6,000 kms from Banda Aceh in the west to Jayapura in the east.

In a technical sense, ESP includes a very wide but interrelated group of skill sets including, but not necessarily limited to, the following:

- watershed experts
- biodiversity specialists
- agronomists/agriculture specialists
- forestry experts
- water resources specialists
- hydrogeologists
- water and sanitation engineers
- water company experts
- solid waste management advisors
- health and hygiene specialists
- municipal government specialists
- municipal finance experts
- gender applications specialists
- public outreach and communications specialists
- geographic information systems specialists

No program could reasonably afford to have these specialists in all places all the time. Therefore a system of vertical management as well as a horizontal management will be employed, thus the matrix nature of this system. Please refer to the ESP Management Matrix Chart shown on the following page.

ENVIRONMENTAL SERVICES PROGRAM
Matrix Management Diagram

Technical Project Components ↓ Technical Supervisors ↓ Technical Disciplines ↓			Regional Teams				
			Province → Nanggroe Aceh Darrussalam Banda Aceh	North Sumatra Medan	West Sumatra Padang	East Java Surabaya	West Java/ DKI Jakarta Central Core Group Jakarta
Technical Component Teams ↓ ↓ ↓	William Parente, COP Reed Merrill, DCOP → Regional Advisors		John Pontius	Russell Dilts	Karl Kucera	James Davie	William Parente
	Service Delivery Team	Foort Bustraan Municipal WATSAN Specialist Community-based WATSAN Spec. Capacity Building Specialist ESP Health/Hygiene Coordinator Public Outreach/Comms Spec.	Jefry Budiman Eri Arianto (50%)	Ferry Boyke Eri Arianto (50%) Armunanto	Afghoni Angela Ika Evi Douren Syafrizaldi	Agus Hernadi Ristina Aprillia Balgis Muhyidin Suko Widodo	Ahmad Rosyid Ruth Walujan Hernadi Setiono Nona Pooroe Farah Amini
	Watershed Management Team	Reed Merrill Sustainable Forest Mgmt. Specialist Protected Areas Mgmt. Specialist Watershed Management Spec. Agro-forestry/Agric. Specialist Agro-forestry/Agric. Specialist Spatial Planning/GIS Specialist	Irfan Djailani	M. Hambal Widyastama Cahyana Khairul Rizal	Mirza Indra Nofaldi	Didik Suprayogo Arif Hakim Amrullah	Erwinsyah Idham Arsyad Abdul Rohman Aditijaya Sabdo Sumartono
	Finance Team	Robert Parra Municipal Finance Specialist (PEMDA) Corporate Finance Specialist (PDAM) Corporate Finance Specialist (Water) Natural Resources Economist	See West Java/ DKI Jakarta	See West Java/ DKI Jakarta	See West Java/ DKI Jakarta	See West Java/ DKI Jakarta	Saiful Ely Benny Djumhana Poppy Lestari(tent) Naneng Setiasih(tent)

Note: The Central Core Group Specialists and the West Java/DKI Jakarta Teams share the same office and are combined for the purpose of this diagram.

TASK PM-2:

PROJECT IMPLEMENTATION

The ESP Program management and technical professionals will provide overall program-wide guidance and direction to the activities being performed in each project location. The team of professionals in each HPP or SIA will carry out the work, with assistance when and as needed from the central project group in Jakarta. Project reporting will evolve from the locations where the work is being performed and will be assimilated into comprehensive project reports.

This section describes many of the regular or periodic tasks involved with managing the ESP Program in accordance with the Contract and with USAID guidelines. Some of the following tasks have specific deliverable reports which will represent official reporting of progress and attainment of goals during the course of the work.

Detailed activities, inputs, outputs and milestones are summarized below.

Activity Description	Resources	Outputs	Time Frame
Submit ESP Procurement Plan to USAID	DAI Home Office Administration, Project Administrator, DCOP	Procurement Plan	Jan. 2005
Bi-weekly Electronic Newsletters	All Technical Staff, COP, DCOP, Project Administrator	Regularly issued E-Newsletter	Twice Monthly throughout Project
Monthly Financial Report Submitted to USAID	Project Accountant, HO Finance Office	Monthly Accruals	End of each Month
Management Meetings with SO Team	COP, DCOP, others USAID/BHS as required.	Monthly or periodic meeting/ update.	Monthly or as necessary.
Periodic Meeting of ESP Management and Team Leaders	COP, DCOP, RAs, Technical Team Leaders, other staff as necessary	Coordination only	Monthly, or as directed.
Periodic Meeting with Key Partner Organizations	COP, DCOP, USAID rep, NGOs, GOI central or local, other agencies or groups.	Feedback, Guidance	At least quarterly, or as directed.
Quarterly Report to USAID and GOI.	COP, DCOP, RAs and TLs	Three progress reports per annum (sixth included in Annual Report below)	Every three months.
Annual Inventory Report of ESP Property	COP, DCOP, Program Administrator, Office Administrators	Continuous Inventory, Report once per year.	With Annual Report
Annual Performance Report to USAID and Key Partners	COP and entire ESP staff	Annual Report (to include quarterly progress for the most recent period)	October 15 each year

TASK PM-3:

ESP SMALL GRANTS AND SUB-CONTRACTS

The Small Grants Program (SGP) administered by Development Alternatives, Inc. (DAI), supports USAID-Indonesia “Higher Quality Basic Human Services Utilized” (BHS) Strategic Objective that will focus on the interdependence of health and the environment and their effect on health outcomes. Working with USAID’s Environmental Services Program (ESP), SGP funds a wide range of activities that relates to watershed management and biodiversity conservation, environmental services, and environmental service financing in the priority provinces of North and West Sumatera, East and West Java, DKI Jakarta, and in the special imperative/concern areas of Balikpapan in East Kalimantan, Manado in North Sulawesi, and Manokwari and Jayapura in Papua.

The small grants program will follow the USAID regulations (ADS 303) and that the USAID/Indonesia will be substantially involved in the establishment of the small grants mechanism and will approve the actual selection of grant recipients.

SUBTASK PM3-1 PREPARE SMALL GRANTS PROGRAM MECHANISM

ESP will develop the small grants manual, field guidelines and procedures and award agreement templates to effectively implement the ESP Small Grant Program. A list of tasks, associated timeline and outcomes is described below.

Activity	Resources	Outputs	Time Frame
Development of the ESP-SGP Manual	DAI Staff	ESP-SGP Manual Developed	January – March 2005
USAID Approval of the ESP-SGP Manual	DAI and USAID	ESP-SGP Manual Approved by USAID	April 2005
Development of ESP-SGP Field Procedures and Guidelines	DAI Staff	ESP-SGP Field Procedures and Guidelines Established	March 2005
Development of ESP-SGP Presentation Materials	DAI	ESP-SGP Power point Presentation Prepared	March 2005
Development of ESP-SGP Award Agreement Templates	DAI	ESP-SGP Award Agreement Templates Developed	April – May 2005

SUBTASK PM3-2 IMPLEMENT ESP SMALL GRANTS PROGRAM

The ESP Head Quarter staff in Jakarta and Regional Offices staff will facilitate the implementation of the ESP Small Grants Program. As applications for grants generally fall into one of three categories of applications solicited through a full and open request for assistance, directly from pre-selected NGO or group of NGOs or groups of ESP partners, and unsolicited applications, most of ESP grants falls under the first category. ESP will invite project partners to a regional workshop to understand the ESP program and the ESP Small Grants Program and invite partners to solicit project proposals.

Activity Description	Resources	Outputs	Time Frame
Develop Review Committee at each project area and ESP Head Quarter	DAI and Partners	Review Committee Roster	April – May 2005
Workshop at each project area	Multi-stakeholders Workshops	Small Grants Program Socialized	April – July 2005
Potential partners submit Concept Papers	Travel	Concept Papers Screened	July 2005
Potential partners submit Proposals	Travel	Proposals Reviewed	August 2005
Pre-Award Assessment	Travel STTA	Grant Worthiness Assessment	August 2005
Proposals Approved by USAID	USAID DAI	Proposals Approved	September 2005
Award Agreements	DAI	Grants Awarded	September 2005

SUBTASK PM3-3 MONITORING AND EVALUATION OF THE ESP SMALL GRANTS PROGRAM

Monitoring and evaluation of the small grants projects in the field will be done by field staff and also by the ESP Participatory Monitoring and Evaluation Officer and the ESP Grants Manager. In some cases, the ESP Senior Accountant will conduct financial management trainings to partners in the project areas.

Activity Description	Resources	Outputs	Time Frame
Workshop at each project area	Multi-stakeholders Workshops	Small Grants Program Socialized	April – July 2005
Develop and install ESP Small Grants MIS	Travel STTA	SGP MIS Installed	June 2005

Activity Description	Resources	Outputs	Time Frame
Training in ESP Small Grants MIS	Training STTA	ESP staff trained in MIS	June – July 2005
Financial Management Training to Partners	Travel Management Staff	# of partners trained in financial management	September – October 2005
Monitor Project Progress in each region	Travel Project staff	# of projects monitored	September 2005 -
Review Monthly Reports	Technical staff	Monthly Reports	September 2005 -
Review Quarterly Reports	Technical staff	Quarterly Reports	September 2005 -
Review Final Reports	Technical staff	Final Report and Close-out Project Report	September 2005 -

TASK PM-4:

PUBLIC OUTREACH AND COMMUNICATIONS

ESP will facilitate an integrated public outreach and communications strategy to stimulate stakeholder awareness of and support for improved services and practices necessary to achieve overall program goals and objectives. This strategy involves two components. **Public outreach and communications field activities** include a suite of three communications campaigns that target ESP partners to influence behavior change necessary for achieving program goals and objectives. This includes community conservation awareness campaigns, health and hygiene campaigns, and regular public awareness campaigns. **ESP program communications activities** communicate program results, best practices and lessons learned in a timely and professional manner to a broad Indonesian and international audience.

SUBTASK PM4-I PUBLIC OUTREACH & COMMUNICATION FIELD ACTIVITIES

ESP will implement three integrated activities in High Priority Provinces. One-year **community conservation awareness campaigns** targeting upper-watershed communities, and strive to build awareness of, pride in and conservation management for areas of high biodiversity value. **Health and hygiene campaigns** will focus on more densely populated urban and peri-urban areas including but not limited to provincial capitals. Both conservation awareness campaigns and health and hygiene campaigns apply social marketing principles and best practices, and stimulate behavior change of target groups necessary to achieve ESP outcomes. Finally, **regular public awareness campaigns** will be implemented in partnership with local media and NGOs in each HPP capital. Regular ESP and BHS messages will be communicated through regular campaigns that communicate information and 'calls for action' through a range of electronic and print media. While each HPP will facilitate integrated public outreach and communications strategies, SCIAAs will

FIRST ANNUAL WORK PLAN AND LIFE OF PROJECT PLAN

adapt some communications tools for specific purposes. It is likely that SCIA's will adapt health and hygiene campaign materials for local needs.

Activity Description	Resources	Outputs	Time Frame
ESP PO&C strategy development	Workshop; LTTA from ESP (DCOP); PO&CT; Rare; JHU-CCP; STTA: Yanti Gunadi. Consultation w/ USAID Branding.	ESP PO&C communications strategy for HPPs	April or May 2005
Baseline survey information collection & analysis	PO&CT; STTA: Yanti Gunadi Baseline surveys in urban, peri-urban and rural areas in each HPP	KAP and other information surveys developed and conducted, results feed into specific campaigns	May-July 2005
Rare Community Conservation Awareness Campaign workshop	Workshop; PO&CT; Rare LTTA & STTA	Initial training in conservation awareness campaign technique; recruitment of campaign facilitators	July-August 2005
Rare Community Conservation Awareness Campaigns, Round 1	Training; PO&CT & Rare LTTA & STTA Small grants for campaigns	4 Community Conservation Awareness Campaigns implemented (1 per HPP)	October 2005-September 2006
Rare Community Conservation Awareness Campaigns, Round 2	Training; PO&CT & Rare LTTA & STTA Small grants for campaigns	8 Community Conservation Awareness Campaigns commenced (2 per HPP)	April 2006-March 2007
Health & Hygiene Campaigns material developed	Surveys; H&HT LTTA & STTA	Baseline survey information collected and analyzed for H&H campaigns	April-June 2005
Health & Hygiene Campaigns implemented	H&HT LTTA & STTA; publication & distribution of materials	Health & Hygiene campaigns launched in each HPP	July 2005-September 2006
Health & Hygiene Campaigns adapted to SCIA's	SCIAT w/ H&HT LTTA	Health & Hygiene campaigns adapted to each SCIA	October 2005-September 2006
Regular public awareness campaign teams established	Workshops; Informal meetings; PO&CT LTTA & STTA	Public Awareness Campaign Teams established in each HPP	June-July 2005

Activity Description	Resources	Outputs	Time Frame
Regular public awareness campaigns implemented	Workshops; Informal meetings; PO&CT LTТА & STТА Small grants & sub-contracts	Bi-monthly public awareness campaigns target ESP or BHS issues in each HPP	July 2005-September 2006

SUBTASK PM4-2 PROGRAM COMMUNICATIONS ACTIVITIES

ESP will implement a strong program communications strategy to communicate program results, best practices and lessons learned. This includes the development of a **program web site**; a monthly email list service providing ESP news and activities updates, in English and possibly Bahasa Indonesia, called **ESP News**; **ESP technical fact sheets** describing program activities; and broad distribution of ESP technical reports to an Indonesian and international audience.

Activity Description	Resources	Outputs	Time Frame
ESP branding, logo design & style guide development	Purchase Order; COP & DCOP LTТА; USAID Branding consultation	ESP branding, logo & style guide that reflect USAID branding guidelines and provides professional & uniform presentation of all ESP program products	March-April 2005
ESP web site development	STТА; Purchase Order; Training	ESP program web-site set-up; user friendly in terms of accessing and adding program information	April-June 2005
ESP News development & monthly implementation	PMT LTТА & STТА	Monthly email list serve communicates ESP program activities to Indonesian & international audience	May 2005-September 2006
ESP technical fact sheets production	ESP technical Groups; production costs	ESP fact sheets describing technical activities and geographic focus available to Indonesian & international audience	April-June 2005
ESP report production & distribution	ESP technical Groups; production costs	Regular, timely & broad distribution of ESP reports	March 2005-September 2006
ESP brown-bag lunch series	Technical presentations; meeting space	Regular technical presentations of ESP & BHS issues by staff and partners	May 2005-September 2006

TASK PM-5: GENDER

INTRODUCTION

The Environmental Services Program, its professional staff, and its partner subcontractors and agencies are acutely aware of the importance of incorporating gender concerns early in the program such that it will be a routine and mainstream occurrence throughout the program and beyond. With the advent of the Aceh tsunami and the resulting significantly worse effect on women than men, this concern for gender inequity becomes even more center stage. At the same time, ESP must at all times be aware and understanding of local and regional culture, sensitivities and attitudes and work within the system to promote positive change where that may be needed at a pace and in a manner that does not alienate the program from the target constituents.

While presented as an independent task here, it must be stressed that gender is not a task in and of itself. It is an action plan and concept which will be incorporated in injected in and throughout every work task within this workplan as well as the ESP PMP.

Over the course of this first workplan, ESP will strive to ensure that the entire team of advisors and specialists on ESP are fully aware and knowledgeable in matters and in techniques of dealing with gender issues. This will be achieved through the development of an ESP gender training guide, and the implementation of a training program that achieves a consistent, uniform and understanding of gender.

Activity Description	Resources	Outputs	Time Frame
Development of ESP Gender Training Guide	STTA, with ESP Management	STTA recruited, training guide prepared	June-September 2005
Gender issues incorporated into ESP workplan and PMP	ESP Team	Gender issues reflected in workplan technical activities as well as PMP	March-June 2005
Gender training program conducted for ESP staff and partners	STTA	All ESP advisors and specialists trained in gender sensitivity issues	October 2005-March 2006
Gender fully integrated into ESP planning cycle	ESP Management	Gender issues reflected in all aspects of ESP work	Ongoing
Gender issues incorporated into ESP health & hygiene campaigns	SD Team with HCSs	Well targeted and gender-sensitive health hygiene campaign materials produced and distributed	September 2005-September 2006
Gender issues incorporated into regular communication campaigns	POCs with ESP Team	Gender issues raised and developed in regular ESP public outreach and communication materials	Ongoing

TASK PM-6:

GEOGRAPHIC INFORMATION SYSTEMS AND MAPPING

The utilization of geographic information systems (GIS) represents an important facet of the technical approach outlined in the ESP Workplan. Importantly, the development of a robust ESP GIS is not viewed as an end in itself, but rather as a tool that supports and enhances the technical components, program communications and evaluation, and overall program management.

From the standpoint of the technical approach, GIS will play a particularly important role in the development of watershed management plans in the targeted areas. More specifically, ESP will use GIS applications to integrate data on the locations of critical ecosystems, people, threats, resource characteristics, and markets, and produce land-use suitability maps. The program will couple these maps with economic analysis and market studies to identify sustainable “development pathways” on a regional scale. Additionally, throughout the community mapping process, ESP will seek to build off of and expand the already substantial GIS capacity in Indonesia through the development and implementation of training events.

Regarding program communications and evaluation, DAI’s Internet-based GIS capability provides a simple communication tool that will help tell the story of local conditions and project activities in eco-regions to a wide audience. ESP will compile geo-referenced data, link them to information on ESP project activities, and incorporate them in custom maps on the ESP Web site, readily accessed by stakeholders to coordinate or target development interventions in the eco-regions, or to share successful approaches and lessons learned.

Finally, regarding overall program management, the mapping of ESP activities will facilitate the tracking of where program efforts are focused, thereby enabling ESP Management to make informed decisions concerning the allocation of resources and staff. Visually displaying the initiatives under the small grants program, for example, will help ensure that grant funding is balanced appropriately across the priority regions.

Activity	Resources	Outputs & Deliverables	Time Frame
Staffing of ESP Offices with needed GIS Expertise	ESP Management	GIS experts hired and active in a all pertinent program offices	April 2005
Preliminary Analysis and Acquisition of GIS data by region	Karl Kucera/GIS Team	Initial data needs identified, data collected and inventoried	May 2005
Identify International, National, and Regional GIS Partners	Karl Kucera/GIS Team	Contacts identified with each partner and data exchange procedures established	May 2005
Mapping of Program Activities on ESP Website	Karl Kucera/GIS Team, STTA	Program Activity Maps displayed on ESP Website	August 2005

Activity	Resources	Outputs & Deliverables	Time Frame
Watershed Mapping (See Subtask WSI-2 for greater detail)	Karl Kucera/GIS Team, Reed merrill/Watershed Management Team	GIS map of watershed target areas developed	Ongoing
GIS Capacity Building	Karl Kucera/GIS Team, GIS Partners	Development and implementation of GIS Training Modules	Ongoing

TASK PM-7:

PROJECT MONITORING AND EVALUATION

ESP Monitoring and Evaluation (M&E) Activity will refer to the Performance Monitoring Plans (PMP). The ESP PMP will support and contribute to the Strategic objective of Basic Human Service and Special objective of Maintaining Healthy Ecosystem. During in the implementation of M&E activities of ESP will also target to identify the impact of the program through the implementation of Participatory Monitoring and Evaluation. The participatory monitoring and evaluation will involve the targeted groups and other stakeholder so, it will further enhance the impact of the program.

SUBTASK PM7-1 DESIGN ESP PERFORMANCE MONITORING PLANS (PMP)

This task will focus on development of ESP PMP. The ESP Team will work closely with USAID BHS Team during in this period to link the ESP PMP with the concern of Strategic objective of Basic Human Service and Special objective of Maintaining Healthy Ecosystem.

Activity	Inputs/Resources	Performance Milestone, Output or Deliverables	Time frame
Review proposal on ESP PMP and link with BHS strategic objective and indicators and ESP workplans	Document review; M&E specialist	List of review results on target, output and indicators	April 2005
Development of ESP PMP	M&E specialist	ESP PMP developed	May 2005
Consultation and discussion on ESP PMP	Discussion with ESP teams and USAID (BHS Team); M&E specialist, COP, DCOP, ESP teams, USAID-BHS Team	PMP revised and improved	May 2005

SUBTASK PM7-2 BASELINE AND DATA COLLECTION

The activity during in this phase will mainly get the baseline data to be put in PMP format in order to determine the ESP targets and outputs.

Activity	Inputs/Resources	Performance Milestone, Output or Deliverables	Time frame
Baseline and data collection	Data collection from several resources (websites, reports, etc.); M&E Specialist	Baseline and data related to PMP indicators, target and output	May – June 2005

SUBTASK PM7-3 PMP ANNUAL DATA COLLECTION

The process on PMP annual data collection will be coordinate by ESP M&E specialist involved ESP regional staff and ESP partners. The result of the PMP annual data collection will show the annual achievement and impact of the program activities. The PMP data collection process will be done semi-annually and will be finalized annually for PMP reporting.

Activity	Inputs/Resources	Performance Milestone, Output or Deliverables	Time frame
Develop M&E tools and methods based on ESP PMP	Writing and develop M&E tools and methods; M&E Specialist	Guidelines and forms for M&E activities developed	May – June 2005
Testing of M&E tools and methods	Workshop and Field visit; M&E specialist and ESP Teams	Process of M&E implementation practiced	July 2005
Training on M&E tools and methods based on ESP PMP	Training and workshop; M&E specialist, ESP Teams, relevant ESP partners and STTA	# of ESP staff from different team are trained on M&E implementation	July 2005
PMP Data Collection (semi-annual and annual)	Workshop and Field visit; M&E specialist, ESP Teams and relevant ESP partners	PMP Data collected semi-annually and annually (depend on the term of data collection related to PMP indicators)	July 2005 – September 2006

SUBTASK PM7-4 PMP REPORTING

The PMP reporting will be done annually. During in the implementation of the workplan period, the PMP report will be consulted and discussed with the USAID BHS Team to see how the ESP achievement and impact will contribute to the SO and IR of Basic Human Service and Maintaining Healthy Ecosystem.

Activity	Inputs/Resources	Performance Milestone, Output or Deliverables	Time frame
Produce PMP report (interim and annual report)	Discussion, data analysis and report writing; M&E specialist, COP/DCOP	Interim and annual PMP report produced	July 2005 – September 2006
Consultation and discussion on ESP PMP Report	Discussion with ESP teams and USAID (BHS Team); M&E specialist, COP, DCOP, ESP teams, USAID-BHS Team	Interim and annual PMP report reviewed and improved	July 2005 – September 2006

SUBTASK PM7-5 PARTICIPATORY MONITORING AND EVALUATION

This task will focus to identify the impact of the ESP program activities. The Participatory M&E will involve ESP stakeholder and community groups. The Participatory M&E is planned to be conducted annually in the end of the year program activities. The result of the Participatory M&E will be documented and published that will also use for public awareness campaign of the ESP program. This activity will also support for development of follow up program in the following program period.

Activity	Inputs/Resources	Performance Milestone, Output or Deliverables	Time frame
Develop process and curriculum of Participatory M&E	Writing and develop process and curriculum Participatory M&E; M&E Specialist	Process of Participatory M&E and workshop curriculum of Participatory M&E developed	September 2005
Training and Workshop on Participatory M&E	Training and workshop; M&E specialist, ESP Teams, STTA	# of ESP staff from different team are trained on implementation of Participatory M&E	October 2005 and August 2006
Implementation of Participatory M&E	Workshop and Field visit; M&E specialist, ESP Teams, ESP partners and community groups	Impact and best practices of ESP Program documented	November 2005 and September 2006
Develop publication materials based on the results of Participatory M&E	Workshop, discussion, publication production; M&E specialist, POCT, ESP Team	Publications for promoting impact and best practices of ESP program produced	December 2005 and September 2006

**CHAPTER 3
WATERSHED
MANAGEMENT AND
BIODIVERSITY
CONSERVATION**

COMPONENT I

3.0. WATERSHED MANAGEMENT AND BIODIVERSITY CONSERVATION

3.1. INTRODUCTION

The Watershed Management and Biodiversity Conservation Component contribute to stabilizing and improving the supply of raw water to urban and peri-urban population centers in High Priority Provinces and Special Imperative Areas. This is achieved through promoting a landscape approach to improved land stewardship that integrates conservation of natural forests with high biodiversity value; restoring and rehabilitating degraded forests and critical land; and supporting sustainable utilization of agricultural land. Enabling conditions for improved land stewardship include policy support for land tenure necessary for responsible community-based forest management, as well as financing options to reward upper-watershed communities for activities that contribute to conserving a stable supply of raw water for their down-stream neighbors.

While this section of the workplan discusses the specific tasks and sub-tasks of the Watershed Management and Biodiversity Conservation component, it must be emphasized that the Watershed Management and Biodiversity Conservation component of ESP supports and is supported by the Service Delivery and Finance technical components, as well as cross-cutting themes of communications and GIS, in order to ensure an integrated program that achieves its ultimate goal of promoting health through improved water resources management and increased access to clean water and sanitation services. ESP strives to identify 'the perfect watershed' in all site selection. This 'perfect watershed' balances protected areas and forest area of high conservation value as well as clearly identifiable raw water resources in upper watershed areas with urban and peri-urban areas in lower watersheds with significant populations as well as local governments, PDAMs and civil society organizations interested in working together to achieve a more stable supply of clean water and better sanitation services.

3.2. ASSUMPTIONS

Effective watershed management and biodiversity conservation contributes to stabilizing and improving raw water supply for lower-watershed urban and peri-urban communities. Currently, watershed management in Indonesia is weak. This is indicated by an increased incidence of landslides, flooding and sedimentation in rivers during the rainy season as well as reduced water flow during the dry season. Problems associated with mismanagement of watersheds include illegal logging and encroachment on steep and vulnerable lands, and a wide range of land use and conversion decisions based on short-term rather than long-term interests. Achieving effective and integrated watershed management is made difficult by

trans-boundary conflict exacerbated by the on-going decentralization process, the sectoral nature of government administrative structures at the national to local level, and land tenure policy that discourages farmers and communities living in or adjacent to forests to invest in long-term agroforestry systems that would lead to improved land stewardship.

As Indonesia political situation stabilizes, and as roots of reform and decentralization begin to take hold, there is a unique opportunity to make significant progress in addressing these issues. ESP will focus on clarifying roles and responsibilities of watershed management stakeholders from government and civil society, and implement a systematic approach to strengthen watershed management through field initiatives and policy reform that integrates improved land stewardship with enhanced livelihoods development, builds effective public-private linkages, increases awareness of the role of watershed management in clean water delivery and public health, addresses trans-boundary conflict, leads to policy reform for responsible land tenure, and rewards upper watershed water resource managers for conserving and rehabilitating raw water resources for lower-watershed markets.

3.3. APPROACH

ESP will facilitate an iterative and participatory approach toward strengthening improved watershed management that results in improved forest biodiversity conservation as well as degraded forest restoration and critical land rehabilitation in order to improve raw water resource flow to major urban and peri-urban areas. Central to ESP watershed management is the establishment of watershed management forums (WMMFs), development and implementation of watershed management plans by these forums, and participatory monitoring and evaluation of watershed management plans to ensure field activities achieve overall goals and objectives. Key to watershed management plans are field activities that integrates improved land stewardship with enhanced livelihoods for farmers and community groups. ESP will support a number of initiatives including Farmer Field Schools, Public-Private linkages, and business development and support so that sustainable livelihoods development activities clearly reward upper-watershed stakeholders for best practices that safe-guard raw water supply for downstream users.

ESP will tap into a number of cross-cutting initiatives in order to support effective watershed management. GIS will be used for site selection, watershed management plan development, targeting of activities, and monitoring. This will contribute to more informed decision making in all aspects of watershed planning and management. GIS Specialists in each High Priority Province will be responsible for this work. ESP will also work with the Communications Team on the implementation of an integrated communications strategy. This includes conservation awareness campaigns in upper-watershed areas, contribution of watershed management-related themes to regular public awareness campaigns, and utilization of health and hygiene campaign materials for stakeholders in upper-watershed areas.

Successful watershed management in Indonesia requires balancing on-the-ground management with policy reform at the national as well as local level. At the national level, ESP will work with the Ministry of Forestry on policy reform for responsible land tenure necessary to stimulate forest restoration and critical land rehabilitation as well as decentralized collaborative conservation management. Additionally, ESP will work with Ministry of Home Affairs and BPN on addressing land title issues and streamlining small-holder land title process. Besides providing analysis and technical support for policy reform, ESP will link this work to pilot activities or learning sites in the field. This way, Indonesian

field experience can drive necessary policy reform. ESP will also support policy reform at the local level to stimulate effective implementation of watershed management plans. This includes but is not limited to land tenure issues and budget support for community watershed management initiatives.

Whenever possible, ESP will support and strengthen existing government and community initiatives rather than commence new ones. ESP is committed to long-term capacity building and sustainability. This is best achieved through the support of on-going initiatives. In the absence of existing initiatives, ESP will start with small initiatives, and nurture their growth over time prior to more significant expansion.

This eighteen month workplan provides a description of the tasks, sub-tasks and activities necessary to achieve this. Over the course of this initial workplan, watershed management activities will be implemented in a select number of highly visible watersheds in each High Priority Province and select Special Imperative Areas. ESP will adapt and expand this work to many more watersheds in High Priority Provinces and, possibly, Special Imperative Areas in future years of ESP. Importantly, while we set goals for necessary policy reform, it is expected that ESP will take only a few steps toward addressing this policy reform in the early stages of the program. As such, we will strive to be engaged in relevant policy dialogue as well as to develop pilot field initiatives that act as learning sites for policy reform.

3.4. RELATION TO OTHER ESP COMPONENTS

The Watershed Management and Biodiversity Conservation component expects to contribute to and draw from other ESP components as well as other USAID programs on a regular basis. The Watershed Management Team will collaborate closely with the Environmental Services and Finance teams and their partners, providing regular resources and presentations to foster a greater understanding of the role of sustainable watershed management in clean water delivery. The Watershed Management and Biodiversity Conservation component expects to draw technical support from the Environmental Services team for the provision of technical support in rural water supply and sanitation development as well as health and hygiene campaign information. The Watershed Management and Biodiversity Conservation component expects to draw technical support from the Finance Team in order to develop alternative financing mechanisms for supporting aspects of watershed management plans that might include conservation financing, financing community livelihoods initiatives, and establishing a menu of options to reward upper-watershed communities for safeguarding urban and peri-urban water supplies.

The Watershed Management and Biodiversity Conservation component also expects to draw from other USAID programs. We will share technical information and approach with recipients of Orangutan Habitat funding, we will seek technical support from BHS partners working on Point of Use Safe Water System campaigns as well as maternal and child survival activities. We will seek opportunities to work with USAID's education programs, and we will seek to draw from the technical experience of the new Local Government Support Program (LGSP). In each of these cases, the Watershed Management and Biodiversity Conservation component provides networks and issues that can support and be supported by broader USAID programming.

3.5. OUTCOMES

Specific outcomes over the course of ESP include:

1. The formation of adequate policies at the local level to recognize the tenure and/or access rights of communities to manage their forests and watershed areas, and implement transparent and participatory district-level management of forests, thus reducing conflict and illegal logging.
2. Improvement of watershed functions in areas supplying water to urban centers and PDAMs as measured by a 50% increase in rehabilitated land (total area of degraded land where trees, commercial or non-commercial, are planted).
3. Area of forest with high biodiversity conservation value under improved, local management increases by 50%.

Over the course of this workplan, we will make significant steps toward achieving these outcomes by establishing and implementing at least eight (8) watershed management forums plans in High Priority Provinces and Special Imperative Areas. The following sections provide details on the tasks, subtasks and activities considered necessary toward achieving this. ESP sees this first workplan as a time for building a conceptual foundation as well as trust amongst partners. By achieving results in a reasonable number of field sites over the first year and a half, we will have the momentum to significantly ramp-up and expand activities in ESP program years 3 through 5.

3.6. WATERSHED MANAGEMENT & BIODIVERSITY CONSERVATION TASKS

Watershed Management and Biodiversity Conservation Tasks include:

WS1 Development of Watershed Management

- WSI-1 Identify watershed areas
- WSI-2 Map watershed target areas
- WSI-3 Facilitate development of multi-stakeholder watershed management forums
- WSI-4 Build awareness and support for watershed management planning in targeted areas
- WSI-5 Identify specific activities to support watershed management plans
- WSI-6 Prepare watershed management plans
- WSI-7 Assist with watershed management plan financing

WS2 Implementation of Watershed Management Plans

- WS2-1 Support the multi-stakeholder forum in the implementation of watershed management plans
- WS2-2 Support improved protected areas management
- WS2-3 Support ecosystem restoration/rehabilitation projects
- WS2-4 Leverage biodiversity conservation and ecosystem funding
- WS2-5 Build capacity of community groups to promote improved natural resource management

WS2-6 Promote participatory monitoring and evaluation of watershed management plan implementation

WS3 Scale up and Achieve National Impact

WS3-1 Deepen impact of watershed plans in existing ESP sites

WS3-2 Expand impact of ESP watershed management best practices in HPPs

WS3-3 Expand Impact of ESP watershed management best practices at national level

WS3-4 Policy support for sustainability of ESP watershed management best practices

3.7. FIRST WORKPLAN TARGETS

TASK WSI: Development of Watershed Management Plans

1 to 2 WSM forums (WMF) in Each High Priority Provinces (HPP)

Up to 2 WMF in various Special Imperative Areas (SIA)

(Total: at least 8 WSM Forums)

by Sept 2005, initial groundwork towards establishing of up to 8 WMF

by Sept 2006, up to 8 WMF established and functioning

TASK WS2: Implementation of Watershed Management Plans

1 to 2 WSM plans in Each High Priority Provinces (HPP) under implementation.

Up to 2 WSM plans in various Special Imperative Areas (SIA) under implementation.

(Total: at least 8 WSM plans under implementation)

TASK WS3: Scale-Up and Achieve National Impact

Local and national policy to support implementation of WSM plans. Adaptation of ESP integrated watershed management best practices in at least 10 other sites across Indonesia. Progress towards these targets is expected during the time frame of this initial workplan, though achievement of targets is expected later in the program.

by Sept 2005, policy discourse established at national and local levels

by Sept 2006, pilot initiatives to support policy reform in responsible land tenure have commenced

TASK WSI:

DEVELOPMENT OF WATERSHED MANAGEMENT PLANS

DESCRIPTION

Establishment of functioning multi-stakeholder watershed management forums to work together to understand watershed functions and the link between watershed management and water resource conservation. Then, development of Watershed Management plans that

contribute to improved land stewardship that result in increased conservation of forest area with high biodiversity value and rehabilitation of degraded lands.

TARGETS

1 to 2 WSM forums (WMF) in Each High Priority Provinces (HPP)

Up to 2 WMF in various Special Imperative Areas (SIA)

(Total: at least 8 WSM Forums)

by Sept 2005, initial groundwork towards establishing of up to 8 WMF

by Sept 2006, up to 8 WMF established and functioning

RESOURCES

Reed Merrill, Watershed Mgmt. Advisor/Deputy Chief of Party

National and Regional WSM Teams, GIS Team, Public Outreach & Communication Team.

TIME FRAME

January 2005 – September 30, 2005

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS

SUBTASK WSI-I IDENTIFY WATERSHED AREAS

DESCRIPTION

Multiple threats to forests and their associated biodiversity, increased incidence of land slides, flooding and associated flood damage has accelerated degradation of many watersheds in Indonesia. High sediment yields are reducing life span of high investment infrastructure such as dams and reservoirs. Erosion, sedimentation and fluctuation in flows are reducing availability of water resources, and degrading water quality while causing flooding. Roles and responsibilities among watershed stakeholders are often unclear, and short-term decisions aimed at immediate benefits are causing long-term problems. To address this, ESP will identify **watershed target areas** that demonstrate the complex challenge of improved watershed management based on a rapid assessment of biodiversity value, watershed management opportunities and constraints, forest and land rehabilitation options, and political will of local stakeholders to work together to achieve long-term solutions. During the period of this workplan, up to eight watershed target areas will be identified for commencement of ESP activities. This will form a base from which to expand from in future years.

The **principal output** for Subtask WS I-I for the workplan period is the written identification of six to eight target watershed areas.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This work will be facilitated by the Watershed Management Team in close collaboration with the GIS Team, and this activity contributes to ESP site selection through September 2006. This information will be shared with USAID/BHS, LG and Education partners.

Activity	Resources	Output	Time frame
Identify & map key WSM & water resource conservation stakeholders at provincial, districts & village level through field visits, discussion, and basic mapping.	WST with GIST	Map of key stakeholders concerned with watershed and water resources management	January – May 2005
Communicate/socialize ESP program and integrated WSM at provincial & district levels	WST	Meetings/Presentations of ESP program and WSM principles	January – May 2005
Develop matrix indicators for identification & selection of target WSM areas through meetings and literature review	WST, GIST and EST; USAID 118-119 report & literature review	Matrix indicators developed	January – June 2005
Preliminary inventory of watershed and water resources intervention priority areas and issues	WST; Report assessment, maps	Data and information set on watershed and water resources	February – June 2005
Complete WSM target identification matrix	WST	Completed Matrix of watershed management target areas	February – June 2005
Identify initial WSM target areas for ESP activities.	WST	Identification of Immediate watershed target areas (at least one municipality and two districts within appropriate watersheds and sub watersheds)	March – July 2005

SUBTASK WSI-2 MAP WATERSHED TARGET AREAS

DESCRIPTION

Achieving informed decisions toward more effective WSM and water resources the gathering and presentation of biophysical, administrative and socio-economic information best communicated through maps. ESP will use GIS to develop basic **Watershed Planning and Management Information Systems (WMPMIS)** for targeted areas. The landscape planning approach will use satellite imagery and concept of agro-ecologic zone mapping. This allows integration of environmental sensitivity, farming systems and socio-economic data with particular sections of landscape. This will be a rapid mapping process used to support targeting and identifying areas for ESP activities, and more detailed GIS mapping may be done in other stages of the WSM process.

The **principal outputs** for Subtask WSI-2 for the workplan period are GIS maps of each watershed area identified.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

The WST and GIST will work together with ESP partners on the development of maps. Maps, information and data sets will be shared with other USAID partners.

Activity Descriptions	Resources	Output	Time frame
Data Collection, verification and update for spatial planning of WSM	WST, GIST and STTA; Field visits, GIS work	Database for spatial of WSM collected, verified and updated	January – September 2005
Participatory planning of GIS development of watershed target area	WST, GIST and STTA;	Stakeholder Workshop regarding key aspects of watershed target area	April – September 2005
Capacity building on development of participatory mapping of watershed management	WST, GIST and STTA	Training on participatory mapping conducted	May – September 2005
Participatory studies and assessments on economic, resource valuation, environmental, conservation, biodiversity and financial issues	WST, GIST and STTA;	Analysis of data and information on economic, resource valuation, environmental, conservation, biodiversity and financial issues	May – September 2005
Development of GIS map	WST, GIST and STTA	GIS map of watershed target area developed	March – September 2005

SUBTASK WSI-3 FACILITATE DEVELOPMENT OF MULTI-STAKEHOLDER WATERSHED MANAGEMENT FORUMS

DESCRIPTION

Effective watershed management (WSM) requires the clarification of roles and responsibilities among a broad range of actors, and then the facilitation of these actors to work together towards a common vision. ESP will facilitate an iterative participatory process that identifies key WSM constituencies at the national, provincial, district and village level, including government, community groups, NGOs, universities and the private sector. ESP will facilitate the development of constituency-based partnerships, and then broaden this to upper- and lower-watershed management forums or working groups. Ultimately, watershed management forums (WMF) will be created to bring together diverse upper- and lower-

watershed constituencies to work together towards integrated WSM solutions. Where possible, ESP will work with and strengthen existing WMF or similar multi-stakeholder management bodies. Where such WMF have not yet emerged, ESP will facilitate their establishment as a key to long-term sustainability of ESP work. ESP will provide limited financial support to stimulate the emergence and early strengthening of WMFs, and also facilitate WMFs to identify locally-available and more sustainable sources to finance operating costs.

The **principal outputs** of Subtask WSI-3 for the workplan period are workshops in the target areas in which Watershed Management Forum members are identified and strategic plans are developed.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

Watershed Management Forums (WMF) are the key institution through which ESP facilitates informed and participatory WSM. These forums will be responsible for developing policy and field activities in WSM plans. WMF are thus central to all WSM component activities. They also provide a solid network for sharing of information from other ESP activities as well as activities from other USAID programs (Various BHS health and hygiene campaigns, for example)

Activity Descriptions	Resources	Output	Time frame
Public consultation of ESP WSM work to identify stakeholder & partner interest.	WST	Workshops/Presentations and Focus Group Discussions in which WSM constituents and Upper- and lower-WSM teams are identified	April – May 2005
Feasibility study by multi-stakeholder core team	WST, STTA and multi-stakeholder core team	Feasibility Study Report which includes (1) WSM portrait of each targeted area, (2) a needs assessment for each targeted area, and (3) a Multi-stakeholder framework of WSM developed	May – July 2005
Strategic planning of upper and lower user groups	WST, STTA and representative of multi-stakeholder from upper and lower area of watershed	Workshop of user groups in which Strategic Plans for targeted watersheds are developed	July – August 2005
Capacity building for upper and lower user groups	WST, STTA and other team related to relevant issues	Workshops/Trainings in which the general understanding of WSM concepts for upper and lower user groups are improved (particularly that linkages between both user groups in support of the WSM Plans)	September 2005

SUBTASK WSI-4 BUILD AWARENESS AND SUPPORT FOR WATERSHED MANAGEMENT PLANNING IN TARGETED AREAS

DESCRIPTION

An effective, integrated public outreach and communication strategy will be used to stimulate stakeholder awareness of and support for effective watershed management in ESP watershed management sites. This includes the facilitation of a range of activities including conservation awareness campaigns as well as regular public awareness campaigns. Upper-watershed conservation awareness campaigns will be in-depth one-year initiatives that include campaign coordinator training and then implementation of a twelve-step campaign. Regular public awareness campaigns provide month-long campaigns that inform the public of specific ESP and BHS issues, and then foster a call-to-action in response to these issues. This integrated approach promotes the development of watershed management plans in order to generate support from the different stakeholders involved in WSM. Awareness building activities will continue during in the implementation of the WSM Plans in order to increase support for watershed management and biodiversity conservation activities.

The **principal outputs** of Subtask WSI-4 for the workplan period are the commencement of public awareness campaigns in the target areas identified in the form of the production/dissemination of promotional materials and the conducting of multi-stakeholder awareness meetings.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

Conservation awareness campaigns in upper-watersheds can incorporate materials and messages from other ESP and USAID programs. Regular public awareness campaigns provide a unique mechanism for communicating WSM issues to primary and secondary WSM audiences, as well as for promoting other ESP and USAID/BHS messages to the broader ESP target audience.

Activity Descriptions	Resources	Output	Time frame
Capacity Building of ESP Staff in public awareness campaigns	WST and ESP communications partners including Rare, JHU & ESP Public Outreach & Communications Specialists	ESP Staff training in conservation awareness, regular public awareness, and health and hygiene campaign methodology	April or May 2005
Integrated Communications Strategy Development	WST and ESP communications partners including Rare, JHU & ESP Public Outreach & Communications Specialists	ESP Integrated Communications Strategy developed	April or May 2005

Activity Descriptions	Resources	Output	Time frame
Conservation Awareness Campaign	WST, outreach team and STTA	Implementation of Conservation Awareness Campaign, including (1) Market survey to identify the campaign message conducted; (2) Workshops and training for local campaign organizers conducted in each program locations; and (3) Integrated communication activities to promote WSM plans conducted by local campaign organizers	April 2005 – September 2006
Regular Public Awareness Campaign	WST, outreach team, and STTA	Implementation of regular Public Awareness Campaign, including (1) production of promotional publications for WSM plans; (2) dissemination of promotional materials in local media; and (3) multi-stakeholder workshops to promote the WSM Plans	April 2005 – September 2006
Capacity building of local partners to implement awareness campaigns	WST, outreach team and STTA	Trainings for local partners on the promotion of WSM plans	April 2005 – September 2006

SUBTASK WSI-5 IDENTIFY SPECIFIC ACTIVITIES TO SUPPORT WATERSHED MANAGEMENT PLANS

DESCRIPTION

Effective WSM plans will include a broad range of activities that contribute to improved stewardship of watersheds through forest conservation and restoration, critical land rehabilitation, and sustainable agroforestry and agriculture development. Successful activities will integrate improved land stewardship with enhanced livelihoods of communities and farmer groups. The purpose of this subtask is to identify a menu of potential activities that integrate improved stewardship of watersheds with enhanced livelihoods. ESP supports enhanced livelihoods by strengthening an integrated range of assets, including financial, social, and environmental. Thus, some activities may support income generation, while other activities may support basic rural development (as in the development of rural water and sanitation systems).

The **principal outputs** in Subtask WSI-5 are assessment reports for each targeted watershed which recommend specific activities to improve both stewardship of the watershed and the livelihood of community member.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This subtask is facilitated by WST and draws from input by the Private Sector Coordinator, EST and FINT. Additionally, links will be made with DOI-OSM on mining-related activities. Outcomes include a menu of options for livelihoods development activities that directly support enhanced WSM through improved land stewardship.

Activity Descriptions	Resources	Output	Time frame
Livelihoods development and WSM stewardship assessment based on livelihoods framework	WST, STTA	Profile of existing problems and livelihood aspects related to watershed management in selected areas	April – July 2005
Assessment of previous FFS or similar activities in selected area	WST and STTA	Assessment report of previous FFS, including data on the number, distribution, and types of activities	April – July 2005
Profiling of existing local Farmer Trainers in selected area	WST, STTA	Profile of local farmer trainers: number, location, activities	April – July 2005
Profiling of other activities/ organizations present in community in selected area	WST and resource persons	Profile of regular activities done by community and other programs supported by external institutions (such as NGO, Government, Religious Organization, Private sector etc.) in the area	April – July 2005
Assessment of agro-forestry / NFTP products and other potentials in selected area	WST	Profile of the agro-forestry / NFTP produced by the community and other potencies	April – July 2005
Collaboration with DOI-OSM on assessment of mining activities & alternatives in key watersheds	WST with DOI-OSM; Field visits with DOI-OSM to understand mining issues as related to WSM	Report of specific opportunities for collaboration on mitigating health and environment impact of mining in targeted watersheds.	June-September 2005
Inventory of the activities of private sectors involvement related to watershed issue in selected area	WST	Profile of the activities of private sectors involvement related to watershed issue in selected area	April – July 2005

SUBTASK WSI-6 PREPARE WATERSHED MANAGEMENT PLANS

DESCRIPTION

Based upon the successful identification of key watersheds, establishment of Watershed Management Forums, and development of a menu of options for interventions that integrate improved land stewardship with livelihoods development, integrated and iterative watershed management plans will be prepared. Focusing on the importance of environmental flows and the maintenance of many integrated natural processes, watershed management plans will be developed in a way that fosters long-term solutions and broad-based integration of government and non-government institutions from the national to local levels. These plans will be based on the principle that watersheds are of the interest of all those who have a relationships to a particular body of water. It can be the basis for building broad-based alliances between diverse users of water to help solve problems cooperatively through public participation. Within a single watershed problems may range from water shortages to floods, erosion and sedimentation and water pollution. Watershed management plans link water quantity and water quality, and may be used for information gathering for standard setting, licensing, monitoring and enforcement.

The application of the watershed approach in Indonesia has gradually evolved since the early 1980's when it was introduced in GR 22/1982 regarding the Administration of Water. This Regulation referred specifically to the concept of the river basin as the unit for planning the use of water, and introduced the concept of "one river-one plan". With the introduction of Act No.7/2004 concerning the Management of Water Resources, the concept of linking watershed management to water supply has been made explicit in law for the first time. This Act has also for the first time considered surface and groundwater as integrated components of the water resources of a region requiring an integrated management response. The preparation of the watershed management plans through the coordination and engagement of government, industry, and civil society stakeholders is crucial for the development and implementation of the watershed management plans. Implementation experiences in the watershed in or across jurisdiction areas stimulate policy support at the local and national level to foster tenure and/or access rights of communities to manage forests and watersheds in order to reduce conflict and illegal logging.

The **principal outputs** of Subtask WSI-6 for the workplan period are the completion of Watershed Management Plans for each targeted area.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

Watershed management plans are facilitated by WST and are the basis for long-term implementation activities. Links occur with all ESP technical teams. Outcomes include watershed management plans approved by WMF in each targeted area.

Activity Descriptions	Resources	Output	Time frame
Coordination and engagement of government, industry and civil society stakeholders	WST and STTA	Workshop emphasizing the role of WMF as a focus for community based water resource management planning <i>i.e.</i> , <i>Water Boards and Councils</i>	April – September 2005

Activity Descriptions	Resources	Output	Time frame
Development of management plan vision, framework and time frames	WST and STTA	(1) Planning Workshop resulting in (2) a shared vision statement among stakeholders of watershed management goals and a framework for long term planning and implementation i.e., <i>Renstra</i> or <i>A Five Year Management Plan</i> .	May-July 2005
Development of annual action plans	WST and STTA	Annual Action Plan, including a project based analysis of activities assigning institutions, staffing, and budgets for project implementation on a rolling one year program in conformity with agreed long term management plans	July – September 2005
Development of basic hydrologic and watershed modeling system as tool to support WSM planning and decision making	Input: workshops and training WST and STTA,	(1) Hydrologic Modeling Workshop/training resulting in (2) completed watershed and hydrologic model	March – July 2005

SUBTASK WSI-7 ASSIST WITH WATERSHED MANAGEMENT PLAN FINANCING

DESCRIPTION

Financing is important for both the implementation of watershed management plans as well as long-term rewards for sustainable watershed stewardship that includes forest biodiversity conservation and forest and critical land restoration and rehabilitation. ESP will facilitate the development of a sustainable financing plan that starts with basic resource valuation of upper-watershed environmental services. This will be followed by developing a clear budget for implementation of watershed management plan stewardship activities. ESP will then facilitate watershed management boards to present management plans and budgets for potential funding through a range of sources including local government (provincial, district and/or municipal), national government (Forest Rehabilitation Movement or *GNRHL*), and other relevant programs. ESP will also facilitate private sector linkages to support management plan activities. We will seek to match private sector investments to community-based land stewardship activities. Finally, ESP may also provide small grants to specific activities in management plans that are especially innovative or that helps a particular group achieve certain enabling conditions that spark further progress.

The **principal outputs** of Subtask WSI-7 for the workplan period are the development of budgets to guide the implementation of WSM Plans in the target areas.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This work will be facilitated by WST with significant technical support from FIT. This sub-task is a precursor to WS-2, and WSO 2 and 3.

Activity Descriptions	Resources	Output	Time frame
Watershed Resource Valuation Study	WST, FIT, STTA	Resource valuation report at least from 4 HPP	May-August 2005
Watershed Management Plan budget preparation	WST and WSM Forum	Budget plan prepared at least from 4 HPP and 2 SIA	August 2005
Watershed Management Plan budget presentations	WST and WSM Forum	Budget plan presented and agreed by multi-stakeholder Forum at least from 2 HPP and 4 SIA	September 2005
Building Public and Private-Sector Partnerships with WSM Boards	WST and FIT	Partnerships built between Public/Private-Sector and WSM Boards at least from 4 HPP and 2 SIA	June – September 2005
ESP small grants for innovative WSM initiatives	WST and Grants Manager	Up to 6 small grants in HPP and SIA	June – September 2005

TASK WS2:

IMPLEMENTATION OF WATERSHED MANAGEMENT PLANS

DESCRIPTION

Implementation of integrated watershed management plans contribute to stabilize supply of raw water to urban and peri-urban population centers based on improved land stewardship in order to achieve the end results of the ESP program. Forest areas of high biodiversity value under conservation management is increased. Areas of forest and degraded land being restored and rehabilitated is increased.

TARGETS

1 to 2 WSM plans in Each High Priority Provinces (HPP) under implementation.
 Up to 2 WSM plans in various Special Imperative Areas (SIA) under implementation.
 (Total: at least 8 WSM plans under implementation)

RESOURCES

Reed Merrill, Watershed Mgmt. Advisor/Deputy Chief of Party
 National and Regional WSM Teams, GIS Team, Public Outreach & Communication Team.

TIME FRAME

May 2005 – September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS

SUBTASK WS2-1 SUPPORT MULTI-STAKEHOLDER FORUMS IN THE IMPLEMENTATION OF WATERSHED MANAGEMENT PLANS

DESCRIPTION

Implementation of watershed management plans under the leadership and coordination of Watershed Management Forums is the heart of ESP’s approach to improving watershed management and contributing to improved water supply for down-stream users. Having already supported the development of watershed management forums (Task WS1), ESP will work closely with each Watershed Management Forum to ensure effective implementation of watershed management plans. ESP will provide a wide range of support, including leveraging financial and technical support from government agencies, government programs, private sector linkages and donor coordination. ESP will also provide technical assistance to implement activities supporting livelihoods development and improved land stewardship as well as public outreach and communications campaigns. On-going participatory monitoring and evaluation will ensure long-term success of management plans, and support an iterative and integrated planning-management interface. The WMFs will facilitate and coordinate the link between stakeholders in upper and lower groups in watershed area so they will have better communication in order to have better sustainable watershed management. The WMF will also support local policy development toward sustainable WSM.

The **principal outputs** of Subtask WS2-1 for the workplan period are (1) trainings in integrated watershed management for WMFs and (2) the formation of partnerships (in the form of memorandums of understanding) between WMFs and government agencies, universities, and local NGOs.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

Watershed management plans grow from WS1 subtasks and activities, and contribute to all WS outputs and deliverables, including forest biodiversity conservation, land rehabilitation, and policy support for community-based forest and land management.

Activity Descriptions	Resources	Output	Time frame
Appreciative Inquiry Training	STTA	Training for ESP staff & partners in Appreciative Inquiry	September or October 2005

Activity Descriptions	Resources	Output	Time frame
Strengthening of Partnerships in support of Watershed Management Plans	WST, core team of WSM Forum, STTA and other team related to relevant issues	(1) MOUs between WMFs and government agencies to provide financial & technical support for WSM plan implementation; and (2) Various partnerships established with government & private sector to support WSM plan implementation.	September 2005 – September 2006
Conflict Mitigation of trans-boundary issues and land tenure	WST, other ESP teams related to relevant issues, and STTA	Specific training in conflict mitigation techniques.	January-May 2006
Capacity building of upper and lower user groups and WSM Forum	WST, other ESP teams related to relevant issues, and STTA	Specific training, mentoring provided for technical issues as well as institutional development and policy reform.	September 2005 – September 2006
Public awareness campaign	WST, other ESP teams related to relevant issues, and STTA	(1) Community conservation awareness campaigns; and (2) WSM issues in regular public outreach campaigns	September 2005 – September 2006
Legal and policy development to support WSM plan implementation	WST and STTA	Workshop/Training in legal drafting and public consultation	September 2005 – September 2006

SUBTASK WS2-2 SUPPORT IMPROVED PROTECTED AREAS MANAGEMENT

DESCRIPTION

ESP supports significant expansion of forest areas of high biodiversity value under improved conservation management. Natural forests contribute to sustainable watershed management, and Indonesia's remaining natural forests are home to a globally-significant and vast wealth of biodiversity. ESP supports improved management of existing protected areas, including but not limited to national parks, through the strengthening of decentralized collaborative management. ESP also supports the establishment and management of new protected areas of high biodiversity value within the context of IUCN Category V protected areas, new national protected areas, as well as possible new local (provincial, district and community) protected areas. ESP is less interested in expanding the area under protection, but, instead on strengthening the conservation management of existing or new protected areas. ESP's strategy integrates biodiversity conservation with livelihoods development to ensure communities living near protected areas have strong incentives to support protected area conservation management.

The **principal outputs** of Subtask WS2-2 for the workplan period are (1) the formation of multi-stakeholder Protected Areas Management Boards, (2) the implementation of conservation awareness campaigns, and (3) the identification of conservation financing options.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This task will complement other task, especially awareness campaign program, livelihood development and collaborative management. Outcomes are a 50% increase of forest area with high biodiversity value under improved conservation management in each targeted watershed.

Activity Descriptions	Resources	Output	Time frame
Facilitate effective conservation management based on principles of decentralized collaborative management	Input: Workshop, regular meeting, FGD, cross visit Resources: WST and STTA	(1) Formation of multi-stakeholder boards for Protected Area Management; and (2) Preparation of work plan for collaborative protected area management	June 2005 – September 2005
Develop and implement conservation awareness campaigns	WST, Outreach team and RARE Team	(1) Monthly awareness campaigns developed and implemented; (2) Conservation awareness campaigns network developed	June 2005 – September 2006
Policy support to enhance management practices protected areas	Policy team, WST, STTA	(1) Development of conservation management policies; (2) Local regulations to support effective conservation management disseminated; (3) Incentive systems embodied in local and national regulations supporting conservation and rehabilitation activities	June 2005 – September 2006
Develop activities that balance improved community livelihood and conservation management of adjacent protected areas	WST	(1) Trainings/workshops that identify sustainable improvements in the livelihoods of community members; (2) the inclusion of sustainable livelihood activities in WSM plans	September 2005 – September 2006
Establishment of sustainable conservation financing mechanism linked to integrated WSM	Private sector team, WST	(1) Workshops/ meetings/ cross visits that identify conservation financing options; (2) Conservation financing activities managed by multi-stakeholder forum	November 2005 – September 2006

SUBTASK WS2-3 SUPPORT ECOSYSTEM RESTORATION/ REHABILITATION PROJECTS

DESCRIPTION

ESP supports the restoration of forests and rehabilitation of degraded land as a central theme of strengthened watershed management that contributes to improved supply of water resources to down-stream users. A broad range of approaches will be utilized to achieve this. At the field level, ESP will support the development of community nurseries, agroforestry and agriculture development activities that lead to improved land stewardship through forest restoration and degraded land rehabilitation. ESP will also foster links with government and donor programs aimed at forest restoration and land rehabilitation. Specifically, ESP will work with the Ministry of Forestry to support and strengthen the National Forest and Land Rehabilitation Movement (GNRHL). Additionally, ESP will support policy reform to encourage more rapid progress towards forest restoration and critical land rehabilitation. At the national level, ESP will work with the Ministry of Forestry and other stakeholders on developing policy that supports responsible land tenure for community groups and individuals living in and around degraded forest land. At the local level, ESP will work with local government to explore more efficient administrative procedures for clarifying areas under responsible community and/or individual tenure. ESP will integrate field activities with policy reform by using field activities as learning sites to explore and stimulate policy reform through various pilot initiatives.

The **principal outputs** of Subtask WS2-3 are (1) the design of a restoration and rehabilitation program in each target area, and (2) the commencement of the restoration and rehabilitation activities identified in the design (such as silvi-culture trainings, community nurseries, and small-scale mine rehabilitation).

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This task will complement other task, especially awareness campaign program, livelihood development and policy reform. Outcomes are a 50% increase of degraded forest under restoration and critical land under rehabilitation in each targeted watershed.

Activity Descriptions	Resources	Output	Time frame
Public consultation of restoration programs	WST	Workshops/meetings held to increase public awareness of restoration programs	May – June 2005
Restoration and rehabilitation campaign activities for upper and lower watershed communities	WST, STTA	Environmental restoration awareness campaign activities (public meetings, workshops, media campaigns) conducted in at least 4 HPP and 2 SIA	May – July 2005
Institutional capacity building concerning upstream watersheds	WST, STTA	Trainings to promote understanding of overall philosophy and technical issues related to rehabilitation program	May – June 2005

FIRST ANNUAL WORK PLAN AND LIFE OF PROJECT PLAN

Activity Descriptions	Resources	Output	Time frame
Development of community nursery initiatives, including training in silvi-culture and rehabilitation management	WST, STTA	(1) Community group trainings in silvi-culture and ecological rehabilitation; (2) the establishment of 20 community nurseries	August – December 2005
Generate among stakeholder a mutually accepted approach to rehabilitation programs	WST, STTA	Workshops/meetings that solicit stakeholder input in the design of the rehabilitation program	May 2005 – September 2006
Develop community-based agro-forestry initiatives	WST, STTA	(1) Workshops/trainings and technical assistance in agro-forestry; (2) Implementation of agro-forestry initiative; and (3) recording of “lessons learned” to inform the development of national policies	October 2005 – September 2006
Develop technical guidelines of for the rehabilitation of degraded forest lands	WST, STTA	(1) Workshops; (2) Handbook of rehabilitation technical guidelines	August – September 2006
Encourage local government units to develop policies related to restoration/ rehabilitation programs, including the establishment of incentives from downstream users	WST, STTA	Technical assistance to local governments in the development of policies that support forest restoration, degraded land rehabilitation, and responsible community/individual tenure	April – June 2006
Facilitate collaboration at the regional level regarding rehabilitation program	WST, STTA	Regional consultation workshops	May –September 2006
Technical support and training on improved practices in small-scale mining	WST, DOI-OSM	Trainings on environmentally safe small-scale mining practices	October 2005 – September 2006
Facilitate evaluation of program implementation institutions using methods such as IDF	WST, STTA	Institutional capacity for facilitation of forest restoration and land rehabilitation improved	May– September 2006

SUBTASK WS2-4 LEVERAGE BIODIVERSITY CONSERVATION AND ECOSYSTEM FUNDING

DESCRIPTION

ESP will facilitate a range of options to generate financial support for WSM plan implementation. This includes seeking local government support through the annual budget process, national government support through programs and projects including but not limited to GNRHL, and leveraging additional donor support. ESP also encourages a broad range of private sector partnerships to stimulate investments in improved stewardship of watersheds in order to contribute to improved supply of water resources to down-stream communities. The private sector can provide technical and financial support to community livelihoods activities connected to forest conservation and restoration as well as critical land rehabilitation. The private sector can also provide market access to farmers, community groups and broader networks for NTFPs, agroforestry and agriculture products. Managed effectively, private sector involvement can lead to increased investments or expanded market access necessary for the implementation of watershed management plans. Additionally, private sector linkages can contribute to tangible financial rewards for upper-watershed communities engaging in improved land stewardship that result in improved watershed management.

The **principal outputs** for Subtask WS2-4 for the workplan period are (1) convening of a private sector workshop in each area, (2) the preparation and submission of proposals by WMF for DR funding, and (3) the awarding of small grants in support of biodiversity conservations.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This subtask is linked to WS tasks 1 and 3, and supports the leveraging of financial and technical resources for WSM plan implementation. WST, FINT and Private Sector Coordinator work together to facilitate this. This subtask provides an opportunity for collaboration with USAID's Local Governance Support Project. It supports WSO 2 and 3.

Activity Descriptions	Resources	Output	Time frame
Identify potential partners of highly motivated and eco-friendly business and industry	WST, FINT	A public – private partnership introduced and established in each identified area	March – May 2005
Convene a private sector gathering focusing on the role of private sector on WSM and biodiversity conservation	WST and STTA	Private Sector Workshop to promote understanding and cooperation among businesses and the industry of programmatic objectives in improved WSM	June 5, 2005 (Environment Day) November 5, 2005 (National Biodiversity Day) March 20, 2006 (World Water Day) June 5, 2005

Activity Descriptions	Resources	Output	Time frame
Publish a bimonthly periodical to encourage investment related to watershed management, biodiversity conservation and sanitation improvement	WST and STTA	Bimonthly publication of periodical.	Ends of March – May – July – September – November 2005 January – March – May – July – and September 2006
Assist local governments in the planning and development of APBD that includes financing for WSM	WST and STTA	APBD developed which include funding for watershed management	May – September 2005
Coordination WSM financing with MoFR and assist potential partners in preparation of proposals to receive WSM funding from Dana Reboisasi (DR) to support WSM	WST and STTA	(1) Meeting with MoFr to discuss the commitment of a small percentage of the DR funds annually for the watershed management and biodiversity conservation activities in project areas; (2) Preparation and submission of proposals to MoFr for DR funding	May – September 2005
Integrate ESP small grants program with Sea Grants program	WST and STTA	Small grants implemented in collaboration with Sea Grants program	May – September 2005
Donor Coordination meetings to collaborate in activities within each project area.	WST and STTA	Leveraged support for WSM plan implementation	March 2005 – September 2006

SUBTASK WS2-5 BUILD CAPACITY OF COMMUNITY GROUPS TO PROMOTE IMPROVED NATURAL RESOURCE MANAGEMENT

DESCRIPTION

ESP will support many small-scale field initiatives in each targeted watershed, but long-term and sustainable impact rests on community and farmer groups deepening their field work within their communities and then expanding this to neighboring communities. ESP will foster the establishment of community and farmer networks by focusing on a range of activities including but not limited to community mapping, resource stewardship, building inter-community networks, expanding multi-stakeholder forums of watershed management, facilitating campaigns on healthy natural resources management practices, supporting

advocacy on local policy related to natural resources management, supporting participatory monitoring and evaluation of their natural resources management program, and building mutual public-private partnership with other multi-stakeholder groups. This will ensure sustainability of WSM plans, and expand the impact on a significant scale.

The **principal outputs** of Subtask WS2-5 for the workplan period are the implementation of community-based activities (such as Farmer Field Schools, Community Action Research, and People’s Media Campaigns) within each watershed that support improved natural resource management.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This sub-task is linked to all other WS tasks, and will be facilitated by WST. Additional support will be provided by GIST and FINTE. This sub-task provides an important entry point for bringing in messages from other USAID/BHS programs.

Activity Descriptions	Resources	Output	Time frame
Community-Level Social Mapping using Sustainable Livelihoods framework	WST, STTA, GIST	Livelihoods Assessments generated by communities are discussed/shared with general community	May-July 2005
Participatory Activity Planning: Seasonal, Annual	WST, STTA. Local resource persons	Community-based planning meetings with specific groups identified through assessment; creation of immediate seasonal plans and annual plans	June-August 2005
Foundation Farmer Field Schools	WST, community facilitators	Implementation of Farmer Field Schools to facilitate in situ understanding of applied ecology and basic organizational development	August-December 2005
Follow-up (Post-FFS) Activities:	WST, other ESP teams, STTA, Community facilitators, local resource persons, partner agencies, private sector	Follow-up activities which may include: (1) Marketing studies/TA and “Local Food System” participatory research; (2) ‘Land care’ and soil management group/network development; (3) Farmer Action Research; (4) New agriculture and Agro-forestry system such as: non-polluting water saving rice system; (5) Cross visits, inter-group/ area forums; (6) Community workshops	January-September 2006

Activity Descriptions	Resources	Output	Time frame
“Hot Spot” action research/	WST, STTA	(1) Watershed / Natural Resource Conflict Management training or workshops; (2) Community Participatory Intervention / Mediation Research; (3) Interventions/training on small-scale mining	January – September 2006
Public-Private Partnership	Public-Private Partnership Team, WST	Involvement of Private sector in supporting ecological actions by communities (financial support, technical assistance, and direct involvement).	January – September 2006
‘People’s Media’ and campaigns	WST, STTA	F-to-F media, ‘people’s theater’, Field Days, forums, dialogues, Community Seminars, print media, etc.	Oct. 2005- Sept.2006

SUBTASK WS2-6 PROMOTE PARTICIPATORY MONITORING AND EVALUATION OF WATERSHED MANAGEMENT PLAN IMPLEMENTATION

DESCRIPTION

The participatory monitoring and evaluation of implementation of WSM plans supports an iterative planning and management process, and ensures WSM plan tasks and activities contribute to overall goals of improved land stewardship. Participatory monitoring and evaluation will be introduced early in the WSM planning process in order to nurture integration between planning and management. Partners will be trained in participatory monitoring, and thus have the skills to incorporate monitoring and evaluation into their work on a regular basis. While designed to support individual watershed management planning and implementation, participatory monitoring and evaluation will also incorporate ESP PMP indicators and targets, and thus contribute to a more robust and inclusive program performance monitoring system. The result of participatory monitoring and evaluation will be used to promote the lessons learned of the program activities through campaign activities and also as baseline data for develop the continuation of the program in the following phase. By relating this aspect, it is expected to strengthen and speed up the achievement of the program target and place the sustainable ways to continue the program activities.

The **principal outputs** of Subtask WS2-6 for the workplan period are progress reports for each targeted area. Each progress report will be based on the sustainable livelihoods framework and will be developed in close consultation with stakeholders.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

Participatory monitoring and evaluation will be facilitated by the Monitoring and Evaluation Specialist with support from WST. This is linked to PM Task x, Project Monitoring and Evaluation.

Activity Descriptions	Resources	Output	Time frame
Assessment and identification of raw water supply in watershed area	WST and EST	Assessment conducted (through field visits and workshops) and raw water supply identified	May – September 2005
Conduct participatory monitoring and evaluation of WSM plans through workshops and training	WST and other ESP Team	(1) Progress, Problem and problem solving strategy on implementation of WSM plans identified by WSM multi-stakeholder; (2) Quality matrix of the program activities on WSM implementation plans ; (3) Livelihoods framework developed for each site	May 2005 – September 2006
Conduct interim participatory evaluation on the progress and impact of the WSM implementation plans by using sustainable livelihood framework	WST and other ESP team, and STTA	Workshops/trainings/field visits resulting in: (1) Initial progress reports prepared for each site; (2) Follow up strategy and action plans prepared for each site; (3) Livelihoods framework assessed in each site; and (4) Results of participatory evaluation used and disseminated	May 2005 – September 2006

TASK WS3:

SCALE UP AND ACHIEVE NATIONAL IMPACT

DESCRIPTION

ESP-supported approach to integrated watershed management that stabilizes raw water resources is deepened among stakeholders in ESP sites, expanded to additional watersheds and/or sub-catchment areas in ESP High Priority Provinces, and stimulates policy support at the local and national level to foster tenure and/or access rights of communities to manage forests and watersheds in order to reduce conflict and illegal logging.

TARGETS

Local and national policy to support implementation of WSM plans. Adaptation of ESP integrated watershed management best practices in at least 10 other sites across Indonesia. Progress towards these targets is expected during the time frame of this initial workplan, though achievement of targets is expected later in the program.

by Sept 2005, policy discourse established at national and local levels

by Sept 2006, pilot initiatives to support policy reform in responsible land tenure have commenced

RESOURCES

Reed Merrill, Watershed Mgmt. Advisor/Deputy Chief of Party
National and Regional WSM Teams

TIME FRAME

March 2006 – September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS**SUBTASK WS3-I DEEPEN IMPACT OF WATERSHED PLANS IN EXISTING ESP SITES****DESCRIPTION**

ESP supports the deepening of positive impact of watershed management plans in targeted sites by supporting a range of activities that lead to more farmers and community members in specific villages becoming engaged in WSM activities, as well as more farmers and community members in adjacent and nearby villages becoming engaged in WSM activities. At the field level, farmer networks will be strengthened and broadened. Additionally, 'peoples' media' will be developed to raise awareness of and commitment to land stewardship and sustainable WSM. At the local and national policy level, ESP will support policy reform that encourages responsible community and individual land tenure, and leads to reduced conflict over land access. Successful integration of bottom-up community and farmer organizing with top-down policy reform can stimulate significant deepening of the positive impacts of sustainable watershed management.

The **principal outputs** of Subtask WS3-I for the workplan period are (1) workshops to improve the capacity of Farmer's networks, and (2) the development of a people's media campaign.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This work will be facilitated in the field and at the policy level by WST. This is related to and supports all WS tasks and contributes to all WS outcomes.

Activity Descriptions	Resources	Output	Time frame
Strengthen Farmer's Network and Capacities	WST	Workshops to improve the capacity of Farmer's Network	October 2005 – September 2006
Strengthen Government's Commitment	WST and STTA	Community-based Forestry policies proceeding and land tenure conflict reduced	October 2005 – September 2006
Develop People's Media	WST, STTA Other ESP Team	Trainings/campaigns to promote the involvement of the private sector in supporting ecological actions by the farmer community in different areas	October 2005 – September 2006

SUBTASK WS3-2 EXPAND IMPACT OF ESP WATERSHED MANAGEMENT BEST PRACTICES IN HIGH PRIORITY PROVINCE (HPP)

DESCRIPTION

ESP will help expand the use of WSM best practices developed in targeted areas in a number of ways. First, once significant progress has been made in initial ESP sites, ESP will expand technical assistance into new sites. The number of new sites will grow significantly especially in the third and fourth year of the program. Additionally, ESP will foster a more natural expansion of impact by supporting on-going implementation and expansion of conservation awareness and regular public awareness campaigns. Further, ESP will document and disseminate ESP watershed management best practices through periodic reports, an integrated mapping system and web site, and thematic watershed management and biodiversity atlases.

The **principal outputs** of Subtask WS3-2 are (1) continued support of conservations awareness campaigns, and (2) collection and dissemination of ESP best-practices guidelines.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This will be facilitated by the WST in close collaboration with Public Outreach and Communication Specialists. This contributes to achievement of all WS outputs and deliverables.

Activity Descriptions	Resources	Output	Time frame
Support on-going conservation awareness and regular public awareness campaigns with WSM messages	WST, other ESP Team and STTA	Media training, co-financing of media publications (electronic and printed), and technical assistance to disseminate best practices of the program and expand the media coverage of important WSM issues in each HPP	March – September 2006
Produce and disseminate program documentation	WST and other ESP team, and STTA	(1) Periodic reports from each HPP produced and shared; (2) Website contains information related to progress and best practices of the program launched; (3) Thematic watershed management and biodiversity atlases produced	March – September 2006

SUBTASK WS3-3 EXPAND IMPACT OF ESP WATERSHED MANAGEMENT BEST PRACTICES AT NATIONAL LEVEL

DESCRIPTION

While ESP is able to make significant contributions toward improved watershed management in many watersheds and sub-catchments in ESP HPPs and SIAs, there is ample opportunity and need to expand ESP WSM best practices at the national level. This includes supporting the adaptation and/or replication of ESP best practices at the field level, as well as supporting policy reform at the national in order to provide the enabling conditions for more informed, participatory and decentralized WSM. While watersheds are a logical way to manage landscapes and ecological processes, trans-boundary conflicts, lack of sound information and data, and a traditionally sectoral approach to resource management inhibits more effective WSM. ESP will support the expanded impact of WSM best practices in two distinct ways. First, ESP will facilitate an Indonesian Watershed Management Symposium on an annual basis. This symposium will provide an opportunity for WSM scholars, practitioners and policy makers to come together and share experience on applied research and WSM, looking at policy and management issues from institutional, ecological, social and economic contexts. Annual symposiums will enrich knowledge and experience of WSM practitioners, and foster a network for long-term sharing and capacity building. Second, ESP will actively collaborate with government agencies and the donor community, sharing ESP lessons learned, and striving to incorporate ESP best practices in on-going and future government and donor projects.

The **principal output** of Subtask WS3-3 is the production of the first annual Indonesia Watershed Symposium.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This subtask will be facilitated by the WST and contributes to WSO 1. This sub-task will provide materials to be distributed to staff and partners of all other ESP teams.

Activity Descriptions	Resources	Output	Time frame
Annual Indonesian Watershed Management Symposium	WST and possible STTA	Annual WSM symposium and proceedings	SEPTEMBER 2005 AND 2006
Disseminate best practices to other donor and Government agencies	WST	Regular meetings with GOI and donors to encourage the incorporation of ESP WSM best practices in other donor and GOI programs	March 2005 – September 2006

SUBTASK WS3-4 POLICY SUPPORT FOR SUSTAINABILITY OF ESP WATERSHED MANAGEMENT BEST PRACTICES

DESCRIPTION

The subtask activities aim to stimulate policy support at both local and national level to foster tenure and/or access rights of communities to manage forest and watersheds in order to reduce conflict and illegal logging. Facilitating support to enhance good coordination between local and national government will be developed in order to support responsible community-based forest management and for adapting of ESP integrated watershed management best practices in at some sites across Indonesia. Field activities, pilot initiatives and ESP WSM best practices will be drawn from to support national and local level policy reform. ESP will not achieve policy reform during this initial workplan time frame, but will strive to build enabling conditions necessary for achieving this. At the national level, ESP will engage in policy dialogue for responsible tenure, social and community forestry, and decentralized collaborative conservation management. ESP will also foster field initiative-policy links by supporting pilot initiatives in community forestry and decentralized collaborative conservation management that contribute to policy reform.

The **principal output** of Subtask WS3-4 are (1) the commencement of pilot activities to demonstrate successful NRM practices, and (2) the drafting of policy papers addressing potential policy reforms to further sustainable watershed management.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

The subtask activities will cover a wide range of coordination between national and local government and multi discipline support from the various specialists of ESP project components. This will be facilitated by WST and supports WSO 1.

Activity Descriptions	Resources	Output	Time frame
Discuss policy and technical issues to share the ESP WSM outcomes	WST	Workshops/meetings/cross visits to share field updates and follow up actions	June 2005 – September 2006
Technical support on the development of effective implementation of social forestry and community-based forest management regulations	WST and STTA	Workshops/meetings to identify access right of communities to manage forest and watershed	September 2005 – September 2006
Provide technical assistance to the MoFr on the development of effective implementation of decentralized and collaborative watershed management regulations	Input: workshops and meetings Resources: WST and STTA	(1) Policy papers on decentralized and collaborative watershed management; (2) promotion of recommended national and regional policies through workshops and meetings	March – September 2006

FIRST ANNUAL WORK PLAN AND LIFE OF PROJECT PLAN

Activity Descriptions	Resources	Output	Time frame
Provide technical assistance to the MoFr on social forestry and collaborative conservation management policy	WST and STTA	(1) Policy papers on social forestry and community-based forest management and conservation; (2) promotion of recommended national and regional policies through workshops and meetings	March – September 2006
Facilitate pilot or demonstration activities for community based forest management and conservation management	WST and STTA	Pilot activities implemented in support policy reform	August 2005 – September 2006

CHAPTER 4

SERVICE DELIVERY

COMPONENT 2

4.0. SERVICE DELIVERY

4.1. INTRODUCTION

The Service Delivery Component has a central role in the whole ESP program linking the (upstream) Watershed Management and biodiversity conservation component, the financial component and a health & hygiene component to increase delivery of basic human services (water & sanitation) in the most appropriate, efficient and effective manner. It will combine institutional strengthening of key stakeholders (providers, supporting agencies, decision makers and users), demonstrating activities, based on a menu of options (technical, financial) and public awareness and campaigns. This component will also identify and promote new possibilities for attracting external finance, either from public or private sources.

This means that the Service Delivery Component will plan and implement activities in close collaboration with the other ESP main components and cross cutting themes. Collaboration start with identification of the “perfect ESP site”, combining critical watershed, good potential for improvement of basic services in Water and sanitation and good opportunities for alternative financing. Identification, development and (promotion of) conservation of critical raw water resources will be implemented jointly with the ESP/ Watershed Management component. Increased access to reliable services requires increased finance, which will binds the Service Delivery and Finance component activities, specially with regard supporting activities for most promising PDAM (tier I). This section will provide examples of close collaboration, not only within the ESP program, but also with other USAID programs and other donor agencies.

4.2. ASSUMPTIONS

The Service Delivery component faces many challenges, especially because it will depend very much on the interest and commitment of local decision makers to prioritize the delivery of water and sanitation services. It will require a major shift in thinking of all local stakeholders (government, parliaments, organizations and communities) to establish and maintain creditworthy PDAMs, which will operate with full cost recovery and which provide sufficient affordable services to the urban poor. Furthermore local decision makers have to encourage and support alternative service provision, like through communities or local providers, private sector and provide the enabling, legal environment for this to take place.

An additional assumption in the ESP program is that it can mobilize sufficient financial resources to match the physical (5-year) outcomes of constructing at least 30 sanitation/solid waste facilities and increase access to clean water for over 2 million people. This will require substantial financing, combining public sources and private sources, whereby the ESP budget can be used to ‘leverage’ larger finance.

Finally, in some regions the demand by PDAMs for additional clean raw water sources will be challenged by other interests, both within one local government boundary or cross-boundary, requiring agreements between different local governments.

4.3. APPROACH

The Service Delivery component will undertake a initial site selection process by combining quantitative data collection, using the PDAM Benchmarking data collecting system, with qualitative information on PDAM priorities with regard our activities and their commitment /political will to become creditworthy companies, providing excellence service to the communities, including the urban poor.

In this first workplan the Service Delivery component will concentrate on a limited number of locations (around 15- 20); this initial group is already part of the target watersheds identified by the Regional Water shed Management teams to be included in this first workplan. Locations also include PDAMs with the potential to be included as “Tier 1” in the Finance component. PDAMs will sign a MoU (+ action plan, including their commitments) to implement a number of PDAM related activities (see SD-1, SD-2 and SD-3). Only committed PDAM and Local governments will be allowed to join the major CB activities, like classroom training and exposure visits. As a measure of commitment these activities will always be implemented in cost-sharing arrangements with PDAMs and/or Local Governments. Most of these PDAMs will continue for subsequent workplans as well, before reaching Full Cost Recovery. However for the general introduction activities, like seminars, classroom training, etc other PDAMs, within the same (sub) catchment area will be invited to join. This is both a very efficient way to expand knowledge and information, and also will measure interest and future commitment of these local governments and PDAMs.

This first Service Delivery workplan related to PDAMs will demonstrate, to all local stakeholders that it is possible to improve management and financial performance, without major investments; cash flow will increase through a series of measures aimed at increasing revenue and reducing costs. This should provide sufficient incentive for local decision makers to strongly support subsequent workplans which will then focus also on the sustainability of this increased performance/access, through adoption of Quality Management systems, Management Information systems and Human Resource Management programs.

During this first year the Service Delivery team will identity, develop and implement crucial capacity building program for key service providers, decision makers and selected communities. A combination of studies, training programs, exposure visits, and pilot programs described in action plans with PDAMs and/or Local Governments will provide the basis of the workplan. The results of these activities will increase understanding of real issues affecting access to service delivery and show how and where to start with the improvements. In subsequent workplans this will lead to increased possibilities for (alternative) financing, which will result in increased access to improved services for water supply, sanitation and solid waste. Included also in this approach is a strong gender component to increase a decision-making role for women in the delivery of reliable water and sanitation services. This will be further supported by the ESP Public Outreach and Communication programs.

With regard increase access to improved water and sanitation facilities, especially for the urban poor, the workplan will develop a menu of options for increased access, establish pilot/ demonstrating sites, and provide all the necessary community development and awareness raising tools. This will be the basis for more rapid expansion in subsequent workplans.

The ESP /Service Delivery Team operate as the core team and will coordinate and implement the activities, explained later. In addition the Service Delivery team can draw upon the professional resources of our professional partner organizations.

4.4. RELATION TO OTHER ESP / USAID COMPONENTS

The SD Component will work closely with the Watershed component on issues related to the protection of existing PDAM water sources (cross-boundary) and identification of new water sources, to increase PDAM raw water capacity and to support specific activities to support water and sanitation improvements for local communities in watershed areas. The SD Component will link very closely with the ESP Finance component, on all activities aimed at improving PDAM Financial position and management, in order to reach Full cost recovery and ultimately creditworthiness. Also strong support by the finance team is required to find additional financial resources, outside the project budget, which are required for the increased access to water, sanitation and solid waste facilities as envisaged in the Scope of Works. The GIS team will support us in the development of urban GIS programs, required to optimize distribution network information, both technical and customer related. The Public Outreach & Communication will link up especially with our sanitation, solid waste and hygiene promotion programs, exchanging experiences and developing joint awareness campaigns.

The SD team will also exchange, share and support activities by other USAID programs. Within the wider USAID program the SD component will liaison closely with the new Local Government Support Program (LGSP), to convince Local Governments and Local Parliaments of the high priority for improved service delivery water and sanitation services and ways in which this can be reached. Also for cross-boundary issues related to optimizing the use and protection of water sources LGSP teams will be involved. For the health & hygiene activities within the SD component the team will work close together with the other USAID/BHS partners (Point of Use Safe Water systems and Health Services Project); specifically in developing templates for system analysis, conducting baseline and campaigning for alternative point of use and better hygiene for the community.

The SD Team will finally develop strong relationship with other donor supported programs operation in the same fields. Examples are the new Dutch trust fund supporting, through the Worldbank and Bappenas, capacity building activities for water supply and sanitation, various Asian Development Bank programs, Japanese aid programs (like JBIC's Medan Flood control) and German Development Aid (GTZ) for establishment of Water Advisory Service Centre.

4.5. DELIVERABLES

The Scope of Works included the following specific outcomes for Component 2: Service Delivery:

1. Technical operations and financial management of at least 30 PDAMs is improved
2. 20% increase in revenues from existing water production.
3. Population with access to clean water is increased by 20%.
4. At least 5 sewage treatment proposals are developed in conjunction with local or provincial governments and submitted to international development banks, for funding consideration + At least 20 small scale sanitation plans are developed and implemented
5. At least 10 solid waste management plans are developed and implemented.
6. The precursors needed to impact childhood diarrheal disease (clean water and sanitation) are contributed to the BHS effort to reduce in the incidence of childhood diarrheal disease and mortality.

During this first workplan the foundation for reaching all above outcomes will be laid. Operational and Financial Management of PDAM will be improved, as well as their financial position, through various measures increasing revenues and reducing costs, and in close cooperation with the ESP finance team. Opportunities to increase use of raw water will be initiated as well in this workplan as well as increase use of access to improved non-piped water sources. To reach the three specific sanitation and solid waste outcomes, a program of awareness and capacity building will be initiated for both local decision makers and selected pilot communities. With regard the specific Health & Hygiene outcome, a baseline survey as well as the development and implementation of targeted hygiene messages and campaigns will be conducted. The following section provide more details on all planned activities and will demonstrate that through this first workplan, we will built a strong platform, both internal (ESP teams and our partners) and external (Local government, communities and resource institutions) for later expansion.

4.6. SERVICE DELIVERY TASKS / SUBTASKS

The Service Delivery component will include the following tasks / subtasks:

SD1 Improve PDAM Technical, Operational and Financial Management

- SD1-1 PDAM baseline & priority assessment
- SD1-2 Develop & implement PDAM corporate planning
- SD1-3 Improve PDAM customer orientation
- SD1-4 Implement training & CB program for PDAM, PEMDA, DPRD
- SD1-5 Raise key PDAM inter-regional policy issues
- SD1-6 Implement PDAM benchmarking
- SD1-7 Implement PDAM water quality monitoring programs
- SD1-8 Develop and use PDAM GIS & MIS

SD2 Increase PDAM Financial position

- SD2-1 Reduction of Non-Revenue water
- SD2-2 Implement tariff review
- SD2-3 Improve efficiency PDAM branch - systems (IKK)
- SD2-4 Optimize meter reading and billing systems

- SD2-5 Introduce energy reduction and pressure control Programs
- SD2-6 Improve production and distribution costs management
- SD3 Increase Access to clean water**
 - SD3-1 Encourage & increase piped (PDAM) water access for urban poor
 - SD3-2 Increase production and distribution capacity
 - SD3-3 Increase point of use drinking water systems
 - SD3-4 Improve quality of individual household water source
- SD4 Increase Access to improved sanitation systems**
 - SD4-1 Preparation Sanitation concept to Local Government
 - SD4-2 Optimize existing and develop new sewerage systems
 - SD4-3 Prepare and construct 8 DEWATS CBS systems
 - SD4-4 Study sludge collection and treatment systems
 - SD4-5 Improve individual septic tank systems
 - SD4-6 Support public awareness campaign on sanitation
- SD5 Increase Use of community based solid waste systems**
 - SD5-1 Identification existing community based solid waste systems
 - SD5-2 Introduce/promote options of community based solid waste system
 - SD5-3 Implement 4 community based sanitation management systems
- SD6 Reduction of child diarrhea disease**
 - SD6-1 Develop and implement H&H baseline and monitoring system
 - SD6-2 Develop/implement H&H communication programs and awareness campaign
 - SD6-3 Link-Up with other activities that influence factors to reduce childhood diarrheal disease
 - SD6-4 Promote use of alternative water treatment systems
 - SD6-5 Mobilize consumers/public to pressure/demand on PEMDA, DPRD

TASK SDI:

IMPROVE PDAM TECHNICAL, OPERATIONAL AND FINANCIAL MANAGEMENT

DESCRIPTION

Improve PDAM Management through Corporate Planning, based on customer information, training, benchmarking, water quality monitoring program and GIS/MIS systems.

Key cross-boundary issues between neighboring LG will be addressed as well.

TARGETS:

8 PDAMs for Corporate Planning, Customer Focus, cross-boundary issues
10 - 15 PDAMs for Training and Benchmarking

RESOURCES:

Foort Bustraan, ESP/Municipal Water Services Advisor + ESP/Service Delivery Team
USAID/LGSP
Worldbank Institute (with Dutch Trustfunding)
PERPAMSI Benchmarking and Training Foundation
FORKAMI

TIME FRAME

April 2005 – September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS**SUBTASK SDI-1 PDAM BASELINE AND PRIORITIES ASSESSMENT****DESCRIPTION****RELATION WITH OTHERS**

- PERPAMSI PDAM Benchmarking program

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Collect 2003/2003 and 2004 Benchmarking information with PERPAMSI	<ul style="list-style-type: none"> - SD Team - Fin team - STTA (PERPAMSI) 	<ul style="list-style-type: none"> - BM data available - contract with PERPAMSI 	June'05

SUBTASK SDI-2 DEVELOP AND IMPLEMENT PDAM CORPORATE PLANNING**DESCRIPTION**

PDAM Corporate Planning (CP) is essential as it integrates all important aspects of PDAM operation and management, so that PDAM can achieve its targets. CP defines realistic performance targets, which will improve PDAM's operational and financial condition as well as its reputation.

RELATION WITH OTHERS

- ESP/WSM team for availability raw water ; ESP/Finance for Financial issues
- USAID / LGSP: support to legalize CP to PEMDA / DPRD & seek PEMDA commitment
- WBI (Dutch Trust fund) for promotion PDAM business planning

TARGET LOCATIONS (FIRST WORKPLAN):

Around 8 locations: either update existing CP or preparing new CP

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
If existing: Review of existing CP for usage, update, targets ; recommend improvements; conduct stakeholder seminars	<ul style="list-style-type: none"> - SD team - STTA - seminars 	<ul style="list-style-type: none"> - reports on status existing CP ; problem analysis, recommendations - stakeholders agreement 	Dec'05

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
If new: seminars/training, establish PDAM CP teams ; Conduct follow-up activities	- SD team - Fin Team - STTA	- PDAM establish internal active CP teams	Dec '05
conduct consultation workshops with general public and key stakeholders	- SD team - Fin Team - STTA	- draft CP prepared - final CP adopted	June '06 Sept '06
monitoring / follow-up and also identify possibilities for PSP or other financing requirements	- SD team - Fin team	- CP used	Sept'06 – workplan 2

SUBTASK SD1-3 IMPROVE PDAM CUSTOMER ORIENTATION

DESCRIPTION

As initial step to meet customer preference, PDAM need to carry out Customer Satisfaction Survey (CSS), as well as establish Customer Forum. This will be perceived that PDAM cares about the needs of its customer. CSS is expected to obtain customer's problems, preferences and eventually their satisfaction. Customer Orientation also includes to for PDAM to develop proper communication channels with its customers for both receiving complaints and providing information on operational and financial issues.

RELATION WITH OTHERS

- USAID / LGSP: support to push PEMDA/DPRD to increase PDAM's customer orientation
- WBI (Dutch Trust fund) for supporting PERPAMSI communication program

TARGET LOCATIONS (FIRST WORKPLAN):

Around 8 locations: either update existing CSS or preparing new CSS

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Introduction seminars to PDAM on general issues on customer orientation ; identify priorities	- SD team (logistics) - STTA	- Customer Orientation priorities agreed by PDAMs	Sept'05
prepare and conduct PDAM CSS (questions, target regions (incl. urban – poor); setup PDAM CSS team; training enumerators ; analyzation; results in CP	- SD team (logistics) - STTA - subcontract for NGO / university: enumerators	- CSS prepared - PDAM CSS team setup - enumerators selected and trained - CSS completed	March '06

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
PDAM communication systems reviewed and improved, for complaints and informing public, including Customer Forum, exchange visits	- SD team - STTA - travel (local)	- communication & complaint systems developed and operating - customer forums established	June '06
Review customer orientation, upgrade and prepare dissemination	- SD team	- systems reviewed and where necessary upgraded	Sept'06

SUBTASK SDI-4 IMPLEMENT TRAINING AND CB PROGRAM FOR PDAM, PEMDA, DPRD

DESCRIPTION

This activity is focused to improve capacity of key stakeholders involved in provision of basic services (water, sanitation, solid waste). Completion of certain training would lead to certification of participants. The training covers comprehensive topics including technical, financial, leadership, public relation, motivation/behavioral change, etc. based on actual needs of each target audience.

RELATION WITH OTHERS

- LGSP (+APEKSI / ADEKSI): identification & supporting Capacity Building for PEMDA & DPRD
- PERPAMSI Training Foundation: identification & organizing training needed for PDAM
- WBI (Dutch Trust fund): supporting PERPAMSI Training Foundation program
- USAEP: (financially) support selected Capacity Building programs (directly or through PERPAMSI)
- CLGMarYIPD: participation in institutional development

TARGET LOCATIONS (FIRST WORKPLAN):

Initially open for all Locations in Workplan I

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
training needs assessment; identify key participants & priority topics; training providers & arrange training programs / materials / locations	- SD team - Fin Team - STTA (PERPAMSI Training Foundation) - STTA	- Training needs assessment completed - participants and topics identified - PDAM, PEMDA agree on cost sharing arrangements	Dec'05

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Conduct management trainings and exchange visits for PDAM, PEMDA, DPRD	- SD team - travel (local) - PERPAMSI training Foundation	- exchange programs prepared - training conducted	Aug'05 - Sep'06
Professional trainings conducted (technical, operations, customer related, etc)	- subcontracts (various training providers)	- training conducted	Aug'05 - Sep'06
Follow-up: link with field activities work, evaluation, review, preparation for improved Human Resource Management Program	- SD team	- training results implemented - HRM program prepared	Sept'06

SUBTASK SD I-5 RAISE KEY PDAM INTER-REGIONAL POLICY ISSUES

DESCRIPTION

PDAM needs to operate in an effective and efficient manner, which means having sufficient customer base, guaranteed raw water, etc. Particularly in line with the decentralization, several inter-regional/cross-boundary policy issues have emerged, which require urgent attention, like PDAM cooperation, joined raw water protection/sharing, etc. These issues lead to necessity to have an inter-regional and/or inter-sectoral cooperation. Also

RELATION WITH OTHERS

- ESP/WSM: integrated plan for raw water uses
- USAID/LGSP: support in cooperation between neighboring Local Governments
- Central Government/WASPOLA: coordination/support policy implementation

TARGET LOCATIONS (FIRST WORKPLAN):

One Area (two - three locations) in each target Province

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Identify critical inter-regional issues in ESP field and regions + seminars with respective PEMDA + national seminar	- CD team - ESP/WSM team - STTA (resource) - seminar	- reports on inter-regional issues - PEMDA's agree on issues & need for inter-regional cooperation	April 2005 – September 2005

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Support establishment and operation of PEMDA inter-regional working groups; link with National policies / support programs	- CD team	- PEMDA working groups established and operation (SK)	Sept'05
	- ESP/WSM team		Sept'06
	- STTA (specific topics)	- support by National Government (WASPOLA)	
Evaluate process and prepare to disseminate to other locations ; included National seminar on results cross- sectoral approach	- ESP team (various)	- evaluation completed	Sept'06
	- seminar	- dissemination ready	

SUBTASK SD I-6 IMPLEMENT PDAM BENCHMARKING

DESCRIPTION

This activity will be in conjunction with PERPAMSI PDAM Benchmarking program currently underway. PDAMs' participation in the Benchmarking program is expected to motivate PDAMs to work more effectively and improve its performance, measuring their progress towards realistic targets, comparing with and learning from PDAMs with similar characteristics.

RELATION WITH OTHERS

- PERPAMSI PDAM Benchmarking
- USAID / LGSP: support to push PEMDA/DPRD to make Benchmarking mandatory for measure progress
- WBI (Dutch Trust fund) for supporting PERPAMSI Benchmarking program

TARGET LOCATIONS (FIRST WORKPLAN):

All participating PDAMs in Workplan I

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Conduct four provincial BM seminars on existing use, issues, improvements + explore co-finance PDAM BM participation	- SD team	- review ongoing PDAM BM programs	Dec'05
	- Fin team		
	- STTA (PERPAMSI)	- PDAM participation + co-financing plans agreed	
	- local seminars		
Obtain support from PEMDA & DPRD to make BM mandatory and use BM information for regular performance review	- SD team	- (possibly) Agreement by PEMDA and DPRD	Mar'06
	- Fin team		
	- STTA		

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Data collection for 2005 for all target PDAMs with/by PERPAMSI PDAM BM team	- SD Team (support) - Subcontract (PERPAMSI)	- Data collected / analyzed by PERPAMSI : results returned to PDAM/PEMDA/ DPRD	Jan'06 – June'06
BM results discussed and linked with PDAM performance and targets outlined in Corporate Plan + planning exchange visits	- SD Team (support) - Fin Team (support) - STTA - seminars	- BM results linked with PDAM Corporate Plan - planning for exchange visits prepared to be implemented in workplan 2	Sept'06

SUBTASK SD I-7 IMPLEMENT PDAM WATER QUALITY MONITORING PROGRAMS

DESCRIPTION

Customers need to get water safe for satisfying all the daily needs. To ensure that, a systematic water quality monitoring program has to be developed, so that any risk associated with water could be identified and remedial action could be done properly. The basis for an improved PDAM WQ monitoring system is each PDAM Laboratory which requires standard, certified management and operating systems & procedures. A WQ monitoring program further requires the strengthening of the external monitoring function of Local Health Departments (Dinkes).

RELATION WITH OTHERS

- WSM: joint raw water quality monitoring
- USAID / LGSP: support to push PEMDA for external Water quality monitoring
- Central Health Ministry & Local Health Departments: external Water Quality monitoring

TARGET LOCATIONS (FIRST WORKPLAN):

4 locations (PDAM) in target provinces and special imperative areas

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
identify current laboratory and field practices on WQ measuring, for PDAM & Dinkes and make agreement with PDAMs and Dinkes for WQ improvement program	- SD team (logistics) - STTA (FORKAMI)	- WQ reports with recommendations and planning for improvement - Agreement with 4 PDAMs	Dec'05

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Implement WQ improvement program in 4 locations to establish certified PDAM laboratories + strong cooperation with Dinkes	- SD team (logistics) - subcontract (FORKAMI) - small grants for supporting equipment	- 4 laboratories certified - 4 WQ monitoring programs in place, incl. close cooperation with Dinkes.	Mar'06 – Sept'06
Evaluate results and prepare to disseminate to other locations ;	- SD team - STTA (FORKAMI)	- evaluation completed - dissemination ready	Sept'06

SUBTASK SDI-8 DEVELOP AND USE PDAM GIS & MIS

DESCRIPTION

An integrated and complete customer and technical data base is essential for increased efficiency of PDAM operation and management, especially for PDAM above 30,000 house connections. GIS systems will be developed from two building blocks: customer information (household information on water use, meters, billing, etc) and technical information (distribution data: piping, zoning, measuring points). The combination of these should provide PDAM management with all necessary information regarding network optimization, financial efficiency, water usage, and asset management. In this workplan the two building blocks will be developed in 4 locations. Subsequent workplan will provide the integration.

RELATION WITH OTHERS

- ESP/WSM: integration with watershed GIS
- Other PDAM already operating GIS/MIS systems (like Jambi, Kabupaten Bogor, Tirtanadi Medan)

TARGET LOCATIONS (FIRST WORKPLAN):

4 locations (PDAM) in target provinces and special imperative areas

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Identify possibilities, examples and comparison on existing PDAM GIS/MIS programs; including exposure visits to other PDAMs	- SD team - ESP/GIS team - travel (local)	- GIS/MIS report - fieldtrip reports	Sept'05 - Dec'05
Develop and implement GIS /MIS program for 4 selected PDAMs, including local GIS/MIS program+ partner, training and hardware requirements	- SD team - ESP/GIS team - subcontract	- Agreement with PDAM on program, co-financing - GIS/MIS partner identified & implemented	Dec'05 – Sept'06

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Review initial results and prepare dissemination for other locations	- SD team - STTA (contractor)	- evaluation completed - dissemination ready	Sept'06

TASK SD2:

INCREASE PDAM FINANCIAL POSITION

DESCRIPTION

Increase financial position of PDAMs through reduction of cost and increase of revenue, both technical and institutional.

TARGETS

6 PDAMs for reduction of Non Revenue Water, other cost reductions
10 PDAMs for tariff review, improved meter reading & billing systems

RESOURCES

Foort Bustraan, ESP/Municipal Water Services Advisor + ESP/Service Delivery Team
ESP/Financial Team
PERPAMSI Training Foundation

TIME FRAME

April 2005 – September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS

SUBTASK SD2-1 REDUCTION OF NON-REVENUE WATER

DESCRIPTION

Non Revenue Water (NRW) is the water which is produced but not turned into revenue. The average % of NRW for Indonesian PDAM is around 45%, with spread from 20 – 60%. Causes for high NRW are both technical (physical losses, pressure fluctuation) and administrative (faulty water meters, illegal connections, authorized / unauthorized = illegal use and inefficient meter reading and billing systems). NRW reduction programs can usually reduce high NRW levels (> 50%) with 20%, without major investments in replacing the distribution network. There will be gains both in additional water capacity which can be sold and increased revenue.

The ESP Capacity Building will identify major causes of NRW and develop action plans with specific PDAMs. Being a critical activity to improve PDAM performance, ESP will also provide limited support for pilot areas, like development of customer zoning, sweeping teams and meter replacement. Agreements for co-financing with participating PDAMs will be made for these pilot programs.

RELATION WITH OTHERS

- NRW program by PT PIPA with EU grant (4 PDAM, incl. PDAM Manado)

TARGET LOCATIONS (FIRST WORKPLAN)

8 - 10 Location (1-2 each Province + 1 Special Imperative Area)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Collect NRW reduction info from other PDAMS and/or donor programs	- SD/JKT	- overview NRW program PDAMs & other agencies	Sept'05
Detailed NRW data + conduct introduction workshop on NRW	- SD team (JK, PP) - seminar cost	- report NRW condition all PDAM + commitment	Sept'-05
NRW program preparation: manuals / SOP, pilot zones, sweeping teams + meter replacement program	- SD/JK (SOP) - SD/PP (field)	- pilot zones identified and isolated - sweeping teams ready - SOP prepared / agreed	Dec'05
Implement NRW reduction program in pilot zone, incl. formal training (combined) & on-the-job, exposure visits	- SD team - partner/supplier for meter replacement - limited hardware - local travel	- training and field trip reports + assignments - NRW reduction progress and final reports	Sept'06
Evaluation of pilot areas, correct and disseminate to new locations	- SD team	- evaluation reports - information sharing	Sept'06

SUBTASK SD2-2 IMPLEMENT TARIFF REVIEW**DESCRIPTION:**

PDAM tariff systems are setup with different classes, blocks and cross-subsidies between classes. The average tariff is generally not sufficient to recover all PDAM costs, especially if depreciation and debt repayment is included. Tariff reviews are crucial to show that PDAM can operate professional; also these are the key to increasing their financial capability required to invest in increased capacity (either internal cash flow, equity by LG or outside – public and/or private); tariff review also includes re-classification to reduce subsidies and provide more incentive to connect poorer communities. A tariff review will examine all above and recommend improvements for classification, calculation of average tariffs and reduced cross-subsidies. This task will also examine problems with urban poor to pay the full installation fees and recommend alternative approaches to increase possibilities for urban poor to connect. Tariff seminars will be conducted with PEMDA and DPRD to convince them that PDAMs providing reliable service can charge cost-recovery tariffs, including for the urban poor.

RELATION WITH OTHERS:

- ESP Financial Component ; Water Fund Indonesia (connections by installment)
- USAID/LGSP : assist in tariff review discussions with PEMDA and DPRD.

TARGET LOCATIONS (FIRST WORKPLAN):

around 8 Location (2-3 each Province + 1-2 Special Imperative Area)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Data collection on existing and historical tariff +Review tariff structure review + connection fee (specially for urban-poor)	- SD team - Fin team - STTA	- reports, - recommendations on tariff review	Sept'05
organize tariff adjustment seminars with PEMDA/DPRD	- SD team - Fin team - STTA - seminars	- (possibly) agreements with PEMDA & DPRD on tariff review	Dec'05 – Mar'06
Support implementation new tariffs, structure and focus on urban poor	- SD team - Fin team	- (possibly) new tariff and structure implemented	June'06 – Sept'06

SUBTASK SD2-3 IMPROVE EFFICIENCY PDAM BRANCH - SYSTEMS (IKK)

DESCRIPTION

All PDAM operating in Regions (Kabupaten) operate a number of small branch systems (IKK). In general, these systems are too small to be operated in the traditional PDAM fashion and almost all of them give losses to the PDAM, resulting in a cross-subsidy from the larger systems. Many PDAMs can not maintain them in their current status, let alone expand access and services. This task will therefore work with 4 interested PDAMs to examine alternative operation & management systems with communities, as a means to reduce financial losses to PDAMs and at same time increase quality of service for communities. Issues like ownership and possible operation by third party will be included as well. It is expected that by the end of workplan I these examples will lead to increased interest by PDAMs and communities for joint operation of IKK systems, which then will results in increased access to clean water.

RELATION WITH OTHERS

- WSP : develop concept of community participation in PDAM owned branch systems

TARGET LOCATIONS (FIRST WORKPLAN)

4 Location (1-2 each Province)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Identification of issues, stakeholders and possible options to improve / increase service	- SD team - STTA - travel (local)	- report	Dec'05
develop option to increase efficiency by involvement community / third party and by differentiating tariffs between branch systems	- SD Team - Fin team - travel (local)	- Agreement made between PDAM and community or third party - separate tariff in place for each branch system	June'06
Evaluation program and prepare to disseminate to new locations	- SD team (JK, PP)	- evaluation reports - information sharing	Sept'06

SUBTASK SD2-4 OPTIMIZE METER READING AND BILLING SYSTEMS

DESCRIPTION

If the PDAM meter reading & billing system are not managed and implemented effectively and efficiently PDAM will easily loose 10 – 20% potential revenue. This task will collect best practices and introduce these to other PDAMs as examples for improved system management, including possible outsourcing

RELATION WITH OTHERS

- existing PDAMs with professional meter reading and billing systems

TARGET LOCATIONS (FIRST WORKPLAN)

around 10 Location (2-3 each Province + 1-2 Special Imperative Area)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
collect information and conduct comparative Study on best practices through outsourcing or by PDAM themselves + inform interested PDAMs through case studies, workshops, field visits	- SD/JK - STTA - workshops - travel (local)	- study with conclusions completed - agreement with PDAM on joining pilot program	Dec'05
Pilot program 4 locations (ideally two by PDAM + two with third party)	- SD team - STTA	- 4 systems implemented: resulting in increased revenue	June'06

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Evaluation of pilot areas and dissemination to new locations	- SD team	- evaluation reports - information sharing	Sept'06

SUBTASK SD2-5 INTRODUCE ENERGY REDUCTION AND PRESSURE CONTROL PROGRAMS

DESCRIPTION

PDAMs who use pumps to provide clean in the distribution network often spend up to 30% of their net income on energy cost; furthermore most pumping systems can be improved to reduce operation and maintenance cost. Pump speed regulation equipment, available in Indonesia, can be installed to reduce energy cost, reduce fluctuating pressure in the network and increase life time of the pumps. Better/improved water pressure in the network can increase water consumption by customer & reduce physical losses. Seminars with suppliers will be organized, who can then make energy balance with interested PDAMs. Furthermore grants or micro-credit will be identified to support PDAMs which want to install this equipment.

RELATION WITH OTHERS

- Water Equipment Suppliers

TARGET LOCATIONS (FIRST WORKPLAN)

around 6 Location (1 each Province and/or Special Imperative Area)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Identify suitable locations for energy & pressure control reduction programs + conduct seminar (with selected suppliers)	- SD team - suppliers - seminar / travel cost	- reports for each PDAM - selection suitable PDAM - seminar completed - agreement with max. 6 committed PDAMs	Dec'06
energy studies with/by suppliers, incl. identify micro-credit or grant programs for purchase of equipment	- SD team (logistics) - STTA - FIN team	- studies completed - supplementary funding organized - co-financing agreement with PDAM	Jun'06
Installation energy and pressure reduction equipment and operate	- SD team - Suppliers	- equipment installed - energy cost reduced	Sept'06
Evaluation of pilot areas, correct and disseminate to new locations	- SD team (JK, PP)	- evaluation reports - information sharing	Sept'06

SUBTASK SD2-6 IMPROVE PRODUCTION AND DISTRIBUTION COSTS MANAGEMENT

DESCRIPTION

Most PDAMs can reduce their operating and maintenance (O&M) cost by improving effectiveness and efficiency of their O&M activities, such as chemical dosing, outsourcing of repair/installation, reorientation of staff positions, etc. This task will check first the obvious and easiest improvements for the selected PDAMs;

RELATION WITH OTHERS

TARGET LOCATIONS (FIRST WORKPLAN)

Partly all Location, partly for selected Locations

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Prepare checklist for cost centres in production and distribution network + Arrange exposure visits to best practice locations within Indonesia	- SD/JK (checklist) - SD/PP (field) - travel (local)	- report on cost centres - trip reports/ assignments	Dec'05
Improve systems for chemical dosing	- SD team	- optimized chemical dosing	Sept'05
Evaluate staffing & recommend improvements	- SD team	- recommendations drafted and agreed by PDAM	Sept'05 - Dec'05
Identify potential for optimizing specific O&M activities, to reduce cost, incl. outsourcing;	- SD team - STTA	- reports on outsourcing potential	Mar'06 – June'06
Evaluation program and prepare to disseminate to new locations	- SD team (JK, PP)	- evaluation reports - information sharing	Sept'06

TASK SD3:

INCREASE ACCESS TO CLEAN WATER

DESCRIPTION

Increase access to water produced, through optimization of facilities, (results of Task SD2) and through access to finance (result of Task SD1) for increased network. Included in here increased access by urban poor through innovative measures and potential agreements. Finally measures to increase direct access to drinking water.

TARGETS

4 locations

RESOURCES

Foort Bustraan, ESP/Municipal Water Services Advisor + ESP/Service Delivery Team
 ESP/Financial Team
 Water Fund Indonesia + Water Maatschappij Drenthe
 USAID/SWS program under BHS
 USAID/LGSP program
 GOI (Bappenas, WASPOLA, Public works)

TIME FRAME

April 2005 – September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS

SUBTASK SD3-1 ENCOURAGE & INCREASE PIPED (PDAM) WATER ACCESS FOR URBAN POOR

DESCRIPTION

PDAMs traditionally do not focus on extending their service to urban poor people, for various reasons (no incentives, low tariffs difficult to recover, political reasons, no pro-poor concepts). This task will examine all issues, including to encourage LG to adopt a local policy ensuring access to PDAM services for urban poor. Then alternative tariff structures and operation systems to provide sufficient incentives to PDAMs to connect, either directly or through third party.

RELATION WITH OTHERS

- USAID/ LGSP: facilitation with local government
- WASPOLA: consultation and coordination in policy implementation
- WSP: Program with Small Scale Water Providers (SSWP)

TARGET LOCATIONS (FIRST WORKPLAN)

4 Locations, with interested /committed PEMDA and PDAM

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Identify and discuss with PEMDA, DPRD and PDAM main issues hampering increased (in)direct access to PDAM services for urban poor	- SD team - STTA - Link CSS (SD1-2)	- report on main issues - agreement with PEMDA, PDAM to develop & implement pro-poor program	Dec'05

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Develop options for sustainable community based water systems If possible link up with GOI program for urban-poor	- SD Team (logistics) - subcontract - small grants program	- agreement on 4 MCK pilot systems+ co-financing by PEMDA and/or credit by communities	Sept'06
Identify, improve and (where needed) formalize provision through third parties (vendors)	- SD team - STTA	- report on vendor supply - agreement between 4 PDAMs with vendors	Sept'06
Evaluate program and prepare dissemination	- SD team	- evaluation - dissemination plan	Sept'06

SUBTASK SD3-2 INCREASE PRODUCTION AND DISTRIBUTION CAPACITY

DESCRIPTION

Well managed PDAM should be able to increase access to clean piped water, initially from idle capacity or from reduction in NRW or through re-rating. Furthermore it should attract financing for increased production and/or distribution systems to increase coverage of piped water well above the current 40%. Possible sources for financing can be: soft loans, revolving fund, Private Sector Participation (PSP) with local/international investors, commercial loans (local banks with DCA guarantee). In this task possibilities and programs for/with individual PDAM's and PEMDA's will be identified and prepared, in cooperation with ESP Component 3 (Alternative Financing). These will be promoted to potential financing institutes.

RELATION WITH OTHERS

- ESP / Component 3: alternative Financing
- Water Fund Indonesia (WFI) : revolving fund for household connections
- Water Maatschappij Drenthe (WMD): investment in PDAMs Manado, Manokwari and Jayapura
- USAID/LGSP : promoting alternative financing with PEMDA and DPRD
- USAEP : supporting activities on re-rating of Water Treatment Plants
- GOI (Bappenas, Ministry of Finance)

TARGET LOCATIONS (FIRST WORKPLAN)

From all target location select specific locations for specific activities (PSP, house connections)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Identify PDAM's with idle capacity and waiting list + potential for WTP re-rating to optimize production capacity ; implement re-rating	- SD team - STTA	- re- rating reports, trainings conducted - WTP capacity increased	Mar'06
Promote and support program for increased household connections through revolving fund ; including identify additional financial resources	- SD team - Finance Team - subcontract (WFI)	- cooperation agreements between ESP – WFI with respective PDAM / PEMDA - additional financial resources identified and obtained	Sept'05 – June'06
Identify ESP support required for operation and investment program by WMD in East Indonesia	- SD/JKT + Eastern Indonesia - WMD	- cooperation agreement between ESP- WMD	Sept'05 – Dec'05
Identify need and possibilities for additional production and distribution capacity for PDAMs, incl. PSP potential	- SD team - STTA	- list of PDAMs with need for additional production capacity - pre-FS conducted	June'05 – Sep'06

SUBTASK SD3-3 INCREASE POINT OF USE DRINKING WATER SYSTEMS

DESCRIPTION

Indonesian people normally boil their water before drinking or buy bottled water. Since bottled water is expensive and boiling clean water long enough to make it fit for consumption is also difficult and costly, point of use drinking water systems can be introduced, especially to the lower class and urban poor people. More affordable drinking water systems to be compared and promoted under this task can be SWS (Safe Water System, using 1.5% Hypo-Chloride solutions), SODIS (solar disinfection using plastic bottles), household filtration systems, rainwater harvesting systems and Refill boutiques (using Filtration and Ultra Violet = Isi Ulang).

RELATION WITH OTHERS

- USAID/SWS program under Johns Hopkins University, part of USAID BHS program
- Local NGO's with experience in SODIS and household filtration technology
- Refill companies and associations

TARGET LOCATIONS (FIRST WORKPLAN)

4 locations

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Collect information/experience , on use, acceptance and further possibilities of SWS, SODIS, rainwater harvesting systems, household filtration systems in urban areas in Indonesia	- SD team - STTA (John Hopkins)	- report on experience and possibilities to expand to urban poor	Mar'06
Perform study on Refill systems, potential market, water quality issues, recommendations to improve services	- SD team - STTA (FORKAMI)	- report + recommendations to possibly expand to urban poor	Sept'05 – Dec'05
develop menu of options, cost-benefit for alternative drinking water systems compared to bottled water and boiling	- SD team	- presentation with menu of options and comparisons - input in Task SD6, subtask 3	Jun'06

SUBTASK SD3-4 IMPROVE QUALITY OF INDIVIDUAL HOUSEHOLD WATER SOURCE

DESCRIPTION

Coverage by piped (PDAM) water for urban areas in Indonesia is still less than 40%. This means that most people still use alternative water source, either through a third party (vendor, truck) or using their own water source (mostly shallow wells). If shallow wells are protected and at a sufficient distance from potential sources of contamination, they can also be considered as sources for clean water. Intervention to improve these household water sources will be done at two levels: technical improvement (possible combined with small scale credit programs) and awareness of risks for contamination from septic tanks, surface water. Alternatively improved shared water sources will be developed in areas with high contamination risk.

RELATION WITH OTHERS

- ESP Sanitation awareness program (specially tasks SD4-6 and SD4-8)
- National Government programs/policies (WASPOLA)

TARGET LOCATIONS (FIRST WORKPLAN)

4 locations ,with relative low piped water coverage and high use of individual shallow wells.

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Identify and agree on locations with relative high use of individual shallow wells	- SD (Provincial)	- locations agreed for further support	Sept'05
Link up with policies / programs at Central level (WASPOLA, Health) to protect shallow wells, including identifying possibilities for small scale credit programs.	- SD Team - FIN Team	- agreement with central level ministries on approach - agreement with users on protection of wells, alternatives, use of credit	Sept'06
Evaluate program and prepare dissemination	- SD team	- evaluation - dissemination plan	Sept'06

TASK SD4:

INCREASE ACCESS TO IMPROVED SANITATION SYSTEMS

DESCRIPTION

Increase access to sanitation facilities through cooperation with BORDA and Indah Water Konsortium; included promotion of sanitation for LG, signing of financing agreements for co-financing, studies, training, exposure visits and construction of 8 pilot/demo/training/H&H awareness Community Based systems and Decentralized Waste Water Systems for home industry. Included as well recommendations on sludge collection and treatment, improvement to household septic tank design and materials for general Health & Hygiene campaigns.

TARGETS

4-6 locations for 5 centralized sewerage systems (3 existing and 2 new)
4-6 locations for 4 community based systems and 4 DEWATS (home industry)
4 locations for sludge and individual septic tank improvement studies

RESOURCES

Foort Bustraan, ESP/Municipal Water Services Advisor + ESP/Service Delivery Team
BORDA + Indah Water Konsortium
USAID/LGSP program
GOI (Bappenas, WASPOLA, Public works)

TIME FRAME

April 2005 – September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS

SUBTASK SD4-1 PREPARATION SANITATION CONCEPT TO LOCAL GOVERNMENT

DESCRIPTION

This priority task will be the basis for the whole ESP sanitation program: it will introduce the importance of a sanitation program to various Local Governments (LG), and select participating LG through a demand responsive approach; it will also to collect all available information from existing programs and reports. For decision makers in LG, responsible for centralized sewerage systems, an exposure visit to Malaysia will be organized; selected participants (ESP/LG) will join in a E-learning course organized by BORDA; for each committed LG, "sanitation mapping" will be conducted as basis for further development; LG will make financial commitments for co-financing part of construction costs for DEWATS and Community Based systems ; finally this task includes an extensive Capacity Building program for the committed LG.

RELATION WITH OTHERS

- ESP/Finance to identify and approach potential donors
- LGSP for cooperation with LG ;
- WASPOLA/WSP/Dutch Trustfund for sharing/discussion sanitation concept

TARGET LOCATIONS (FIRST WORKPLAN)

around 3 Locations for centralized sewerage systems + 4-6 Locations for Community based and/or DEWATS systems (locations at least partly overlapping)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
collect data on existing systems /programs/reports / main players + approach donors for grant financing for Urban poor Community Based Sanitation	- SD Team - Fin Team	- reports	Sept'05
Introduction sanitation concept for LG through central or provincial multi-city seminar	- BORDA - ESP team (logistics) - seminars	- MoU with 4 – 6 interested/ committed LG	June'05
conduct Sanitation mapping for selected locations, conduct fieldvisits + obtain financial agreement with LG for co-financing	- IWK (lead) +BORDA (support/data) - ESP team (logistics)	- Sanitation mapping completed + agreed by LG - Financial agreements with 4 – 6 LG for co-financing of 8 demo facilities	Dec'05

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Capacity building program for LG / decision makers on regulations, guidelines, financial issues, Community involvement, willingness to pay /connect, environment, health	- IWK (lead) - BORDA (support) - ESP team (logistics) - training cost	- LG staff joined training - case studies/assignments developed - increased understanding for sanitation issues	Sept'05 – Dec'05

SUBTASK SD4-2 OPTIMIZE EXISTING AND DEVELOP NEW SEWERAGE SYSTEMS

DESCRIPTION

There are currently around eight centralized sewerage + waste water treatment systems in operation in Indonesia, but because of low priority by both Local Government and communities they are not operating well (idle capacity / low willingness to connect and pay). The objective of this subtask is to increase understanding and commitment of the importance of centralized sewerage systems within a city wide sanitation plan. The first activity in this task is to conduct comparative studies of these existing systems and to recommend improvements in general operational, institutional and financial systems, including management and tariff issues. This is followed by exposure visits and training for sewerage plant managers and operators. Requirements for rehabilitation & possible expansion (including limited demand analysis) of three sewerage systems within ESP target Provinces will be prepared, resulting in three business plans. After these new options for potential sewerage systems for two locations will be developed and presented to a number of interested Local Governments.

RELATION WITH OTHERS

- WASPOLA/WSP/Dutch Trustfund for possible combination of studies and training programs.
- LGSP for increasing interest from new LG for considering centralized sewerage systems

TARGET LOCATIONS (FIRST WORKPLAN)

Existing : 3 Locations: Jakarta, Medan, Bandung

New potential : 2 Locations

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Existing: comparative studies + exposure visit operators / managers	- IWK + local consultant - travel cost	- report/recommendations - trip report - Lessons learned	Dec'05

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Existing: training for operators / managers (formal + on-the-job)	- IWK + local consultant - training cost	- training conducted, incl. assignments & certification + increased capacity to operate/manage systems	June'06 – Sept'06
Existing: identify requirements for rehabilitation & possible expansion, including survey of potential customers	- IWK + local consultant - survey cost	- 3 Business Plans for rehab or limited expansion (with financing component)	Sept'06
New: menu of potential new systems , including link with DEWATS systems + introduce to group of 6 interested LG	- IWK + local consultant - seminars	- description of options - two serious LG	Jun'06
New: develop follow-up steps with interested LG	- IWK + local consultant	- action plan agreed with interested LG	Sept'06

SUBTASK SD4-3 PREPARE AND CONSTRUCT 8 DEWATS-SME AND CBS SYSTEMS

DESCRIPTION

DEWATS-Community Based systems can be divided in Small Scale Sewerage Systems (SSS) or combined Public sanitation and Water Supply systems (MCK++). SSS is more appropriate for areas where people already have water supply, either for PDAM or private wells. MCK++ is in high demand for areas where there is also no improved clean water provision

DEWATS systems are also appropriate for home industries (like pig farm, slaughter house, tahu/tempe, batik companies, etc). These are mostly situated within lower class/poor kampungs and always high polluters, causing environmental damage and health problems in poor neighborhood. Small/medium (private and public) hospitals also fall in this category.

ESP will promote construction of DEWATS for home industry, but will concentrate its pilot co-financing on the Community Based DEWATS systems. This co-financing of the construction cost (around 50%), by communities and Local Government, has to be seen as commitment, as pilot/demonstration for other locations, as a contribution to the CB/training of local capacity and as basis for localized H&H awareness campaign demonstration pollution of domestic waste water and ways to resolve this with low-cost, affordable technology.

RELATION WITH OTHERS

- WASPOLA/WSP/Dutch Trustfund for sharing/exchange on information/experience

TARGET LOCATIONS (FIRST WORKPLAN)

8 systems in 4-6 project Locations (spread out over different target areas)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Setup joined financial system with LG to obtain LG co-financing for 8 DEWATS Community Based Systems	- ESP team (support) - BORDA - cost for co-financing	- joined account with LG provide at least 50% co-financing	Jan '06
Select locations, conduct community preparation + develop detailed engineering design	- subcontract (BORDA)	- agreed financing and implementation plans with local communities - DED completed	Mar'06
Construction/ supervision + Capacity Building / training for communities / in-house management	- subcontract (BORDA)	- CB completed - CBS ready to operate	Sept'06
on-the –spot H& H limited awareness program	- SD team (support) - subcontract (BORDA)	- systems used properly by users	Sept'06
Operation / monitoring	BORDA	- operation successful ; effluent in accordance to GOI regulations	Sept'06 (August-September)

SUBTASK SD4-4 STUDY SLUDGE COLLECTION AND TREATMENT SYSTEMS

DESCRIPTION

The current situation with regard septic tank sludge collection and treatment is not good; in general sludge is collected by vacuum trucks on demand and paid for by house owners. Often trucks do not deliver the sludge to the sludge treatment plants (IPLT), but dump it in the nearest river, because plants are too far away, not functioning and due to lack of enforcement of environmental regulations. The task identified in this workplan will discuss this issue with selected LG, collect information and conduct comparative study to identify possibilities for improvements, including the option to outsource the operation to the private sector. Actual improvements in sludge systems will be implemented in the next workplan.

RELATION WITH OTHERS

- WASPOLA/WSP/Dutch Trustfund for sharing/exchange on information/experience
- USAID/LGSP to promote issues of proper city sludge collection and treatment systems

TARGET LOCATIONS (FIRST WORKPLAN)

4 Locations (spread out over different target areas)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
select target LG interested in improving sludge collection/treatment systems	- ESP team - (BORDA support)	- interested LG selected	June'06
collect information on sludge collection/ treatment issues/ operators / financing systems / main problems	- ESP team - local travel cost	- basic reports	June'06
conduct study to identify possibilities to improve sludge collection and treatment systems	- BORDA - ESP team (logistics) - travel cost	- recommendations and action plan for interested LG	Sept'06

SUBTASK SD4-5 IMPROVE INDIVIDUAL SEPTIC TANK SYSTEMS**DESCRIPTION**

Most people in urban areas own and use their own individual septic tanks; even though this is a good practice, but the construction of most of these is not environmentally safe, because they are normally open at the bottom, so that solids and fluids can seep in to the ground and thus contaminate nearby groundwater and/or water sources. This task will start investigation this issue, by collecting information on current regulations and standards and where possible recommend improvements. Target locations are those with high groundwater level and high % of shallow well users; depending on the results in this workplan more specific activities will follow in subsequent workplans.

RELATION WITH OTHERS

- WASPOLA/WSP/Dutch Trustfund for sharing/exchange on information/experience

TARGET LOCATIONS (FIRST WORKPLAN)

4 Locations (spread out over different target areas)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
collect information on current regulation / standards and enforcement for individual septic tank systems	- ESP team - local travel cost	- basic reports	Sept'06 (August)
review current guidelines / standards, recommend improvement and effective enforcement systems	- ESP team (logistics) - STTA (IWK)	- recommendations on improved guidelines	Sept'06

SUBTASK SD4-6 SUPPORT PUBLIC AWARENESS CAMPAIGN ON SANITATION

DESCRIPTION

The subtasks related to sanitation provide excellent sanitation background information to be used as input in the general Public Health Awareness and H&H campaigns, which will later be organized by the ESP/Public Outreach and Communication section. In this task existing Public Health Awareness materials from both BORDA and Indah Water Konsortium, ESP partners will be reviewed and provided to the ESP Public Outreach and Communication Section.

This subtask will not be implemented as a stand alone awareness campaign, but will feed into the other health & hygiene campaigns described in Task SD-6.

RELATION WITH OTHERS

- WASPOLA/WSP/Dutch Trustfund for sharing /exchange on PR materials & information

TARGET LOCATIONS (FIRST WORKPLAN)

Depend on Locations in Public Outreach program

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
review and provide PR materials which can be used in ESP H&H campaigns	- BORDA (lead) - IWK (support)	- PR materials provided to ESP/POC	Mar'06 (January)
Link up and support General ESP Health & Hygiene awareness campaigns	- ESP/PO & C	- In cooperation with ESP/PO&C implement general H&H campaigns	Mar'06 – Sept'06

TASK SD5:

INCREASE USE OF COMMUNITY BASED SOLID WASTE SYSTEMS

DESCRIPTION

Solid waste management systems can basically be divided in two parts: from the individual household to a temporary collection point (TPS) and subsequently from here to the final locations (TPA: either open dumping or landfill). The task in this first workplan will concentrate on the first part: to promote and increase community based solid waste systems; following workplans will then expand on these systems and support specific local governments in developing sustainable systems for collection and final disposal. Included in this workplan are the identification of existing successful community based solid waste programs, potential local organizations and government regulations and policies; the development and promotion of a variety of options, through exposure visits, capacity

building and seminars; finally the construction of 4 pilot/demonstration community based solid waste managed systems.

TARGETS

4 community based solid waste managed systems (including one in Medan in cooperation with JBIC)

RESOURCES

Foort Bustraan, ESP/Municipal Water Services Advisor + ESP/Service Delivery Team
BORDA and other experienced NGO's
USAID/LGSP program

TIME FRAME

April 2005 – September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS

SUBTASK SD5-1 IDENTIFICATION EXISTING COMMUNITY BASED SOLID WASTE SYSTEMS

DESCRIPTION

This subtask will be the basis for the whole ESP solid waste program: the team will collect and analyze information from existing community based solid waste programs and reports, primarily within Indonesian, but also from South-East Asia and worldwide. Secondly it will gather and analyze existing Government policies & regulations (locally and nationally) and current practices in selected ESP locations, for complete solid waste system (from household until final disposal). It will identify potential local institutions which can work together with ESP in promoting community solid waste management. Information will be available to all Provinces and Local decision makers.

RELATION WITH OTHERS

- Local and National government departments responsible / involved in community solid waste
- Local organizations / donor institutions involved in community solid waste management

TARGET LOCATIONS (FIRST WORKPLAN)

6 Locations for assessing current practices for community solid waste programs

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
collect and analyze information on existing programs /reports in Indonesia, South-East Asia and worldwide; also collect/analyze current Government regulations and policies (local and national).	- ESP Team - travel	- reports	June'05 – Sept'05
visit up to 6 selected locations to assess current practices from household to final disposal sites. (mixture of government and private operated)	- ESP Team - STTA - travel	- reports	June'05 – Sept'05
Identify potential local institutions (G'ment, NGO, private) which can assist ESP in promoting community based solid waste management	- ESP Team - seminars	- report + list of potential ESP resource organizations for community based solid waste management pilot programs	June'05 – Sept'05

SUBTASK SD5-2 INTRODUCE/PROMOTE OPTIONS OF COMMUNITY BASED SOLID WASTE SYSTEM

DESCRIPTION

Based on the results and analysis of subtask SD-1, the program will develop a number of options for community based solid waste managed systems and introduce/promote these concepts to local decision makers and communities. The options developed will be based on the existing success stories and will all include a high degree of waste separation and reuse at the community level. Issues relating to the remaining waste to final disposal and selling/marketing the recycled, composted materials will be included in the description/comparison of the various options.

RELATION WITH OTHERS:

- Local and National government departments responsible / involved in community solid waste
- Local organizations / donor institutions involved in community solid waste management

TARGET LOCATIONS (FIRST WORKPLAN):

4 Locations for promoting pilot community solid waste managed systems
Included in here the implementation of MoU between USAID-JBIC for Medan.

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Develop 'menu of options' for various management and operational systems	- SD team - STTA	- report with menu of options and promotion materials	Dec'05
Promote menu of options to local decision makers and communities through seminars and exposure visits to successful locations	- SD team - seminars - travel (local)	- promotion completed - interest by local stakeholders for 4 systems (MoU)	Dec'05
Identification of potential financial resources to support part of the hardware requirements for 4 systems	- SD team - Finance team	- financial support identified	Dec'05

SUBTASK SD5-3 IMPLEMENT 4 COMMUNITY BASED SANITATION MANAGEMENT SYSTEMS

DESCRIPTION

After reaching the principle agreement (subtasks SD5-2), this subtask will develop all details required for the implementation of the 4 community based solid waste pilot systems: design, capacity building, institutional arrangements, financing, implementation and operation.

Co-financing by Local Government (either part of construction costs, or agreement for pickup of waste to final disposal) has to be seen as pilot/demonstration for other locations, as a contribution to the CB/training of local capacity and to show commitment by local stakeholders

RELATION WITH OTHERS

- Local and National government departments responsible / involved in community solid waste
- Local organizations / donor institutions involved in community solid waste management

TARGET LOCATIONS (FIRST WORKPLAN)

4 Locations where pilot community solid waste managed systems will be implemented
Included in here is the implementation of MoU between USAID-JBIC for Medan.

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Institutional, Operational and Financial agreement with local stakeholders	- SD team - small grant (local NGO) - meetings	- agreements / contract	Mar'06 – June'06

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
implementation of preferred options, Capacity Building / training for operators, communities / in-house management	- SD team - small grant (local NGO)	- CB completed - systems ready to operate	Mar'06 – Sept'06
Operation / monitoring	- SD team - local operator / community	- operation successful ;	from Sept'06

TASK SD6:

BEHAVIORAL CHANGE INTERVENTION

DESCRIPTION

ESP will collaborate with other BHS partners to design and implement a health monitoring system to measure the impact of the project on the improvement of health. ESP will carry out health and hygiene communication programs and awareness campaigns to introduce proper health and hygiene behaviors and to promote point of use water treatment systems. ESP will work with the government agencies and local NGOs to use mass media, community mobilization, and advocacy.

TARGETS

ESP intervention districts (and possibly a comparison group without interventions) for a baseline survey.

2 location at each province, but depending on resources (budget availability, staffing) + National campaign element (outside funding) for H\$H communication programs & awareness campaign and promotion of use of point of use water treatment systems

RESOURCES

Foort Bustraan, ESP/Municipal Water Services Advisor + ESP/Service Delivery Team
Johns Hopkins University + John Snow Inc.
USAID/Health Flagship

TIME FRAME

April 2005 – September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS

SUBTASK SD6-1 DEVELOP AND IMPLEMENT H&H BASELINE SURVEY AND MONITORING SYSTEM

DESCRIPTION

In order to systematically measure project achievements, an Environmental Health and Child Survival Performance Monitoring Plan (PMP) for ESP will be designed and implemented. A household survey will be conducted at the beginning of the project to collect baseline data. A survey research organization will be selected to carry out the survey.

RELATION WITH OTHERS

- John Snow Inc. (ESP) + USAID/HSP
- GOI : Ministry of Health , National Statistics Office, others
- UN agencies (UNICEF, WHO, etc.), donor agencies, NGO's

TARGET LOCATIONS (FIRST WORKPLAN)

- Project locations

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Collection of existing materials on environmental health monitoring and health data, both at national and provincial levels	- SD - JSI	- report	April - June'05
Development of Performance Monitoring Plan (PMP)	- SD /Jkt (support) - JSI - USAID Health Monitoring Team - BHS (HSP and SWS)	- monitoring plan developed - indicators selected - data collection methods determined	April - June'05
Preparation of a baseline survey e.g., trip to each province and selection of the sites, selection of a research organization, training of survey team	- SD Team - JSI - travel - research organization	- sites selected and the sample design determined - a survey research organization selected - training conducted	June' – July 05
Baseline data collection, data entry, data analysis, and report writing	- JSI - SD Team - research organization	- data collection completed - analysis - report	Aug – Sept'05
Implementation of monitoring system	- SD Team - JSI	- monitoring system in place	Sept'05 -

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Monitoring data analysis and review, and recommendation for changes	- SD team - JSI - JHU (Support)	- monitoring data collected - monitoring data analyzed	Mar'06 - Sept'06

SUBTASK SD6-2 DEVELOP/IMPLEMENT H&H COMMUNICATION PROGRAMS AND AWARENESS CAMPAIGNS

DESCRIPTION

H&H communication programs and awareness campaigns aim to reduce child diarrheal disease by applying social marketing principles and best practices, which stimulate behavior change of target groups necessary to achieve ESP outcomes. The health campaign will be conducted through community participation programs to support the messages as well as multi media approach using both print and electronic media.

RELATION WITH OTHERS

- Johns Hopkins University /Centre for Communication Programs
- GOI : Ministry of Health , National Statistics Office, others
- UN and other donor agencies, like UNICEF, NGO's

TARGET LOCATIONS (FIRST WORKPLAN)

Estimation: 2 location at each province, but depending on resources (budget availability, staffing) + National campaign element (outside funding)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Literature review from existing health research findings as well as health behaviour situation + Finding the Gaps	- SD Team - UN agencies - other int'l NGOs	- report on existing data	June'05
Conducting additional research as needed include formative research and other behavior (KAP)	- SD/Jkt + PO& Comm - JHU (ESP; SWS; Hand washing) - SI (HSP)	- report on CAP	Jan'06
Develop communication strategy & budget plan	- SD/Jkt+ PO& C - JHU	- strategy is develop - budget approved	March '06
Develop time line of implementation and produce campaign materials(national, local and other partners)	- SD Team - PO& C - JHU/CCP	- time line is set and approved	June'06 – Sept'06

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Implementation	- SD Team - JHU/CCP - PO& C	- Agency selected - materials produced - Campaigns conducted	Sept'06
Monitoring and Evaluation	- SD Team + PO& C - JSMar'JHU	- Evaluation report	Sept'06

SUBTASK SD6-3 LINK-UP WITH OTHER ACTIVITIES THAT INFLUENCE FACTORS TO REDUCE CHILDHOOD DIARRHEAL DISEASE

DESCRIPTION

H&H campaign to reduce child diarrhea will be more effective when it is linked-up with other NGOs, both local and international as well as other USAID projects and UN programs. Through this collaboration effort, we can increase the effect on community by sharing information and supporting each other's programs. Especially in the Special Imperative Areas where ESP has minimum staffing, networking with other programs will be proven beneficial and efficient.

RELATION WITH OTHERS

- JSI HSP
- JHU/CCP SWS + JHU/CCP-KuIS (Koalisi untuk Indonesia Sehat) "hand washing campaign"
- Local and international NGOs and donor agencies that work in the ESP project sites

TARGET LOCATIONS (FIRST WORKPLAN)

All project sites

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Meeting with institution and collecting info on their programs	- SD	- information on activities of other programs/projects	June'05
Assessment of various possible collaboration, network building	- SD	- list of possible collaboration	Sept'05 – Dec'05

SUBTASK SD6-4 PROMOTE USE OF POINT OF USE WATER TREATMENT SYSTEMS

DESCRIPTION

Indonesian people normally boil their water before drinking or buy bottled water. Since bottled water is expensive and boiling clean water long enough to make it fit for consumption is also difficult and costly, alternative drinking water systems can be introduced, especially to the lower class and urban poor communities. Alternative, more affordable drinking water systems to be developed under this task are SWS (Safe Water System, using 1.5% Hypo-Chloride solutions), SODIS (solar disinfection using plastic bottles), rainwater harvesting and Refill boutiques (using Filtration and Ultra Violet = Isi Ulang).

RELATION WITH OTHERS

- SD3-3: Increase alternative drinking water sources

TARGET LOCATIONS (FIRST WORKPLAN)

Estimation: 2 location at each province, but depending on resources (budget availability, staffing) + National campaign element (outside funding)

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Inputs for baseline data collection	- SD team	- list of questions to be incorporated to the baseline survey	June'05
Using the results of the study for SD3-3 and other studies on isi ulang/refill, SWS, SODIS to design intervention and select the areas of intervention	- SD/Jkt	- info on the use of alternative sources (including boiling)	Dec'05 – Mar'06
Develop materials/adapt from the existing project followed by community intervention to promote the alternative water source	- SD Team - PO& C	- appropriate material for intervention - community activities related to alternative water sources	Sept'06

SUBTASK SD6-5 MOBILIZE CONSUMERS/PUBLIC TO PRESSURE/DEMAND ON PEMDA, DPRD

DESCRIPTION

PDAM will carry out Customer Satisfaction Survey (CSS) as well as establishing Customer Forum in their effort to provide better services for customers. This includes proper communication channels with its consumers for both receiving complaints and providing information on operational and financial issues.

Customers need to be well aware of these services and their rights to receive these services. And by understanding their rights on these services, they can put pressure to local

government (PEMDA) and local parliament (DPRD) to do their part of ensuring that PDAM have done their obligation to their customer by providing good services to all customers.

RELATION WITH OTHERS

- PO/Communication
- Journalist forum
- PEMDA +DPRD

TARGET LOCATIONS (FIRST WORKPLAN)

District’s capitals in 2-3 project sites

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
1. Networking building, with media, LG, Parliament	- SD team	- discussions, meetings with stakeholders, minutes of the meetings	Dec’05 – ongoing
2. Utilized results from SDI-2 to design advocacy approaches & strategy	- SD team	- advocacy strategy - media articles and clippings	Sept’06
3. Site selection and partners identification	- SD team	- site and partners	Sept’06

CHAPTER 5
ENVIRONMENTAL
SERVICES FINANCE

COMPONENT 3

5.0. ENVIRONMENTAL SERVICES FINANCE

5.1. INTRODUCTION

Beginning in fiscal year 2001, with the passage of Laws 22 and 25, local governments in Indonesia were required to assume greater responsibilities in the provision and financing of public services, including water supply.

Local governments – including their watersheds and *Perusahaan Daerah Air Minum* (“PDAMs”) – need access to commercial capital if the public is to benefit from a more developed water and sanitation sector. Across the high priority provinces, a significant need exists for a more sustainable supply of raw water from protected areas and watersheds in the highlands as well as better access to water, wastewater and solid waste disposal facilities in the lower watersheds and coastal cities. Although PDAMs are able to borrow under the current legal framework, provincial and municipal governments will not be able to do so until 2006 when Law 35 and its implementing rules and regulations (“IRR”) is anticipated to be in place.

The functional integration of watershed management, service delivery and municipal finance office (“MFO”) is a key operational objective of ESP, as described below:

- MFO will mobilize capital for the watershed management component using alternative finance instruments such as carbon offsets, debt-to-nature swaps, conservation trusts and watershed resource user fees. The objective of alternative finance activity, in this case, is to mobilize capital to pursue specific conservation goals aimed at mitigating threats to sustainable raw water supply, existing biodiversity and/or carbon sequestration within protected area environments. By focusing on such ecological goals, the sustainability and adequacy of raw water supplies for downstream communities and water utilities is improved. Money raised through the use of alternative finance instruments, in many cases, will supplement capital mobilized through public private partnerships aimed at providing livelihoods to the very poor, e.g., through eco-tourism or, for that matter, nucleus estate and satellite farming systems focused on the processing of vegetables, fruits, or medicinal crops;
- MFO will also work to mobilize capital for the service delivery component in the lower watershed and coastal areas for the purpose of expanding service delivery, improving operating efficiencies and/or financing consumer water connections. The financial instruments to be relied upon in this case are those that work best with self liquidating project finance, e.g., public private partnerships, loans, leases and/or bond finance. In this manner, money raised through these instruments would address requirements for:

- ❖ **Improved service delivery infrastructure**, e.g., resources would be used to:
 - Build transmission pipelines through public private partnerships to transport water from watersheds to city gates; and/or
 - Mobilize capital to enhance capacity to treat water, store it safely in reservoirs or holding tanks, and/or transport it through an improved network of high and low pressure pipelines to appropriate points of delivery;

- ❖ **Enhanced operating efficiency**, e.g., additional capital would enable a PDAM to:
 - Acquire energy conservation equipment such as variable speed drives;
 - Reduce non-revenue water through improved network metering equipment;
 - Improve accuracy of household water metering equipment; or
 - Introduce more sophisticated billing systems, etc); and an

- ❖ **Expanding customer base**, e.g., borrowing through micro-credit institutions would:
 - Assist poorer communities to pay for consumer water connections and, through this mechanism, enable the PDAM to improve water coverage.

It is also the intention of the MFO to work closely with other projects that are part of USAID's Basic Human Services ("BHS") project cluster. This is especially true in those cases where there are opportunities to mobilize finance to implement a commercial undertaking that supports objectives embedded in any one of the BHS projects. In addition, from a policy perspective, MFO will also work closely with Local Government Support Project ("LGSP") with the objective of improving processes currently employed to revise tariffs for water utilities. Tariffs revisions are requested by water utilities at least once every two years and, in some cases, more frequently. However, the actual tariff determinations are made by the local parliament ("DPRD"), with all the attendant risks in such a process for 'politicizing' tariff decisions. This risk, if perceived by the financial sector to be pronounced, is likely to impede the development of a municipal finance market for water utilities. There is an urgent need, therefore, to review the tariff determination process for the purpose of working toward an appropriate transition framework that can carry the sector to the next stage in its evolution.

The MFO also needs to work closely with other donors such as the World Bank ("Bank"), Asian Development Bank ("ADB") and possibly Japan Bank for International Collaboration ("JBIC"). Historically, provincial government (*Kapupaten*) or municipal governments (*Kotamadya*) and their PDAMs have had little or no access to commercial finance. For the most part, their external funding has been sourced from the Bank and ADB – with funds channelled through the Ministry of Finance ("MOF") via the Structured Loan Account ("SLA") and Regional Development Account ("RDA") funds lodged therein. Since the program started in the early 1990s, PDAM loans have accounted for approximately 70% of total extensions of credit, a very large percentage of which are currently non-performing and virtually unenforceable. This is a factor that contributes to the negative image of the provincial water utilities and their inability to tap systematically commercial sources of finance. It is of paramount concern, therefore, to regularize these past due obligations, either by restructuring the debt, rescheduling its maturities or, otherwise, entering into agreements to forgive the debt. MOF will be announcing the disposition of the debts of 30 PDAMs in early June 2005, a significant step forward in the effort to regularize past due amounts. Nevertheless, while progress on this issue is positive, it is important to maintain momentum as part of a broader, more holistic, program aimed at revitalizing the creditworthiness of the water utilities. To this end, MFO will work closely with other donors and attempt, where

appropriate, to play a key role in expediting the resolution of this and other similar issues.

It is also worth mentioning, also, that MFO objectives of assisting PDAMs to raise money on commercial terms may compete with current Bank and ADB proposed water sector projects – both of which aim to provide much needed debt capital to the better managed utilities through a revitalization of the RDA/SLA mechanism. An illustration of this development is provided by the Bank's Urban Water Supply and Sanitation Project ("UWSSP"), anticipated to commence in 2006 with a loan quantum of US\$100 million. Through the MOF, the funds will be on-lent to 20-25 selected (as yet undesignated) water utilities, some of which are located in ESP high priority areas. The MOF, through the SLA account, would repackage the funds into (up-to) 20-year sub-loans in local currency for each designated water utility borrower, at 8.5% fixed interest rate, with repayments guaranteed by the respective provincial or municipal government. The MOF would absorb the foreign exchange risk.

Other Bank initiatives which overlap ESP activities include the following:

- A Design Build Lease ("DBL") component within UWSSP, involving as many as 9 municipalities, each reportedly interested in contracting with a private operator willing to design, build, lease and operate a new water distribution facility, with the Bank providing the underlying finance;
- In the Greater Surabaya Water Project ("GSWP"), a project separate from UWSSP and scheduled for implementation one year later in 2007, the Bank intends to increase water supply for some 6 million consumers in Surabaya, Gresik, Sidoarjo and Pasuruan. A centrepiece of GSWP is the building through a public private partnership of an US\$80 million pipeline from Umbulan Springs for the purpose of transporting raw water from the watershed to all four cities. The project will be structured on the basis of a Build Own Transfer ("BOT") or Build Own Operate basis ("BOO"). An additional US\$80 million will be needed to develop necessary transmission facilities linking each PDAM to the main pipeline, as well as expanding in each case the distribution network needed for the new market expansion. The project is being developed through a US\$1 million grant provided by the Government of Japan ("GOJ"), which has financed the feasibility (and engineering) studies. It may also require Output Based Aid ("OBA") e.g., direct water use subsidies from the government to those who fall below a certain income threshold.

The ADB, as mentioned above, is implementing a similar loan/sub-loan program to that of the Bank with another US\$100 million to be channelled through the MOF SLA fund. Once these programs are in effect, the World Bank and ADB will have programs in place that compete with each other and clash with ESP-MFO. Reasonably, it could readily be concluded, that the MFO may have a difficult time competing with the terms of either of these loans, especially since commercial money is unavailable on 20-year terms and certainly, not at 8.5% p. It would seem appropriate, therefore, for the donors collectively to:

- a) Find ways to avoid competition amongst these various programs, as it can only be self-defeating for all concerned and detrimental to the natural evolution of the water sector; and
- b) Support, even if only indirectly, USAID ESP objectives in regard to the mobilization of commercial finance for the PDAMs, since this is in the long-term interest of the sector.

To this end, the MFO should initiate discussions with the Bank with the objective of creating a donor technical steering committee, where discussions regarding each donor objectives, plans and programs, mechanisms, etc., with conflicts discussed and rationalized to the benefit of all concerned. It should be an important objective of the ESP-MFO to persuade the Bank to spearhead the creation of such a forum and to host its technical meetings. This would provide ESP-MFO with a platform from which to discuss its own objectives with the donors and achieve cooperation thereby.

From a strategic perspective, and over the very near future, ESP technical assistance in the *municipal finance area* should focus on the 'blue chip' market, i.e., the most creditworthy PDAMs. There is only a small handful, at best, of PDAMs creditworthy enough to raise money commercially in the next two years. Given the inexperience of even this lofty group, ESP's technical assistance will aim to facilitate commercial borrowing for specific, self-liquidating purposes sponsored by the better managed PDAMs, requiring up to 5-year payback, or less, and involving amounts that will, likely, be relatively modest to start with. The introduction of PDAMs to the credit markets should be done in small steps with the objective of gaining market acceptance. MFO, of course, would also work with those PDAMs that choose to opt out of the World Bank or ADB loan arrangements. Subsequently, when the Bank UWSSP initiative is launched in 2006, along with the similar ADB program, these projects can be aimed at a much larger target market of PDAMs and provide the needed financial loan resources for more ambitious borrowings, requiring longer paybacks. Such understanding between donors, as the ones being described herein, could be operationally crystallized through the technical steering committee meetings discussed earlier.

In the long term, ESP could also collaborate with the other donors by focusing on an initiative for creating a US-style "bond bank" in Indonesia i.e., something that would replace the existing traditional loan mechanisms and result in a leap forward in ensuring sustainability in the supply of commercial finance in the water sector.

5.2. ASSUMPTIONS

PDAMs, or the mid-stream of the environmental services sector, are the logical place to attempt to secure a beachhead for the range of targeted outcomes being contemplated (see further below). The MFO will focus its principal attention on water utilities that are (1) regarded as most likely to achieve full recovery tariffs within one year; and (2) whose municipal owners are the most reform-minded i.e., most likely to support reform including the creation of independent regulatory bodies to de-politicize the current tariff determination process.

5.3. APPROACH

Water utilities selected for special focus will be referred to below as "Tier I PDAMs". Training and orientation of Tier I PDAMs will be accompanied by a parallel, and vigorous, focus on policy issues, specifically the: (1) restructuring or rescheduling of debt owed by the PDAMs to the SLA/RDA, where appropriate; (2) creation of independent regulatory boards at the provincial or municipal levels capable of replacing the local parliaments ("DPRD") in all

matters related to the regulation of the water utilities; and (3) gradual elimination of cross subsidies and block pricing in tariff structure with a policy focus that relies instead on cost-of-service pricing and, for the disadvantaged, transparent lifeline subsidies for water use provided directly by local government.

As mentioned earlier, selection of Tier I PDAMs will assist in part on identifying vertically linked upstream opportunities (i.e., watersheds) to focus on for the purpose of mobilizing alternative finance as well as vertically linked downstream opportunities involving mobilizing of micro-finance from third-party financial institutions willing to specialize in consumer water connections or needed PDAM metering equipment.

Finally, the above activity will prepare groundwork for a number of other synergistic activities, including: (i) the mobilizing of alternate finance for municipal sanitation and sewerage facilities; (ii) issuance of general obligation (“GO”) bonds by municipalities for the purpose of on-lending proceeds to PDAMs; (iii) issuance of revenue bonds by PDAMs intended to be used to expand and/or improve infrastructure base; and the (iv) potential creation of a statutory organization such as a US-style bond bank to be constituted as a self-sustaining source of alternative finance - with funding perhaps derived from one or more donors and, over time, bond market as well.

In practice, it will be necessary to arrive at a satisfactory definition of ‘full cost recovery’ tariffs, a concept which will underlie much of the Tier I, II and III approach described further below. The term is generally approached in two different ways. To some, it means the full recovery of all cash outflows through the tariff mechanism, including the cost of all capital – principal, interest and dividends; to others, it means the full recovery of all operating cash costs plus depreciation and dividends. The difference between the two approaches is in the way debt service is treated. The first classifies the payment of principal as an outflow and includes it, as a legitimate ‘cost’ even though it is not classified as such in accounting terms; while the second approach ignores principal repayments and substitutes capital equipment depreciation in its stead. Depreciation, of course, is a legitimate accounting cost but is often much lower in quantum than principal payments made on long-term debt. The first approach is preferred by lenders, obviously, while the second is often used by other parties, such as PERPAMSI. A satisfactory reconciliation will have to make of these differing approaches and agreed to within ESP.

5.4. RELATION TO OTHER ESP COMPONENTS

Given that integration is a key management objective, almost all decisions related to the ‘site selection’ of targeted financings will be chosen only after consultation with project management, the WMO, SDO and the Regional Teams. The following pages will demonstrate the MFO dedication to this essential collaborative teamwork, as many resources needed for task completion are derived directly from other component or regional resources. Moreover, not only does this finance component collaborate within the ESP Team, but also has the potential to benefit from other USAID past projects (PURSE, LGWS II, PERFORM), as well as be synergistic with current projects falling within the BHS cluster.

5.5. TARGETED OUTCOMES

The following are targeted outcomes for the MFO up to September 2006 and September 2009, followed by contractual macro-tasks embedded in the scope of work and, based on these, key subtasks. The MFO does not expect any key deliverables prior to September 2005.

2009 Targeted Outcomes	September 2006 Targeted Outcomes
➤ Thirty (30) PDAMs to operate on a full cost recovery by September 2009	➤ Five (5) PDAMs to operate on full recovery basis by September 2006
➤ Ten (10) loans reliant on the Development Credit Authority (“DCA”) guarantee	➤ One (1) project loan is booked with DCA guarantee
➤ Five (5) PDAM to achieve an international credit rating	➤ Nil progress up to September 2006
➤ Provide advice on best method to create independent provincial regulatory boards and implement process to do so	➤ Initiate and prepare groundwork to create independent regulatory boards in at least 1 high priority province <u>after</u> critical path for so doing is determined through STTA (See Sub Tasks, further below)
➤ Five (5) PDAMs form financing relationships with micro-credit institution	➤ One (1) PDAMs forms financing relationship with a micro-credit institution
➤ One (1) local government province to issue successfully a revenue or general obligation (“GO”) bond after Law 35 and its implementing rules and regulations is in place;	➤ Initiate and prepare groundwork to assist 1 local government province with assistance to issue successfully a revenue or GO bond <u>after</u> Law 35 and its implementing rules and regulations are in place
➤ Three (3) watersheds to access external finance for conservation purposes	➤ One (1) watershed to access external finance for conservation purposes

The following sections provide details on tasks, subtasks, and outputs considered necessary to realize this goal.

5.6. ENVIRONMENTAL FINANCE TASKS

The following are contractual MFO macro-tasks:

- FN1 Assess community willingness to pay full recovery tariffs**
- FN2 Broaden and develop support for resolution of key policy issues currently overhanging water sector**

FN3 Ensure improved access of commercial finance to the environmental services sector

Supporting subtasks for the first work plan period up to September 2006 are as follows:

- FN1-1 Organize Municipal Finance Team and resources**
- FN1-2 Classify PDAMs into three tiers**
- FN1-3 Develop a tailored training program for each Tier I PDAMs**
- FN1-4 Develop a tailored training program for Tier II PDAMs**
- FN2-1 Focus policy initiatives on issues that improve PDAM creditworthiness**
- FN3-1 1 Agreement to micro-finance water connections**
- FN3-2 4 watersheds being assisted in raising alternative finance**
- FN3-3 1 commercial agreement executed on behalf water utility**
- FN3-4 Study initiated to determine if a bond bank can be created, and**
- FN3-5 Financing plan conceived and designed for 1 BHS project**

TASK FN-1:

ASSESS COMMUNITY WILLINGNESS TO PAY FULL RECOVERY TARIFFS

DESCRIPTION

At the conclusion of this subtask, the Finance Office (“MFO”) will be up to full staff strength of 6, including 1 Municipal Finance Advisor; 4 Municipal Finance Specialists; and one Administrative Assistant, all located in the Jakarta Office. In addition, the MFO will also have a comprehensive library of water sector project reports as well as key laws and regulations impacting on the water sector. Finally, the Office will have established contacts throughout the donor and business community extensive enough to permit it to address its objectives effectively. Based on discussions with other donors, PERPAMSI, SDO, the MFO will also develop a working definition of full recovery tariffs for purposes disseminating it through the training sessions.

TARGETS

Assist 5 PDAMs to operate on full recovery basis by September 2006
Develop 1 project within the environmental services project that will rely on a DCA for mobilizing commercial finance

RESOURCES

MFO, SDO, STTA

TIME FRAME

September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS

SUBTASK FNI-I ORGANIZE MUNICIPAL FINANCE TEAM AND RESOURCES

DESCRIPTION

The task involves four functions: (a) complete office recruitment; (b) develop a well-targeted networking program; (c) create a library of key legal, regulatory and/or informational sources; and (d) understand goals of all donor initiatives and, particularly, where coordination for mutual benefit is desirable as well as all private initiatives in the Indonesian private sector.

The recruitment process may take at least 3-6 months, as the desire is to bring people on board with the requisite skills. The emphasis in this regard will be individuals with investment banking, credit rating, commercial banking experience and/or previous participation in donor projects involving the water sector, generally, and specifically, the PDAMs.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This Subtask is the building block upon which all others are to be executed, since without requisite human resources, no work plan can be executed. Prior to the actual commencement of the project, there was not finance team in place or even identified in the proposal and, with the exception of USAID activities, very little knowledge accumulated of other donor activities and their projects and programs.

Activity Description	Resources	Outputs	Time Frame
Complete office recruitment, staffing and organization	Administrative support, MFO Team Leader, Partners	Scopes of work for all Environmental Finance positions and all positions filled	January – June 2005
Develop a well targeted networking program	Administrative / MFO Team Leader	Point of contact persons for agencies listed in Annexure I identified and recorded	January 2005
Create information clearinghouse of key legal, regulatory and/or information sources	Administrative Team, Government of Indonesia and United States, Donors, MFO, partner participation	Library created from all documents listed in Annexure II	January – September 2005
Understand goals of all donor and/or private initiatives in the country related to water through networking visits	MFO Team Leader	Final reports from all of previous projects collected and added to library; matrix listing all donor projects and their past and current goals	January – June 2005

Activity Description	Resources	Outputs	Time Frame
Persuade World Bank to synergize and host creation of a technical steering committee made up of donor projects, whose members meet at least monthly to discuss water sector issues, coordinate programs and avoid overlaps and conflicts	MFO Team Leader	World Bank agrees to create technical steering committee	May 2005
Arrive at an acceptable 'ESP definition' of full recovery tariffs, after discussion the issue internally	SDO, MFO (understand rationale for donor approaches, FRAP and PERPAMSI definition)	Definition of full recovery	June 2005

SUBTASK FNI-2 CLASSIFY PDAMS INTO THREE TIERS

DESCRIPTION

The objective of this subtask is to identify PDAMs that are to be prioritised for commercial financing. Category designations will be Tier I, II and III, with Tier I holding the most advanced preconditions and skill sets necessary to mobilize commercial capital. The criteria for selecting Tier I and II PDAMs will be a composite evaluation that consists of: (a) highest scores achieved in the PDAM benchmarking done by PERPAMSI's in 2003; and (b) the assessed quality of commitment from the concerned PEMDA's/DPDR's to work toward achieving tariff reform and full cost recovery within a one year period.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

The activity, above, relates to all targeted water utility money raising outcomes/ activities. Generally, the prioritization serves the purpose of aiding in the development of a needs analysis, activities schedule, training scope and, therefore, assists in achieving activities outlined in FNI-3 and FNI-4

Activity	Resources	Outputs	Time Frame
Collect and evaluate Perpamsi (and LGWS) PDAM benchmark ratings (2003)	SDO, MFO; PERPAMSI data	Evaluation Report	January – March 2005
Discuss potential additional criteria needed with SDO and Regional Teams and finalize classification system	Regional Team, SDO, MFO	Meeting minutes, Classification system report	March – April 2005

Activity	Resources	Outputs	Time Frame
Narrow the list of Tier I PDAMs by identifying the PEMDAs most willing to work with ESP project to achieve tariff reform and full recovery tariffs within one year; arrive at coordinated decision of Tier I and II PDAMs	Regional Teams, MFO	List of 5-10 Tier I PDAMs, and 10 Tier II PDAMs	April 2005

SUBTASK FNI-3 DEVELOP A TAILORED TRAINING PROGRAM FOR TIER I PDAMS

DESCRIPTION

Tier I PDAM's training program will be designed and executed based in part on a Needs Analysis to be conducted jointly with the SDO office, and will focus on operational and financial skills needed to mobilize commercial capital.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This subtask relates to several targeted outcomes, including those emphasizing (a) full recovery tariffs; (b) DCA objectives; (c) international/domestic credit ratings; and (d) mobilization of commercial loans, venter finance, bond issuance, and/or micro-financing of water connections for metering equipment

Activity Description	Resources	Outputs	Time Frame
Conduct Needs Analysis for each PDAM classified as Tier I with a strong focus on identifying specific operational and financial management areas requiring improvement	SDO and MFO	Report containing basic information needed to conceptualize, design and execute approach to training	May 2005
Design a training program for 2-3 Tier I PDAMS with which EFT will work most closely with, to include both operational and financial topics in areas where skill set weaknesses are evident	SDO and MFO	Training curriculum	December 2005
- Seek concurrence from relevant PDAMs / PEMDAs (if appropriate) for the scope and content of the proposed training course	Field managers and PDAM top managers	Stakeholder Meeting Minutes	January 2006
- Conduct training sessions jointly with the SDO	MFO, SDO, PDAM stakeholders	Training Seminar	September 2005 - August 2006

SUBTASK FNI-4 DEVELOP A TAILORED TRAINING PROGRAM FOR TIER II PDAMS

DESCRIPTION

Tier II PDAM's training program will be designed and executed based on a Needs Analysis to be conducted jointly with the SDO office, and will be designed for Tier II PDAMs which are able to achieve Tier I status in one year.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

Because we are dealing with Tier II PDAMs, this subtask relates to the goal of achieving full recovery tariffs for 30 PDAMs by September 2009.

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Narrow the list of Tier II PDAMs by determining which PEMDAs are most willing to work toward full cost recovery tariffs over a 2-year period	Regional Teams	Short list of Tier II PDAMs	April 2005
Conduct Needs Analysis for each PDAM classified as Tier II with strong emphasis on operational and financial areas needing improvement	STTA, SDO and MFO	Needs analysis report containing basic information needed to conceptualize, design, and execute approach to training	June 2005
Design a training program for Tier II PDAMS based on Needs Analysis	SDO and MFO	Training program curriculum	March 2006
Seek concurrence from top management of relevant PDAMs / PEMDAs (if appropriate) for the scope and content of the proposed training course	Regional Teams	Meeting minutes of Stakeholder's meeting	April 2006
-Conduct training sessions jointly with the SDO	SDO, MFO		September 2005 – August 2006

TASK FN-2:

BROADEN AND DEVELOP SUPPORT FOR RESOLUTION OF KEY ISSUES

DESCRIPTION

At the conclusion of this subtask in September 2006, the FN Office at a very minimum will have formed an hypothesis as to how best to proceed with debt restructuring and independent regulation and, as necessary, issued STTA for the use of MOF, provincial government, municipalities, PDAMs or PMDAs in respect of specific approaches that might relate to these general problems.

RESOURCES

MFO Team, SDO Team, STTA

TIME FRAME

September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS

SUBTASK FN2-1 FOCUS INITIATIVES ON ISSUES THAT IMPROVE PDAM CREDITWORTHINESS

DESCRIPTION

The restructuring of the PDAM debt due to the MOF is one of the overarching objectives of the program, as it will contribute greatly to the perception of creditworthiness. A second objective, Perhaps of comparable importance, is the creation of independent regulatory bodies that are capable of balancing consumer and investor interests when determining full recovery tariffs. ESP will undertake initiatives aimed at improving credit-worthiness of PDAMs through (a) restructuring debt; (b) creating independent regulatory commissions in one or more of the high priority provinces; (c) substituting current tariff structures¹ with cost-of-service pricing and lifeline tariff subsidies.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This sub-task relates to all targeted outcomes that concern improvements in creditworthiness, including: (a) full recovery tariffs; (b) DCA objectives; (c) international / domestic credit ratings; and/or (d) mobilization of commercial bank, vender finance, bond issuance or micro-finance.

¹ block tariffs and cross subsidies

Activity	Resources	Outputs	Time Frame
Approach MOF to discuss possibility of debt restructuring for PDAMs, debt to equity swaps, or debt forgiveness	MOF	Minutes of meeting, shared vision statement reached by EFT and MOF	April, 2005
Use the vision statement as a foundation in assisting MOF to alleviate the debt burden problem, and identify workplan activities as necessary	TBD	Workplan activities, resources and outputs necessary for assisting MOF	June 2005
Create scope of work for special study that would identify legal preconditions as well as work plan needed to create independent, local water regulatory commissions in the provinces	MFO STTA	Scope of work; commissioned report on required preconditions and workplan activities, resources and outputs necessary for creating independent, local water regulatory boards in the provinces	September 2005
Work with PDAMs/PEMDAs/DPRDs in selected areas to build up community support for independent regulatory commissions	SDO, MFO, STTA	Scope of work, commissioned report	December 2005
Based on political will evidenced in PEMDAs and DPRD's, and recommendations outlined in special study identified above, implement work plan to assist PEMDAs in one or more high priority provinces to create independent regulatory commission(s)	MFO inputs unknown but potentially significant, STTA TBD	Workplan activities, resources and outputs necessary for assisting PEMDAs in creating independent regulatory commissions	March 2006

TASK FN-3:

ENSURE IMPROVED ACCESS OF WATER UTILITIES TO COMMERCIAL FINANCE

DESCRIPTION

At the conclusion of this subtask, MFO expects to have several demonstration projects in place that illustrate how government entities can raise commercial, or alternative, finance, including: (a) 1 agreement with a financial institution to micro-finance consumer water connections, 4 watershed master plans in place with the ultimate objective being to raise alternative finance for conservation purposes, 1 loan agreement executed on behalf of water

utility that will likely include a DCA guarantee, and a study on the feasibility of developing a bond bank at the national, or provincial level, to ensure the sustainability of commercial finance for PDAMs.

TARGETS

I agreement with a micro finance institution to micro-finance consumer water connections;
 Preparation of groundwork to raise alternative finance for conservation purposes, with 4 watershed master plans completed, including identification of commercial interventions
 I loan agreement on behalf of water utility, accompanied by DCA guarantee;
 Completed concept study on viability of developing a bond bank at the national or provincial level to ensure sustainability of commercial finance for PDAMs;
 Ongoing effort to assist municipality or province to issue a GO, or revenue bond in the local market

RESOURCES

mfo, stta

TIME FRAME

September 2006

SUBTASKS LEADING TO ACHIEVEMENT OF TARGETS

SUBTASK FN3-1 I AGREEMENT TO MICRO-FINANCE WATER CONNECTIONS

DESCRIPTION

At the conclusion of this subtask, the FN Office will have the following deliverables: (a) a master agreement covering the responsibilities of the participating bank and the PDAM in respect of consumer water connection financing; and (b) a portfolio of loans that, legal framework permitting, can be prepared for commercial paper issuance.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This sub-task activity improves market acceptance of PDAM financing and facilitates eventually all commercial finance targeted outcomes, including (a) use of DCA; (b) use of credit ratings to gain market acceptance; (c) mobilization of commercial finance through bank loans, vender finance, bond issuance and/or micro-credit.

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Identify financial institutions currently involved in micro financing, generally, and particularly those interested in micro-financing of water connections	MFO	List of financial institutions, to include Banks and leasing companies	April 2005

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Conduct first round interviews with the targeted banks (Mandiri, Niaga, BRI, NISP, Danamon) to determine their interest in the micro-financing of water connections or metering equipment	MFO	Minutes and assessment of interviews	May 2005
Identify Tier I PDAMs interested in expanding their capacity to finance water connections	Regional Teams	List of PDAMs interested in micro finance	June 2005
Introduce financial institutions to PDAMs and assist in developing working relationships	MFO, STTA	Memorandum of Understanding (MOU)	December 2005
Execute at least one working relationship between a PDAM and a finance company	MFO, STTA TBD	Formal Agreement between PDAM and financial institution	March 2006

SUBTASK FN3-2 4 WATERSHEDS BEING ASSISTED IN RAISING OF ALTERNATIVE FINANCE

DESCRIPTION

The MFO will collaborate with the Regional and Watershed Management Teams in developing watershed master plans and identifying potential commercial and non-commercial interventions that are capable of attracting alternative finance. It is also important for the MFO to identify within government any obstacles that might exist that would prevent the development of a framework of application of the alternative finance instruments. At the conclusion of this subtask, the FN Office will have the following deliverables: (a) 4 designated provinces to work with; (b) 4 watershed master plans for watershed management and development; (c) acquisition of a full set of policy and regulatory issues published by the Department of the Environment on the implementation of the Kyoto Protocol Clean Development Mechanism.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This Sub task most directly relates to the targeted outcome of raising alternative finance for at least 1 watershed by 2009 and, thereby, creating a demonstration project.

Activity Description	Resources	Outputs	Time frame
Draft scope of work for STTA to identify foundations and corporations in the US and Europe interested in investing in conservation instruments	MFO, STTA	Scope of work, and commissioned report with accompanying review	September 2005
Based on agreed target criteria and coordinating with Deputy COP and field offices, select watersheds that will constitute the key targets for mobilizing external finance (for conservation purposes) over the first 21 months	Field managers and Regional Teams, MFO, DCOP	Specific list of watershed targets	Sept-Dec 2005
Identify for each watershed area the specific type of money raising opportunity that will be pursued, and coordinate the development of a joint work plan with the field offices to recruit investors	Field Managers and Regional Teams, MFO	Conservation plan (with which to recruit investors)	Dec-Mar 2006

SUBTASK FN3-3 | COMMERCIAL AGREEMENT EXECUTED ON BEHALF OF WATER UTILITY

DESCRIPTION

At the conclusion of this sub task, there exists an agreement between one PDAM and either an investment consortium, a lender or vendor supporting a specific commercial relationship that brings additional capital to the designated PDAM.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

This subtask relates to the general goal of improving the perception of creditworthiness of PDAMs and/or developing market acceptance for their borrowings. In a more specific sense, the goal of raising finance also involves potentially the application of the DCA guarantee.

Activity Description	Resources	Outputs	Time frame
Develop a 'credit rating exercise' to determine how 3 selected PDAMs from Tier I Group would perform under a formal credit rating	MFO, STTA	Scope of work, Final Report on credit rating exercise	August 2005

FIRST ANNUAL WORK PLAN AND LIFE OF PROJECT PLAN

Activity Description	Resources	Outputs	Time frame
Select the optimal PDAM to work with in mobilizing external finance, based on relative ranking under the credit rating exercise, but also the marketability of the specific project it wants to implement	MFO	Minutes on evaluation exercise, based on Final Report, above; summary of specific project and marketability	December 2005
Secure a formal credit rating from PEFINDO for the selected PDAM and, if necessary, provide necessary assistance in developing offering documents and loan structuring (May require a DCA Guarantee)	Coordinate assistance needed by PEFINDO for credit rating; MFO for assisting PDAM in approaching commercial banks and negotiating terms and conditions	Formal credit rating for at least 1 PDAM	March 2006
Market the PDAM based on its formal credit rating to commercial bankers, vendors or institutional investors (via private placement) and help mobilize funding and negotiate terms and conditions (May require a DCA Guarantee)	MFO	Minutes of meetings with bankers or vendors	September 2006
Once Law 35 is in effect with its implementing rules and regulations, select the most creditworthy PEMDA interested in structuring a GO Bond or Revenue Bond and initiate process of structuring a transaction that can be taken to the bond market (May require a DCA Guarantee)	MFO	Specific Work Plan to be developed	Unknown, as this time frame is dependent upon Parliament and the passage of, as well as preparation of rules and regulations associated with Law 35

SUBTASK FN3-4 STUDY INITIATED TO DETERMINE IF A BOND BANK, CAN BE CREATED

DESCRIPTION

This policy initiative must be regarded as long-term one, as funding and legislation are required to create a statutory organization of this type. Essentially this organization, as currently conceived, would be funded through donors; would make loans on commercial basis to PDAMs; and, subsequently, re-package these loans for delivery to the capital

markets as pooled bonds, thereby enabling the bond bank to replenish its resources. This, in effect, would provide sustainable debt finance to PDAMs as well as be a source of pooled bond offerings in the domestic capital markets.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

The presence of a statutory organization dedicated to the water sector as a source of alternative finance would prompt PDAMs and PEMDAs to undertake serious water sector reforms such as installing independent regulatory bodies; achieving full recovery tariffs; entering into private partnerships for efficient water treatment and/or reduction of unaccounted for water (UFW); accessing high quality raw water; and/or otherwise, improving the infrastructure base and service quality.

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Discuss concept of a bond bank for PDAMs with MOF and donors (World Bank, ADB, JBIC, DfID) interested in providing loans to the government for the purpose of capitalizing the bank	Scheduled interviews to be done by MFO	Minutes of the meetings	July 2005
If there is interest in the concept, conduct a special study to determine what legal or regulatory impediments that need to be resolved	- MFO to draft scope of work - MFO to review report upon completion	Scope of work Commissioned report on bond bank	May depend partly on donor interest
Based on the requirements of interested donors and the outcome of the special study, devise a special work plan to create the bank, assisting the appropriate authorities as much as possible	MFO to draft up work plan for approval by project management	Work Plan	

SUBTASK FN3-5 FINANCING PLAN CONCEIVED AND DESIGNED FOR I BHS PROJECT

DESCRIPTION

This subtask is intended to capture project possibilities that spring out of sanitation, waste disposal or any other project that is related to the USAID BHS cluster of projects.

Financing of sanitation and waste disposal is likely to be the most difficult single task attempted by the MFO. The preliminary work plan below aims to start early in determining potential alternatives to consider in finding monies – public or private – with which to address this type of infrastructure.

RELATIONSHIP WITH OTHER TARGET OUTCOMES

There are no formally targeted outcomes that are affected by this task, other than the need to coordinate with SDO in the development of wastewater or waste disposal projects, and to divide those into two streams: those that (a) are commercially feasible; (b) require donor funding in order to be implemented. It is also desirable to coordinate with other contractors, the development of BHS projects that might be commercially feasible.

Activity	Inputs/Resources	Performance Milestone, Outputs or Deliverables	Time frame
Conjure up a jointly conceived strategy to raise money from donors and prepare presentation for this purpose	SDO and MFO	Presentation	June 2005
Approach donors to determine their interest in supporting sanitation and waste disposal activities in high priority provinces (JBIC, ADB, World Bank, DfiD)	SDO and MFO	Meeting minutes	August 2005
Conceive and design 2-3 alternative approaches to the financing of sanitation projects with a combination of private and/or public funding	SDO and MFO	Presentation	December 2005
Based on the most likely successful alternative, assess progress to date and outline a special work plan to identify specific target opportunities in sanitation and waste disposal and deadlines for achieving them	TBD	Detailed Work Plan	December 2005
Assist with the development and financing of any other project in the water sector that is relevant to the ESP/BHS Mission	TBD	TBD	TBD

ANNEXURE I

NETWORKING ACTIVITY: EXAMPLES OF KEY ORGANIZATIONS

A. POLICY, LEGAL AND REGULATORY FRAMEWORK INSTITUTIONS:

BAPPENAS, MINISTRY OF FORESTRY, MINISTRY OF ENVIRONMENT, MINISTRY OF HOME AFFAIRS, MINISTRY OF CULTURE AND TOURISM, MINISTRY OF FINANCE AND OTHERS WHICH ARE MEMBERS OF INTER-DEPARTMENTAL COMMITTEE OF FORESTRY AS WELL AS THE COORDINATING COMMITTEE OF INFRASTRUCTURE MINISTERS CREATED IN 2001 (PARTICULARLY ITS PDAM REVITALISATION “SUB COMMITTEE”)

B. FACILITATIVE AND/OR FINANCE-RELATED

- i. **DONOR INSTITUTIONS:** Asian Development Bank, World Bank, Japan Bank of International Cooperation
- ii. **CAPITAL MARKET ORGANISATIONS:**
 1. **MARKETS FOR SECURITIES TRADING:** Jakarta Stock Exchange, Surabaya Stock Exchange;
 2. **CREDIT RATING AGENCIES E.G.:** PEFINCO, Kasnik Duff and Phelps;
 3. **INVESTORS INTERESTED IN TAKING ON PRIVATELY PLACED DEBT:** Identify selected pension funds, life insurance companies, mutual fund companies, interested in taking on directly placed loan assets;
- iii. **COMMERCIAL BANKING ORGANISATIONS:** Select top 5-10 domestic and foreign commercial banks to visit, particularly Banks BRI, Danamon, NISP, Niaga
- iv. **MICRO-FINANCE INSTITUTIONS:** Select 5 micro finance institutions in Jakarta area to visit, particularly BRI and NISP
- v. **NOT-FOR-PROFIT:** Indonesian Business Links, Association of Water Companies, others to be identified

ANNEXURE II

CREATING INFORMATION CLEARINGHOUSE: RESOURCE DOCUMENTS AND REPORTS

A. LEGAL FRAMEWORK RESOURCE BASE (*Indicative List*)

- i. Laws 22 (1999), 25 (1999), 32(2004) and 33(2004) related to decentralization;
- ii. Water Resources Law 7 (2004) River Basin Management Authority / Corporation, including all 39 pieces of subordinate legislation;
- iii. Law 5 (1962) which concerns local government owned enterprises (BUMDs) along with (new and updated versions of) Draft Law on Local Government Owned Enterprises;
- iv. Permendagri 1 (1984), Procedures for developing BUMD;
- v. Keputusan Bersama (Joint Decree) of the Ministers of Home Affairs and the Minister of Public Works No. 5 and 28 (1984) concerning guidelines on organization, technical maintenance, structure and calculation of costs for determining the tariff, customer service, management of water supply and management of public taps for PDAM and BPAMs;
- vi. Permendagri 690-1572 of 8 November 1984 containing main regulations concerning Board of Supervisors, Directors and Personnel of PDAM;
- vii. Permendagri 1 of 1998, Guidelines for Tariff Setting in PDAM;
- viii. Kepmendagri 50 of 1999, Governance of Local Government Enterprises;
- ix. Kepmendagri 8 of 2000, Guidelines on PDAM Accounting System;
- x. Kepmendagri 34 of 2000, Guidelines on PDAM Personnel Mgmt;
- xi. Kepmendagri 43 of 2000, Guidelines on Cooperation Between PDAMs and Third Parties;
- xii. Keputusan 907, concerning quality of water;
- xiii. SE Mendagri 500/746, Basic Guidelines for Preparing Corporate Plans for BUMD;
- xiv. Law 17/2003 State Finances; and
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- iii. ADB, *Reform of Water Enterprises, Camp Dresser McKee International Inc and Associates*, June 2003;
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- ix. PERPAMSI's, *Establishment of a PDAM Benchmarking System, 2003 and Final Report on Water Enterprise Performance (2002)*, Mott MacDonald Ltd; and
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CHAPTER 6

REGIONAL WORK PLANS

6.0. REGIONAL WORK PLANS

This chapter contains Regional Work Plans for Aceh, North Sumatra, West Sumatra, West Java/DKI Jakarta and East Java. These Regional Work Plans are based on the previous three chapters which describe the main technical components of the ESP, namely Component 1 – Watershed Management and Biodiversity Conservation, Component 2 – Environmental Services Delivery, and Component 3 – Environmental Services Finance.

The basic “global” or “project-wide” work tasks, as described in the work plan for the three Components, will in general be carried out in all five HPPs. However, given that there are different needs in some of the provinces, and in particular Aceh Province, it is necessary to comments on some specific areas where work will be carried out, or in some cases the variations between the tasks as they may apply to specific provinces.

This chapter also includes a discussion with regard to the Special Concern Imperative Areas, and ESP’s approach to making interventions in those areas given the broader scope of ESP over the five HPPs.

6.1. REGIONAL WORKPLAN: NANGGROE ACEH DARUSSALAM (ACEH) PROVINCE

CONTEXT

Located in the northwestern corner of Indonesia, on the northern tip of the island of Sumatra, the Province of Nanggroe Aceh Darussalam (Aceh) occupies approximately 55,000 square kilometers. With a total population numbering 1.7 million people, the population density is the lowest of the ESP High Priority Provinces with only 76 persons per square kilometer. Banda Aceh, the largest metropolitan area in Aceh and the provincial capital, is the economic hub of the region.

Aceh contains a wealth of natural resources including natural gas and petroleum deposits. The harvesting of timber, rubber, and palm oils also contribute significantly to the regional economy. Notably, the south eastern section of Aceh is also home to Gunung Leuser National Park. Covering an area of nearly 950,000 hectares, Gunung Leuser is one of the largest national parks in Indonesia. Its diverse ecosystems range from steep alpine areas in the Bukit Barisan Mountains to swamps and rainforest in the lowlands, and is arguably the most important protected area in terms of biodiversity conservation on the entire island of Sumatra.

Aceh poses a number of unique challenges for the Environmental Services Program. Plagued by 30 years of civil war, development in the region has been greatly constrained. The region has suffered from insufficient infrastructure (including water and sanitation infrastructure) as well as limited institutional capacity. These chronic problems were greatly exacerbated by the tragic earthquake and tsunami disaster in late December 2004. The deluge of water

along coastal communities resulted in massive damage to the already ailing infrastructure and administrative systems. The administrative offices of the Banda Aceh PDAM, for example, were largely destroyed and only 25% of the original piping network remains operational. The map below identifies those areas of the Province that were most affected by the tsunami disaster.

ESP APPROACH IN ACEH

In late March 2005 USAID identified the Aceh Province as a High Priority Province due to the overarching technical and programmatic imperatives for environmental services following the earthquake and tsunami on 26 December, 2004. ESP is well positioned to provide strategic technical assistance, or 'software,' to strengthen the positive impact of the millions of dollars of government and donor assistance for 'hardware' during Aceh's reconstruction process. ESP works with government agencies, PDAMs, international and local NGOs and community organizations to ensure that investments today lead to long-term improvement of environmental services delivery.

Given the present condition of environmental services in Aceh, ESP prioritizes technical support for basic reconstruction and rehabilitation activities related directly to water supply, water sanitation, and solid waste management. As such, the majority of resources during the workplan period will be devoted to Service Delivery activities. Watershed Management and Biodiversity Conservation activities will play a supporting role, and will be focused principally on the identification and protection of raw water sources for the larger population centers. Activities related to Finance will be relatively limited in light of the large amounts of external funding that is currently available. The activities of each component are addressed in greater detail in the narrative below and in the bar chart of the following page. Based upon a rapid assessment of Aceh in February 2005 and subsequent inputs from USAID, ESP will initially focus on the town of Banda Aceh and the surrounding vicinity and then expand toward Calang and Meulaboh.

In addition to commencing the implementation of program activities, the first year also requires special attention to coordination with other international donors active. With a myriad of externally funded initiatives already underway in Aceh, it will be important for ESP to define its "niche" in the reconstruction and rehabilitation effort in order to avoid duplication and optimize the impact of the program.

Program Management. With the expansion of ESP into Aceh approved in March, the first major task related to program management is the opening of the program office and the mobilization of full time staff. ESP has already obtained appropriate office space in Banda Aceh and will work to make this office fully functional in April and May 2005. This will consist of establishing communications infrastructure, setting up computer systems, hiring additional support and technical staff, and training new staff in program operating procedures. Beyond office setup, other key management tasks include quarterly reporting, monthly financial reporting, and monitoring and evaluation. ESP is in discussions with USAID's MNCH to share office space in Banda Aceh and Meulaboh. ESP will be responsible for a Banda Aceh office, and provide working space to our MNCH partners. Conversely, MNCH will be responsible for a Meulaboh office, and provide working space to ESP staff.



Component I: Watershed Management and Biodiversity Conservation

Given the focus on Banda Aceh, initial activities under Component I will consist of the an assessment of the Krueng Aceh watershed, including the identification of raw water sources and the development of a detailed map of the watershed. Over time we will then seek to identify and implement a limited number of targeted activities in support of the protection of the raw water sources. Illustrative activities will include reforestation initiatives, farmer field schools, and public awareness campaigns.

Task WS I: Development of Watershed Management Plans

Sub-task WS I-1: Watershed Area Data Base/Map. A small forum of NGOs and GOI agencies involved in watershed management and biodiversity conservation has been created. This forum is focused on issues related to forest protection. Their concerns are related to, among other things, illegal logging. ESP will support the activities of this group and help them to develop a coordinated approach to watershed management and biodiversity conservation. Most notably this support will be delivered in the context of working on the development of databases that will provide a context for the forum to better identify necessary activities and create effective watershed policy.

Sub-task WS I-2: Creation of Hydrological Database/Map. The aquifer under Aceh Besar and Banda Aceh will have perhaps many hundreds of deep wells drilled into in the very short-term. There is no complete knowledge base of the aquifer nor any sense of the rate of success of drilling activities, salt water intrusion, or other important aquifer related issues. ESP in Aceh will facilitate a forum of organizations in the development of a hydrological data base.

Task WS II: Rubber Dam Repair

The embankment of the rubber dam protecting the intake of PDAM Tirta Daroy and Tirta Montala Water Treatment Plant from salt water was damaged during the earthquake that caused the tsunami in Aceh. While the dam itself still works, structural damage incurred by the embankments on each side of the river due to the earthquake could lead to riverbank erosion. This erosion would lead to the dam's becoming ineffective. The dam is located in the catchment area above the city and the city of Banda Aceh and thus is dealt with as part of the watershed management component. The Water Resource Division of Public Works has presented differing estimates of both damage and costs for repair. A second, outside, assessment needs to be made.

Sub-task WS II-1: Assess Damage and Construction Needs at Rubber Dam and Make Emergency Repairs. An independent structural engineer (STTA) will be contracted to assess the damage and construction needs at the rubber dam. This assessment will then be used for making immediate emergency repairs to the dam. The assessment will also be used to determine whether ESP can support further construction, recommend the project to others for funding, or return the assessment to Public Works for them to use in seeking project funding.

Component II: Service Delivery

There is an immediate need for Service Delivery especially as related to Water Supply. What is done in the short term related to Water Supply will create a foundation for successful activities in Sanitation in the long term. Service Delivery activities of ESP in Aceh are designed to position ESP strategically as a "player" in water and sanitation without expending a large amount of limited budgetary support. ESP will help PDAMs to make effective use of investments in them by donors and to help donors invest effectively in PDAMs so that communities are better served. The major goal of ESP in ACEH during this planning period is to achieve recognition that software is a key element in the reconstruction of tsunami devastated areas in ACEH and that ESP can be depended upon to deliver important software related to Water Supply and Sanitation.

Task SD I: Management Support for PDAMs in Banda Aceh, Aceh Besar, and Aceh Barat.

A key element in improved delivery of clean water in PDAMs in Banda Aceh, Aceh Besar, and Aceh Barat and eventual profitability of these agencies is the improvement of the management system. Tirta Daroy and Tirta Meureubo have lost records of connections, all three PDAMs lack effective corporate plans and senior staff, especially the inexperienced director in Banda Aceh, need training to help them become better managers.

Sub-task SD I-1: Users Survey of Tirta Daroy and Tirta Meureubo. PDAM Tirta Daroy in Banda Aceh and Tirta Meureubo in Aceh Barat have requested ESP to provide support in conducting a door-to-door household survey to collect data on current/potential water provision by PDAM. Most of the records in these two PDAMs were destroyed during the tsunami. There is a total lack of information about who is receiving service at this moment and condition of that service. Current billing efficiency is < 30%.

Sub-task SD I-2: Develop PDAM Corporate Plans of Tirta Daroy, Tirta Montala and Tirta Meureubo. PDAM Tirta Daroy, Tirta Montala and Tirta Meureubo have requested the ESP team to provide assistance to help them develop their Corporate Plans. The plans will help them to integrate the important aspects of PDAM operation and management. For PDAMs in Aceh good corporate plans will help them to link up with and

start coordination of ongoing/planned donor activities. These plans will be developed in a participatory manner with PDAMs and other stakeholders: owners, users and (where required) donor agencies. In order to support the planning process several activities will need to be implemented including training, development of SOP for primary PDAM operations, and strategic management training for directors, division heads, and section heads.

Task SD II: Water Quality Improvement.

PDAM Tirta Daroy and Tirta Meureubo have requested ESP/Aceh team to provide support in improving their laboratory facilities and to develop a Water Quality monitoring system. For the laboratories, ESP will make an inventory of existing and required equipment and staffing required to operate them properly. ESP will provide seconded staff during the first period to replace staff lost in the tsunami. ESP will leverage donor funds (like UNICEF/WHO) for necessary laboratory equipment and operating costs for period of workplan.

Task SD III: Water Treatment Plant Operations in Aceh Besar.

The PDAM Tirta Daroy and Tirta Montala both have water treatment plants in the village of Siron, Aceh Besar District. The plants are located near Temporary Living Centers (TLCs). UNICEF is interested in using water from the PDAM Tirta Montala plants to service the TLCs. The largest support is required for the plant to be operated by PDAM Tirta Montala Aceh Besar: The operating capacity of the WTP is 20 l/s. This plant was constructed by the provincial Public Works Department, but was never brought into operation. UNICEF is interested in supporting the operating costs for this WTP. Water from the plant could potentially replace the current 200 daily tanker shipments to TLCs at lower cost while freeing these tankers to service other TLCs. ESP will provide UNICEF with a feasibility study that will determine investment costs and operating costs. ESP will train operators concerning SOPs related to operating the WTP and dosing.

Sanitation

Sanitation is a critical issue in Banda Aceh and Meulaboh. However, the issue, as it plays out in Banda Aceh, concerns major investment projects in landfill rehabilitation and, eventually, the creation of a new landfill or sludge treatment plant rehabilitation or, eventually, the building of a new plant. The opportunity exists for action at the community or sub-community level in, for example, the development of communal septic systems.

The survey done with the PDAM will provide a basis for eventual activities at the community level related to sanitation. Probably the wisest use of limited resources at present is the development of a demand for small solutions to big problems.

Task SD IV: Developing Awareness of Community Approaches to Sanitation Issues.

NGOs and Government agencies could benefit from the application of community based approaches to sanitation issues. The SDT will conduct a workshop for government officials from program priority areas on this subject. To support this work and as a follow-up in Banda Aceh the ESP program will conduct a follow-up tailored to the needs of ACEH. ESP will also continue to play a role in water and sanitation meetings and discussions in Banda Aceh in order to be able to take action in case of an unforeseen opportunity.

The Principle Output of this task during the work plan period will be an increased understanding of community approaches to sanitation issues (eg. DEWATS and SANIMAS) and an increased demand of those approaches.

Component III: Finance

The ESP Team will provide information to government, PDAM and other partners on ESP capacity in financing, both in terms of leveraging investments for infrastructure development as well as identifying opportunities to generate rewards for effective environmental and watershed management initiatives. The Aceh Regional Advisor will maintain close contact with the Municipal Finance Advisor and his team, and will seek technical support as opportunities emerge. Given the current amount of government and donor investment in infrastructure development at this time, it is unlikely that significant work in this component will take place during the timeframe of this current workplan.

6.2. REGIONAL WORKPLAN: NORTH SUMATRA PROVINCE

CONTEXT

North Sumatra presents special challenges and opportunities for ESP. The province has a current population of some 12 million people, with over 2 million of these living in the city of Medan, often termed ‘the capitol of Sumatra’. Medan is a dominant trading city with strong connections to other ‘Straits cities’ including Kuala Lumpur, Penang, and Singapore as well as to other major urban hubs in Indonesia. The population comprises of a vibrant ethnic mix of Batak, Melayu, Javanese, Chinese, and Indian with each contributing its own religion, customs, culture, art, and music. Besides trade, North Sumatra has traditionally been a center for plantation agriculture for crops as palm oil, cacao, pulpwood, and rubber.

The natural environment of North Sumatra is rich and diverse, from the highlands in the north lying within the Leuser ecosystem, to southeastern coastal mangroves, to the islands off the west coast including earthquake hit Nias, to the world famous crater lake Danau Toba comprising the largest body of freshwater in Southeast Asia. However these natural riches are under threat due to logging, erosion, agricultural pressure, and increasing populations. In recent years there has been an increase in landslides, clean water shortages, and flash floods. The city of Medan, Indonesia’s third largest, is now subject to nearly ‘routine’ seasonal flooding. The once dense forests of Sumatra are being rapidly depleted for wood-based industries, as these diminish so do the vital habitats necessary for the survival of endangered species such as Sumatran tigers and orangutan. Fortunately, a range of experienced Government, NGO, and private partner agencies is ready and willing to partner with ESP in tackling these key issues. However, the transition to more decentralized governance has also brought some confusion concerning jurisdiction and control over vital resources including water and forests, resulting in disputes over resource use between local, provincial, and national government agencies.

North Sumatra is also home progressive and highly regarded public utility, PDAM Tirtanadi. This provincial government owned water utility has a highly professional reputation and assists in the management of 10 other local water utilities in the province. Tirtanadi provides the opportunity to explore innovations in public finance, management efficiency, and water resource conservation that can serve as prototypes for other cities in regionally and nationally. Tirtanadi, however, faces future challenges in securing adequate raw water supply as the city grows and as raw water sources become more polluted with higher levels of sediment resulting from pressure on upstream watersheds and domestic and industrial

pollution, including sand and rock mining. And as in most dense Asian cities built around river systems, the banks of the rivers flowing through Medan are lined with high density

The Nias Earthquake in March 2005 added another dimension to the North Sumatra program context. Having served as a staging ground for the Aceh Tsunami relief efforts, the Provincial Government acted quickly and surely in tackling the crisis. ESP provided early support to Tirtanadi as it worked to provide water to the mostly displaced population. ESP will continue to follow the situation in Nias as it evolves and provide support through our partners for restoration of access to water, and for improvement of watershed function.

ESP APPROACH IN NORTH SUMATRA

The ESP approach during the first year in North Sumatra be highlighted by:

- Initiating watershed management component activities by ‘building from the bottom’ of the social and institutional capital found within existing networks of NGO’s and community organizations. In many instances this will also involve collaboration with like-minded Government bodies such as the Environmental Regulatory Agency (BAPEDALDA)
- Moving aggressively in establishing a wide range of collaborative endeavors with PDAM Tirtanadi, beginning with assistance to overall corporate planning.
- Exploring alternative financing modalities that support watershed conservation while providing enhanced services to local communities.

The first year of the program will also be the ‘foundation period’ wherein the ESP program will seed to establish a solid basis for the 5 year program. Foundation activities will include:

- Recruiting and mobilizing a strong Regional ESP Team and putting into place an effective support system
- Developing necessary institutional linkages and relationships with key stakeholders at provincial, district, and community levels
- Working in a limited number of programmatically and geographically strategic sites
- Generating a full cross-section of activities as the groundwork for future scaling-up and scaling-out of program components
- Creating public awareness and building constituencies supportive of ESP initiatives
- Building collaborative partnerships with related USAID and US Government supported programs in health, food security, education, local governance, surface mining, and collaborative research (SeaGrants and USAID IPM CRSP)
- Piloting and documenting a full range of operational modalities and models, from upstream watershed to downstream community hygiene and health
- Creating, as experience accrues, a strategic ‘roadmap’ for future plans and activities

PROGRAM MANAGEMENT

The North Sumatra ESP Office was set-up and staffed during the first months of 2005, and the official launching of the USAID’s Basic Human Services Program and ESP took place in early March. Basic workplanning was accomplished as the program staff were recruited and networks with local organizations established.

The primary program site for the first year will be the Karo-Deli Serdang-Medan water resource system, especially the Deli River basin stretching from Sibayak mountain in Karo

District down to and through Medan. This system encapsulates a full set of ESP issues, opportunities, and challenges while being highly visible and accessible to ESP staff and partner agencies. Potential Partners including BAPEDALDA, JICA, JBIC, Danone-Aqua, BITRA, YES, SOCP, and others have active programs related to the Deli River while Tirtanadi draws over 1,000 liters a second from the river for one of their treatment plants. The watershed also includes several other small water utilities and the Sibolangit spring system.

Other opportunities and challenges presented include:

- A high number of critical/threatened protected areas in Karo and Deli Serdang districts caused by encroachment into protected areas(ex: small holder citrus), illegal logging, the new phenomenon of ‘topsoil piracy’, and surface mining for rock/gravel and dolomite/limestone.
- A burgeoning tourist, recreational, and residential building boom putting pressure on natural resources, infrastructure and existing spatial plans in areas such as Berastagi in Karo and portions of Deli Serdang easily accessible to Medan’s population.
- The high use of pesticides in agriculture in Karo and Deli Serdang. BAPPEDA Karo estimates that 50% of the total pesticides for the whole Province of North Sumatra are applied to agriculture in Karo District for vegetables and horticulture, immediately impacting human and environmental health. The local government, NGO’s and members of the farming community have begun to explore more safe, environmentally sound agricultural methods.
- The situation of “kehausan di pinggir sungai” or “thirsty beside the river’ as described by one local government official. Areas such as Karo may be rich in water, but many communities still do not have access to the improved water and sanitation facilities necessary for a more healthy life.
- A wide range of possible partners from Government agencies to NGO’s to community-based organizations exist in Karo and Deli Serdang..
- Deli Serdang and Karo Districts contain a wide range of communities engaged in forest harvesting, agriculture and agro-forestry, plus environmentally related private industry (juice producers, agri-business, water producers, etc.).

Nias Island will also receive attention during the first year. ESP will be ready to assist Tirtanadi in efforts to rebuild capacity of water systems, while if the situation permits assessments of the watershed will also begin later in the first year. Some preliminary activities in Service Delivery will be initiated in neighboring Langkat District whose Wampu River also begins in Karo District. Langkat District will most likely become a full fledge program area in the second year of the program.

Component I: Watershed Management and Biodiversity Conservation.

Under this component the North Sumatra ESP Team will focus on the upstream watersheds of the Deli River in Deli Serdang and Karo Districts while working to:

- Identify specific areas, and the respective communities comprised, directly impacting upon the quality and quantity of water resources for the Deli River and the Sibolangit Spring system
- Create social and institutional maps, as well as GIS, for the key watershed areas with special emphasis upon existing networks of community groups and organizations. For example, ESP activities can build upon the capacities of the FMPS (Community

Forum for River Conservation), local NGO's such as BITRA, and the IPM Farmers' Networks in both Deli Serdang and Karo Districts.

- Build multi-stakeholder forums (fora) from the bottom-up through joint participatory assessments, 'Up-Stream/Down-stream community cross visits', specific training, action research on topical issues (such as 'humus piracy'). As the capacities of the organizations comprising the forum grows, ESP activities can be increasingly channeled through forum members.
- Conduct awareness and educational campaigns with relevant partner organizations through schools, local media, 'horizontal' community forums.
- Develop sets of plans for activities supporting better watershed management, better protection of critical land, enhanced protection of biodiversity, and reduced pollution loads upon the environment.
- Organize and implement training and community based activities such as Farmer Field Schools for agro-forestry, vegetables, and water saving in rice and 'community tree nurseries' for landcare and rehabilitation, that generate concrete impact upon land and water pollution. In both Deli Serdang and Karo excessive pesticide and fertilizer loads and water wastage can be immediately and greatly reduced, community health improved, and farmer profits increased.
- Create public-private partnership in such areas as water conservation (for example via Danone and PDAM Tirtanadi which currently invests in conservation around the Sibolangit springs). Through BAPELDALDA work on such issues as mining of industrial minerals and water waste treatment
- Conduct policy advocacy with local government to influence policies and local resource allocation in support of watershed management and biodiversity. Leverage additional resources from projects such as the USAID IPM CRSP program which will support farmer training in Deli Serdang and Karo Districts through ESP.

Component II: Service Delivery.

In North Sumatra the Service Delivery component will be anchored by work with PDAM Tirtanadi. The existence of a highly professional public water utility in North Sumatra opens up a number of opportunities besides basic improvement of services. Early discussions have included the topics of better public advocacy, increased sewerage service coverage, promotion of community based-systems, and stewardship of upstream water conservation areas.

While PDAM Tirtanadi has a solid reputation, the same cannot be said of some of the other water utilities in the Deli-Serdang- Karo- and Langkat area. Many are loss generators deeply in debt and facing disgruntled consumers. A class action suit is currently being filed against one PDAM, another is accused of having heavy metals in its 'drinking water', another can produce water for only a few hours a day and hence has what one community group called "A 100% dissatisfaction rating". With these organizations, the basic core of training will be provided to improve effectiveness in delivering improved water to constituents.

Medan's large urban population also has its share of dense slums with spotty if any access to clean water. The classic sights of 'life and death by the river' are abundantly available in

Medan from any river bridge. These areas pose challenges to the development of community based, decentralized water and sanitation schemes that can be coupled directly with health and hygiene initiatives. It must also be noted that health and hygiene is not an urban problem as in numerous villages high in the watershed and along river systems there are problems with water access, pollution, and sanitation that can be addressed in an integrated manner by the ESP program.

PDAM Tirtanadi may also be in the position to explore and address some interesting new areas outside of the 'standard' performance improvement package including energy saving investments, 'new frontiers in Non-Revenue Water: from 20% down', and improved policy advocacy for sewerage handling.

For Sanitation ESP will invite government representatives from Medan and one more location to join a multi-city sanitation seminar at the end of June 2005 to introduce the sanitation concept and solicit interest in participation. Depending on their interest and (financial) commitment ESP will continue with a domestic sanitation program for North Sumatra (including sanitation strategy development and pilots for community based sanitation systems); in addition ESP has been requested to make assessment of current situation with Industrial Waste Water, because of high pollution around Medan.

There are also other partners in Medan working with water where collaboration is being explored including the JBIC supported Medan Flood control Project. An initial agreement is for ESP to work on the 'software', e.g. community organizing, education, public outreach, campaigns necessary for making a success of the JBIC investments in solid waste management for selected communities along the rivers in Medan.

Component III: Municipal Finance

The Municipal Finance Component will be interesting and challenging in Medan. A main focus for the first year will be upon PDAM Tirtanad. Some of the activities that will be undertaken in the Finance component will include:

- Analyzing the financial needs that emerge from work with PDAM Tirtanadi on their 5 year Corporate Plan. ESP will supply technical assistance to the analysis of financial as well as other operational and policy issues during collaboration on the Corporate Plan. This activity should provide a solid entry point to a range of interventions and assistance that will help PDAM Tirtanadi meet its financial challenges. Challenges faced by PDAM Tirtanadi include:
- Obtaining investment for the expansion of the urban sewerage system
- Generating funding for securing adequate raw water supplies for coming years of forecast greater demand
- Incorporating policy supportive of upstream water conservation and finding funding sources internally (tariff increases, budget allocations) and externally (local, national, alternative investment/subsidy, credit, etc.) to support these initiatives
- Exploring credit rating systems and availability of programs such as DCA to support investment in Tirtanadi for improved and expanded services and better access to water for poor and marginalized communities.

- Developing better public relations and advocacy ‘interfaces’ with community groups, local parliament, the press, NGO’s and even government agencies at the provincial and district levels such that new policy directions and investments can obtain support from the public and from representative bodies.

6.3. REGIONAL WORKPLAN: WEST SUMATRA PROVINCE

CONTEXT

West Sumatra is located along the western coast of the island of Sumatra. With an area of 42,297 square kilometers, it is surrounded by the Indian Ocean to the west, North Sumatra to the north, Riau and Jambi to the east, and Bengkulu to the south. The capital of West Sumatra province is Padang. The population of West Sumatra is 4.4 million, with an average population density of 104 people per square kilometer. The population is dominated by the rich Minangkabau culture, which is predominantly Muslim. The province has a large number of environmental assets that include soil and terrain, water resources and large conservation areas with high biodiversity potential. Its humid climate is characterized by relatively high annual rainfall ranging from about 2000 – 4000 mm. The dry season is also relatively short with no major limitation to growing season. The province consists of flat coastal plains with large areas of irrigated rice and coastal fisheries. Central part consist of steep hilly and mountainous terrain with inter mountainous lacustrine and alluvial plains and several major lakes such as Lake Singkarak, Maninjau, Diatas and Dibawah.

Intermountainous plains support large scale gravity irrigation while steep hills and mountain are characterized by dry land tree crops agriculture and extensive areas of forest. The province is also rich in minerals, heavy metals, coal, limestone, rocks providing building materials and also gold. Open cast mining and cement production are key economic activities in the province. Marine fisheries and logging also contributed to the local economy. Estate agriculture produces palm oil, rubber, tea, coffee, cinnamon, clove, nutmeg, gambir and coconut. High altitude areas produce temperate vegetables and fruits. There is very high ecotourism potential that has not been fully utilized. Mentawai Islands along the western coast are becoming major tourist surfing destination. The province has good road communications infrastructure, railway network (although not used over past few years) and marine and air transportation with links to overseas destinations such as Singapore and Kuala Lumpur. Abundant rivers and lakes support hydro-power generation (PLTA Maninjau, PLTA Singkarak, PLTA Kotopanjang, and PLTA Agam). The power plants also supply power to neighboring provinces. There are 22 small watersheds draining to the sea in the west while watersheds Batang Hari, Batang Kuantan, Kampar and Rokan drain to the east to neighboring provinces of Riau and Jambi. Mentawai Island is classified as a separate watershed.

Increased pressure on land resources has resulted in logging and deforestation in some upper catchments such as in Batang Hari, Batang Kuantan and catchments of lakes and reservoirs that provide water supply. In recent years there have been power shortages in dry season indicating water resources management problems and competition for water resources. Piped water supply by PDAM is provided only in Padang, Solok, Bukittinggi and Tanahdatar to less than 50% of urban population. There are no waste water treatment

plants and no piped or covered sewage system, only open drains and septic tanks. Some areas are known to have high incidence of diseases related to water transmission such as diarrhea in selected locations. There is also need for better solid waste management especially in large population centers like Padang.

New regional autonomy laws have provided more democratic platform on one hand but also complications in natural resources management and use of water and land resources. Recently, there has been accelerated degradation in watersheds and increase in floods, land slides, disruptions in water supply and increased competition for water resources. Illegal logging has resulted in damage to provincial biodiversity potential, water shortages in dry season and flooding in wet season. There is a need for support and strengthening of good governance in natural resources and especially water resources management. Present situation requires increased emphasis on application of integrated watershed management principles. Also issues such as cross boundary water supply between cities, districts and across provincial boundaries affect economic development in the province. Mechanism of payments for benefits in lower watersheds generated by rehabilitation effort in the upper watersheds is still a major resources management problem that will have to be solved.

ESP APPROACH IN WEST SUMATRA

The quality of basic human services including health, sanitation, access to water and availability of clean water, quality of food and nutrition are among key issues in the development of the West Sumatra province.

Increasing the quality of basic human services in the province will need implementation of a comprehensive and integrated mechanism of participatory planning and sustainable use of natural resources by multi-stakeholders within the integrated watershed management framework. There is also a need to provide effective management, control and warning systems for dealing with environmental hazards such as floods, flash floods, land slides, volcanic activities, effect of Tsunami and earthquakes.

The ESP team in West Sumatra is systematically assessing watershed degradation and needs for rehabilitation and conservation of water and land resources including environmentally sensitive assets using a number of watershed target indicators. This assessment will be used in providing relevant background data for improvement of water quality, improved PDAM management of water resource, solid waste management and improvement of health and sanitation in the province.

Given the present condition of environmental services in West Sumatra, ESP will focus on land rehabilitation of critical lands, watershed management activities related to support of establishment of agro business, agro processing, protection of water supply sources, integrated community development and activities related directly to water supply, water sanitation, and solid waste management. As such, the majority of resources during the work plan period will be devoted to Components I and II. Watershed management will play key role in establishment of agroforestry and land rehabilitation and provide and will be focused principally on the identification and protection of raw water sources for the larger population centers.

Activities related to Component III – Environmental Finance – will be aimed at incorporation of watershed management in support of PDAM activities using , establishment of integrated community development using market mechanism and PPP initiatives. The activities of each

component are addressed in greater detail in the narrative below and in the bar chart of the following page.

In addition to commencing the implementation of program activities, special attention will be placed on coordination with other USAID programs and their activities in West Sumatra. ESP will also identify other suitable projects and programs within the West Sumatra and within the region that may support financing and implementation of the ESP goals.

PROGRAM MANAGEMENT

The first tasks related to program management are the opening of the program office and the mobilization of full time ESP staff. The office was functional in February and completely equipped with IT and staff by May 2005. This included establishment of communications infrastructure, setting up computer systems, hiring professional, support and technical staff, and training new staff in program operating procedures. Beyond office setup, other key management tasks include quarterly reporting, monthly financial reporting, and monitoring and evaluation.

Component I: Watershed Management and Biodiversity Conservation.

Component I consists of the an assessment and watershed plans for the Batang Kuantan, Batang Hari, Batang Arau and watersheds. This includes identification of actual critical lands, identification of agro forestry and agro – processing rehabilitation centers, protection of PDAM and raw water sources, protection of biodiversity assets and the development of semi - detailed maps of the watershed. We will then seek to identify and implement a limited number of targeted activities in support of the protection of the land rehabilitation establishment of integrated agroforestry and community development (including establishment of village nurseries), establishment of project aimed at incorporation of Kyoto mechanism target program, protection of biodiversity assets and improved quality of PDAM and raw water supply sources. Illustrative activities include reforestation initiatives, agronomic measures in land rehabilitation, management of environmental hazards support, establishment of farmer field schools, and public awareness campaigns.

Component II: Service Delivery.

Component II will provide support for PDAM and community raw water supply sources and supply facilities in the following locations:, Solok district, Solok town, Tanah Datar dstrict, Bukittinggi town.

ESP will work with local governments, NGOs, community groups, universities, private sector and PDAMs on strengthening the service delivery. With regards to clean water delivery, significant focus is given to PDAMs. ESP adopts a three-pronged approach to improving the quality and availability of water and sanitation services in the target areas: 1) improve PDAM performance (business and quality of services, including tariff reviews, reduction of non-revenue water, energy reduction measures and water quality improvements), 2) promote customer-service orientation and citizen involvement, 3) implement organizational reform in PDAMs to provide for sustainability, primarily through stakeholder seminars, PDAM corporate planning and PDAM benchmarking. All activities will be implemented largely through provision of technical expertise, training and other capacity-building activities. Implementation in all three fields, along with health and hygiene initiatives, will proceed concurrently.

For Sanitation ESP will invite government representatives from two of the above locations to join a multi-city sanitation seminar at the end of June 2005 to introduce the sanitation concept and solicit interest in participation. Depending on their interest and (financial) commitment ESP will continue with sanitation for West Sumatra.

Component III: Municipal Finance.

Component III will provide support for economic and financial strategies and financing of PDAM and selected community water supply facilities. This component will use concept of incorporating the watershed management component activities in corporate plans of PDAMs and management plans of selected locations with community water supply systems. Entry point for financial support of PDAMs will be respective corporate plans. Investment proposals at feasibility level will be aimed at support of improving reservoir capacities for gravity fed water supply to cities and spring water protection for PDAM and community water supply facilities. In two selected locations incorporation of the Kyoto mechanism target program for CO₂ emissions reduction will be considered and applied within the financing program. This will also include protection of biodiversity assets for improvement of quality of PDAM and raw water supply sources.

6.4. REGIONAL WORKPLAN: WEST JAVA PROVINCE AND DKI JAKARTA

CONTEXT

The province of West Java is located on the island of Java and the capital is Bandung. With a population of approximately 38 million, West Java is the most populous province in Indonesia. It has an area of 34,736 square kilometers. West Java borders Jakarta and Banten province to the West, and Central Java to the East. To the North is the Java Sea, and to the South is the Indian Ocean. The capital, Bandung, is located in highly mountainous area and completely surrounded by mountains.

The Province of West Java has natural resources that have not been optimally exploited, including such sectors as agriculture, forestry, tourism industry and mining. West Java, being adjacent to DKI Jakarta as a center of trade and services, is a support area and a buffer area for the development of the capital city. West Java is also a center of industries for Indonesia as demonstrated by a large number of industries (metallic products, textile, food industry) scattered throughout the province.

Water is a defining aspect of the West Java landscape, and an integral part of the culture and way of life of the West Java community. The availability of water for domestic, agricultural and industrial use is now at a crisis. Water deficits are impacting on basic human needs in the province. The degradation of upper watersheds through deforestation has resulted in increased incidence of flooding and erosion that impact the overall economy of the area. Groundwater from deep aquifers has been increasingly heavily exploited.

Water services reform is a key element of the development of West Java's economy. The West Java Government has decided to provide a program of reform that they can facilitate in conjunction with private sector investors. The aim of the program is to provide clean water to all properties within West Java. ESP objectives are in line with the West Java initiatives, and are reflected in the two catchment areas for ESP activities in West Java during the course of this first workplan.

ESP will commence work in two catchment areas, Burangrang-Tangkuban Perahu catchment area and the Gede Pangrango catchment area. A third catchment area is Ceremai catchment area of which ESP anticipates to work in that location in the third year of the program. The two catchment areas are close to Jakarta where the project office is located and the political will of the government of the districts and municipalities located in these catchments is very high. The environmental and clean water issues in both catchments are complex. However, integration of all activities in the upstream and down stream will smooth the successes of the program in the two areas.

The Burangrang-Tangkuban Perahu is the main catchment providing water to almost the entire northern area of West Java, including Jakarta. Industries, agriculture, mining, electricity and domestic uses depend on their water from this catchment area.

Gede Pangrango plays an important role in the wider West Java context. More than 60 rivers flow from the catchment area. The area downstream is subject to heavy flooding. Therefore, Gede Pangrango National Park watershed forests support important hydrological functions, as well as providing water for agricultural, industrial and domestic uses.

ESP activities in West Java uses water as an integrating theme to bring together watershed management and water resource conservation with improved and expanded access to clean water delivery and solid waste management will contribute to healthy people and ecosystem in the project area.



DKI Jakarta

Jakarta, the capital city, with its population of approximately 10 million, is located in the western part of Java and its size is only 650 square kilometers. Like in other countries, the capital city is the major attraction for the rural population. Jakarta is surrounded by large urban – industrial regions, Bogor-Tangerang-Bekasi and together with DKI Jakarta is named as Jabotabek. DKI Jakarta has 43 sub districts and 265 urban villages or *kelurahans*. The large population in DKI Jakarta and increased concentration of industries in Jabotabek area makes it difficult for Jakarta to achieve cleaner, healthier, and more attractive urban environment. A large share of the DKI Jakarta population (53%) is dependent of ground water for drinking, despite high population density and high faecal and chemical contamination. Sanitation and solid waste management is the main dilemma in DKI Jakarta. The government assisted by many foreign donors through programs funded through loan and grant funds is trying to respond to the problems facing the population of DKI Jakarta.

ESP APPROACH IN WEST JAVA AND DKI JAKARTA

Given the present condition of environmental services in West Java and DKI Jakarta, ESP will collaborate with the provincial and a number of district and municipal governments in West Java to prioritize rehabilitation activities in the sector of watershed management, water supply, water sanitation and solid waste management. In the case of DKI Jakarta, ESP will work with government agencies, environmental NGOs (e.g., Bappenas, Kimpraswil, LH, Kesra, DepKes, and DKI Jaya) and other donors to collect information on clean water supply, sanitation and solid waste management programs conducted by other donors during the last three years and explore innovative programs (e.g., public awareness and communication and outreach programs) that have the potential of reducing the water supply, sanitation and solid waste and related health problems facing the Jakarta peri-urban population.

As mentioned above, for the first year in West Java, ESP selects two catchments, Burangrang Tangkuban Perahu and Gunung Gede Pangrango, which cover the districts of Subang, Purwakarta, Bandung, Cianjur, Sukabumi, and Bogor, and the municipalities of Bandung, Sukabumi, and Bogor. Intensified economic activity and industrialization, increasing population pressure, mismanagement of public water utilities, rapid degradation of watershed areas, and lack of environmental regulation and enforcement, have led to increasing problems in water supply, water quality, and stressed water distribution systems in these two catchments which heavily impacted the basic human needs in the above mentioned districts and municipalities.

To improve the environmental and ecological function of the two catchments, ESP will initially focus on the watershed areas located in the district of Subang and Cianjur with innovative activities in the areas of improved watershed management, protected areas management and biodiversity conservation, agro-forestry and other environmental friendly livelihood programs.

As there are increasing problems in water supply, sanitation and solid waste management including the management of institutions that deals with those issues in the districts and municipalities mentioned above, initially ESP will work with PDAMs in the selected areas to improve the performance of PDAMs. In addition, ESP will also explore a number of innovative activities in the sanitation and solid waste management sector in one or two municipalities located in the two catchments of Burangrang Tangkuban Perahu and Gede Pangrango.

Initial Health and Hygiene programs including baseline surveys and public awareness programs will be conducted in the districts and municipalities within the Burangrang Tangkuban Perahu and Gede Pangrango catchments in the first year of the program.

In implementing the ESP program in West Java, collaboration with other USAID programs such as Safe Water System Program (SWS), Maternal-Newborn-Child Health Program (MNCH) and the Local Government Support Program (LGSP) is crucial in order to obtain the ultimate benefit of the program.

PROGRAM MANAGEMENT

The West Java and the DKI Jakarta team are located in the ESP Jakarta Office to better integrate the national and local activities. This team reports directly to the West Java/DKI Jakarta Regional Advisor.

Considering that the West Java watershed management team will devote much of their time in the field, it is planned to have a field office in one of the districts in order that grass-root communities will feel comfortable to come in, to plan, design and implement activities with other community groups in selected areas.

ESP has already socialized the ESP program to the district governments and municipalities including the PDAMs located in the two catchments. The program has been well received since it fits to their economic development goal. As for the initial year, the watershed management team has focused the program in two important districts of Subang and Cianjur. Both district governments have offered an office space for ESP. While ESP keeps on exploring innovative activities with PDAMs, discussion with all stakeholders in the district of Subang and Cianjur will continue to identify priority activities and sites for ESP program implementation.

In DKI Jakarta, ESP will map out donors and NGOs who have assisted the DKI Jakarta government in the water supply, sanitation and solid waste management sector and will explore pioneering activities that ESP can assist.

All activities in both provinces will closely be monitored and evaluated, and reported.

Component I: Watershed Management and Biodiversity Conservation

Given the existing issues of watershed management and biodiversity conservation in both catchment areas of Burangrang-Tangkuban Perahu and Gunung Gede Pangrango, ESP will map the watershed areas and identify stakeholders to plan, prepare and develop the watershed forums and watershed plans for two important districts, Subang and Cianjur. ESP will also plan to identify specific activities to support the watershed management plans such as livelihood/farmer field school, agro-forestry programs that will be implemented in the districts of Subang and Cianjur and will support the forums in coordination and implementation of the watershed management plans.

In addition, ESP will support protected areas management agencies and other groups in the improved conservation of biodiversity as stipulated in the watershed management plan. Furthermore, restoration campaign programs for the upper and lower watershed communities will be conducted and ESP will assist in establishing and capacity building of local community groups and network to promote improved stewardship, restoration and management of natural resource, ecological systems, and biodiversity.

Over the course of this workplan, all program impacts and best practices will start in limited areas to develop a strong foundation of success. Over time, ESP activities will be expanded within priority catchments and then expanded into new catchments.

Component II: Service Delivery

The outcome of the PDAM priority assessment indicated that Municipal Water Supply component should work with seven PDAMs situated within the Burangrang Tangkuban Perahu and Gunung Gede Pangrango catchment areas: the districts of Subang, Purwakarta, Cianjur, Sukabumi and the municipalities of Bandung, Sukabumi, and Bogor. TA support includes institutional strengthening (corporate planning, benchmarking, training, customer relations), technical activities (reduction of non-revenue water, water quality monitoring and GIS) and financial topics (tariff review, billing systems). The Technical Assistance will provide a combination of short term technical assistance (STTA), classroom and on-the-job training, seminars/workshops, studies, exposure and (limited) pilot activities. MoU's will be prepared

for a formal cooperation with respective PDAMs. Also a relation will be made with the Provincial Perpamsi office to assist in the coordination of activities and replication the experiences to other locations within the Province of West –Java.

A limited program will be started for direct support to poorer communities, not (yet) connected to piped (PDAM) supply; this will be done in cooperation with local NGO's for urban slums in Jakarta and Bandung.

For the Sanitation part, ESP will start in two locations in for first workplan. We have made agreement with the PDAM Bandung to support a holistic sanitation program for Bandung municipality, covering the centralized sewerage system, community based sanitation systems and the sludge collection/treatment systems. They have already agreed on cost sharing for several community based sanitation systems. In DKI Jakarta, ESP has already developed a strong relation with PD PAL, which is responsible for a centralized sewerage system in down-town Jakarta. ESP assistance will focus on developing a stronger stakeholder participation/support for a sustainable development and expansion of this system, especially with the Provincial Government Department responsible for urban sanitation in Jakarta (Dinas PU, Bappeda and BPLHD).

To start of the ESP community solid waste program cooperation will be made with local community groups in Bandung district, who have already started on a limited scale with a solid waste system; also experience by BEST (local NGO in Tangerang) will be explored for possible replication in slum areas in Jakarta.

Component III: Municipal Finance

In West Java, the Municipal Finance Team will focus their activities in the district of Bogor and will provide technical assistance in specialized areas related to:

- (a) Water conservation, to include potential conservation actions and alternative financing related to raw water quantity and quality drawn from Bogor District;
- (b) Technical options available to enhance operational efficiencies in service delivery with emphasis on priority needs and improvements, i.e., non-revenue water (“NRW”), energy conservation, billing and collections, training, management and organization and/or any other such areas identified by management;
- (c) Determining capital expenditure (“CAPEX”) to be undertaken during the Plan, costs involved, phasing of expenditure as well as options with regard to potential sources of finance;
- (d) Development of a preliminary financing plan and an assessment of its implications for tariff and, particularly, the tariff petitions to be submitted in 2006 and 2008; and
- (e) Determining scope and content of assistance for,
 - i. Customer and tariff advocacy follow-on work in relation to the Plan that should be undertaken by ESP to ensure optimum outcome for the tariff petition in 2006;
 - ii. Advocacy for training and/or the mobilization of finance to be done by ESP pursuant to the completion of the Plan; and
 - iii. Advocacy or technical support in relation to debt restructuring/rescheduling with Ministry of Finance of current debts owed to RDA/SLA fund.
- (f) Conducting a Short Term Technical Assistance for the purpose of,
 - i. Conducting a feasibility study to determine the operational and financial viability of Tirta Pakuan, and the applicable CAPEX financing arrangement according to it;

- ii. Advocating with the DPRD the necessary adjustment to the Tirta Pakuan's tariff;
- iii. Facilitating the meeting of Tirta Pakuan and the potential financial institutions.

These activities in the district of Bogor will be conducted all the way through from year one to the end of the ESP program in year 2009. Best practices of the activities will be replicated to other districts or municipalities within the Burangrang Tangkuban Perahu and Gede Pangrango catchment areas.

6.5. REGIONAL WORKPLAN: EAST JAVA PROVINCE

CONTEXT

East Java is the second most populated province in Indonesia, with more than 35 million people. The province has numerous climatic and edaphic constraints to sustaining the conditions for production of food and the basic processes necessary to support life. Rainfall is lower and the dry season longer than in the provinces further to the West. While East Java has many volcanoes producing fertile deep basaltic soils, these are highly erodible and dependent upon maintaining a vegetation cover for them to act effectively for soil water storage and sustainable water yield through the dry season. To the north east and the east of the province, including the Island of Madura and along much of the south coast, the climatic, geological and soil constraints increase with extensive areas of limestone, yielding shallow soils with poor soil water storage. These are also highly erodible.

These environmental conditions have been exacerbated by a history of poor land use practices resulting in loss of forest cover and serious soil erosion dating from colonial times but accelerating in the past ten years in combination with economic difficulties, increased poverty and a reduced capacity of inexperienced and under-funded local governments to enforce regulations. Deforestation of upper watersheds through conversion to short cycle annual crops and vegetables has become a serious problem for watershed managers. All major watersheds in East Java have extensive areas of Critical Land, so classified because of their limited vegetation and severe erosion. In key areas of the upper Brantas Watershed as many as 50% of the springs have dried up in recent years as a result of forest clearing, erosion, quarrying and conversion to vegetable gardens.

A proliferation of landless and impoverished slum communities in the cities has led to dense and unregulated settlement at lower elevations, often on public lands. The pattern of increasingly dense settlement throughout central East Java is having serious impacts on surface and ground water quality through uncontrolled sewage and solid waste disposal. Especially in the lower reaches of the Brantas River system there has been extensive industrial expansion resulting in high organic and inorganic pollution of surface waters. The combined impact of domestic and industrial pollution has further limited the availability of water for human purposes and imposed heavy financial loads on public water suppliers, required to treat surface water prior to distribution.

The function of ESP in East Java will be to investigate these resource management dilemmas in conjunction with stakeholders in province and local government; in business, and in civil society. The goal will be to facilitate activities that will lead to sustained solutions through behavioral change in affected communities, improved governance and improved and sustained supply of freshwater as the vehicle for improved quality of life. Recognizing the diversity and complexity of the circumstances affecting the quality of life of urban and rural communities alike in East Java, ESP will seek to build a broad coverage of action through case study examples representing the range of economic, institutional, cultural and land use conditions.

ESP APPROACH IN EAST JAVA

The initial 21 month phase of the project will focus on three integrated regions known to represent different biophysical, institutional and social circumstances. This focus will also allow a detailed understanding, through data collection and analysis, of the variation and potential for improvement of health, water supply and environmental management throughout the province. The evolving data base combined with the experience obtained in the initial 21 month phase will result in significant progress to ESP objectives, while laying the basis for provincial and national scaling-up of the activities and lessons, over the subsequent life of the project.

The ESP program for East Java emphasizes an understanding and demonstration of the integrated nature of water resource yield; human utilization, treatment and distribution, and the downstream economic, health and social impacts, when the ecological functions of watersheds are diminished or destroyed. The flow of water is one of the strongest integrating processes in a landscape. Recognition of this factor has been instrumental in determining the geographical focus of the work and the methodology being adopted.

Accordingly, it is proposed to engage three local government clusters in the first phase of the program. The clusters have been identified and defined by considering the integrating nature of water as well as other powerful social and economic linkages that make it difficult to consider single administrative jurisdictions on their own. By adopting this approach ESP is acknowledging the complexity of the province and the cross boundary aspects of the ESP concept. These cross boundary aspects are inherent in the nature of the water sources used by the PDAM's. The three clusters proposed are:

- Malang Raya, involving the Cities of Malang and Batu and the District of Malang.
- The central east coast, involving the Cities of Pasuruan and Surabaya and the Districts of Pasuruan, Sidoarjo and Gresik
- The island of Madura comprising the Districts of Bangkalan, Sampang, Pamekasan and Sumenep.

Of these, the sequence of engagement will be Malang Raya, then the east coast cluster and finally Madura.

The concept of Malang Raya is relatively new and now integrated into administrative planning at the province and local level. Activities are coordinated through the BAPPEDA of Malang City. The integration of the three local governments is further emphasized by the complex arrangement of water management and resources tenure among the three; while their geographical location in the Malang Basin in the headwaters of the Brantas make it impossible to single out one administration from an ecological perspective.

The coastal cluster needs also to be treated as an integrated whole because of issues of demography and population trends, because of the distribution of industry and because they all lie basically within the Brantas delta. In terms of water supply to their respective PDAM's they share common problems in the extraction and treatment of surface water from the Brantas and its distributaries and they are linked in a complex way through existing or proposed use and "ownership" of the Umbulan Spring in Pasuruan. The proposed upgrading of Umbulan spring as a water source, with funding from the World Bank and the equitable distribution of water through a new pipeline linking Pasuruan to Gresik through Sidoarjo and Surabaya will require an integrated approach.

The Madura cluster represents four PDAM's which utilize surface water and ground water wells, in a relatively impoverished and politically and culturally dynamic location, where the quality and quantity of water access is quite underdeveloped. The imperative to commence work on Madura with a particular focus on the western end in Bangkalen recognizes the potential social and environmental difficulties which may be expected to unfold with the completion of the Surabaya-Madura bridge, presently under construction. Its completion is expected to generate a rapid expansion of population and industry as it will provide access to potential new port development. This expansion will undoubtedly impact on issues of water supply and sanitation.

The three proposed clusters encompass a significant percentage of the area and the population of the Province. While ambitious, the proposed methodology will allow this broad coverage through a staged multi-level approach to engagement through each of the program components as explained further below. Broad assessment of the operating status and issues confronting water distribution from 12 PDAM utilizing national assessment pro-forma will permit selection and focus on individual operational requirements necessary to improve water quality and distribution in individual local government areas. This will permit effective and efficient targeted technical assistance while creating from the outset an understanding of the environmental context necessary for scaling up to provincial and national levels in subsequent years. Similar initial broader scale geographic and demographic assessment will create the environmental context for scaling up lessons learned and achievements in the areas of health and in improved watershed management and biodiversity conservation. In both these areas of activity field interventions will be closely targeted geographically to achieve sufficient depth and rigor.

The initial locations have also been chosen to maximize opportunities for close coordination and collaboration between the interrelated projects under the Basic Human Services strategic Objective.

In the implementation of the new Decentralization Acts 32 and 33, there has been a significant shift towards greater direct powers for the Governor over local government. In East Java the Province Government wishes to apply these powers through proactive approaches to coordination and planning through the Provincial Planning Board (BAPPROV) and the coordinating functions of the Governor's office acting through Local Government Coordinating Boards (BAKOWIL) assigned to regional local government groupings.

PROGRAM MANAGEMENT

ESP commenced preparatory work in East Java in late January with negotiations over suitable office space and interviews with long term staff.

By mid-May the East Java office was fully functional with networked communications in place and all but one of the long term technical, administrative and support staff recruited and mobilized. The final professional appointment has been selected and is expected to mobilize at the beginning of July.

By mid June it is expected that standard office policies and procedures will be in place and being followed consistently by all staff, facilitating other key management tasks including quarterly reporting, monthly financial reporting, monitoring and evaluation.

Socialisation and promotion of ESP concept and goals commenced in February but is expected to be a progressive process through meetings, presentations and other forms of outreach for at least six months as stakeholder meetings and focus groups involving government and civil society organizations continue. The extended allocation of time to this process recognizes the complexity of achieving a practical understanding of the interrelationships within the project and the challenges that a cross sectoral approach brings to established management structures.

The East Java ESP office recognizes the importance of maintaining a public service to stakeholders and will establish an ESP information clearing house with electronic linkages to partners. This will be a continuing process but is expected to be in a position to offer access to key publications and other documentation by the end of September 2005.

Component I: Watershed Management and Biodiversity Conservation.

Depending on location, water for domestic purposes is sourced by PDAM and other water businesses from springs, rivers or ground water. The ecological and economic sustainability of these sources is determined by the rate of yield and also the quality of the water. Typically, spring water is the most pure and requires least treatment, whereas river water and groundwater may be contaminated with the cost of treatment a significant factor in the financial viability of a PDAM.

ESP will also focus on biodiversity conservation, and build links between biodiversity conservation, forest restoration and critical land rehabilitation, and community livelihoods development in and around protected areas in the upper watersheds. Protected areas of primary importance during the timeframe of this first workplan include Bromo Tengger Semeru National Park and Raden Suryo Grand Forest Park.

The selection of sites in the first phase of the ESP in East Java will seek locations representative of these three water sources. Here interaction with the communities and an understanding of the forms of their land use will lead to practical solutions for improved ecological restoration or preservation, specific to circumstances which we expect to be replicated elsewhere in the province, thus facilitating an expansion of the project activities in subsequent years.

In the Malang cluster, it is expected that work will progress in the upper tracts of the Sumber Brantas sub-DAS mainly within the boundaries of the city of Batu where it is known that some 50% of the springs have already ceased to function as a result of forest conversion and other agricultural and quarrying activities. Key partners in this work will be the IPM Farmers Association and the Agriculture Faculty at Brawijaya University, while the Provincial Forestry Agency will also be involved because of the proximity of the Taman Hutan Raya Raden Suryo.

The WSM activities within the coastal cluster will focus on improvement of the water quality of the lower reaches of the Brantas River recognizing that for both the Surabaya and Sidoarjo PDAM the cost of dealing with sediment load and other pollutants is a major component of their current operating costs. WSM work will focus on a segment of the Kali Mas between the Mlirip Dam and the Gunung Sari Dam. ESP will especially utilize partnership arrangements with the ULIPEDULI Foundation supported by P.T. Unilever Indonesia, in relation to waste management and riverbank care and the Jasa Tirta I in the design and implementation of innovative solutions involving sediment traps and flood basins within abandoned in-stream quarries and the promotion of artificial wetlands, where the proliferation of species of hyacinth will achieve effective nutrient scrubbing while providing the basis for alternative value-added local industry. Partnership relationships will further be sought with the Taman Nasional Bromo Tengger.

On Madura the focus will be on activities designed to improve the quality and yield of ground water sources. Exploration of the specific activities to be undertaken on Madura will commence later in 2005 but will involve partners from CARE and also Brawijaya University who have already achieved considerable success in the establishment of multi-stakeholder community-based watershed management groups in Sampang

A further key partner that has been identified in relation to the WSM component is international teachers association Caretakers of the Environment (CEI-Indonesia chapter)

Component II: Service Delivery.

The Service Delivery component of the East Java ESP will be a major focus of this province's activities, recognizing that piped water distribution in East Java is managed by 37 of these local government-based enterprises and that the levels of service and financing vary dramatically among them. The task facing this component is to identify key actions that can be taken in those key PDAM that will maximize the impact of the technical assistance leading to an expanded client population.

An important feature of the operation of the PDAM system in East Java is that infrastructure associated with the intake and treatment of water and the major pipelines predate national decentralization in 2001 and in many cases date from the colonial period. This situation creates the anomaly where infrastructure owned by one BUMD is taking water from a source located in another jurisdiction. Especially in the spring-based water sources this situation has resulted in significant cross boundary tension between water suppliers and processors. It is a factor specifically affecting Surabaya, Sidoarjo and Pasuruan as well as Pasuruan, Malang District and Malang City. Understanding of the foundations of these tensions and facilitating sustainable solutions to them will be an important key to increasing investment and in expanding services. In the coastal cluster, there is a strong southerly drift of the population center of gravity from Surabaya itself towards Sidoarjo and Pasuruan essentially creating a megapolis extending from Gresik southward. This urban demographic shift is changing the dynamic of utilities management towards the need for a more integrated and comprehensive solution than individual local governments can provide. Deeper understanding of this dynamic is required before it is clear how best the ESP can utilize its capacity to provide technical assistance, but it is most likely that ESP will adopt a strategy of niche identification in the larger urban centers complementing other large infrastructure donors such as the World Bank in order to ensure maximum effective improvement.

Recognizing this complexity, the Service Delivery component in East Java will work initially on an assessment of the operating status, opportunities and constraints affecting the 12 PDAM within the three regional clusters using the PDAM benchmarking process and semi-structured interviews. For the Malang Raya cluster the assessment is already completed and priority activities with the three PDAMs in this area have been identified.; activities will include support for PDAM corporate planning, customer orientation, non revenue water reduction, tariff review, water quality improvements and GIS. The assessment process for the other clusters will be concluded by the end of June 2005 by which time analysis of these results will provide a clear direction and a schedule for focused engagement with key PDAMs involving specific technical assistance and training, as well as forming the basis for more broadly directed activities through workshops and seminars.

In parallel with the assessment of PDAMs the Province Service Delivery team will undertake assessment of approaches to sanitation and solid waste management in each local government jurisdiction, evaluating policies and projects in place to enhance these circumstances and facilitating through one-to-one discussions, or through targeted training and workshops with ESP partners, to enhance local government planning and implementation of waste management options.

Commencing in June 2005 detailed health assessment activities will commence in targeted locations using standard approaches developed by ESP partners from John Snow International. These results will lay the benchmark for assessing the effectiveness of behavior change and campaign activities to be coordinated by ESP communication and public outreach staff sourced from ESP partner Johns Hopkins University. Health assessments will use carefully designed stratified random sampling approaches to select communities to be involved in more detailed data gathering in relation to infant health, perceptions of disease and its causes and sanitation, food handling and water collection and treatment. Primary data from the assessments will assist in the verification of secondary government statistics and in the design of communication and education strategies.

Component III: Environmental Services Finance

The purpose of the environmental services financing program is to organize alternative finance for PDAMs and the watersheds from which they draw water.

Working closely with the Environmental Services Team based in Jakarta, ESP in East Java will gather the information required to assess the financial status of PDAMs in East Java leading to enhanced management solutions for target PDAMs in the three regional clusters.

Recognizing that rural communities require economic substitutions in order to reduce their impact on sensitive uplands, to engage in land restoration and to vacate particularly strategic sites, ESP in East Java will place particular focus on the identification of innovative funding options, including the potential application of Clean Development Mechanisms, debt swaps and reallocation of funding within the water industry to fund watershed rehabilitation and biodiversity conservation in target watersheds.

The concept of shared responsibilities and multi-stakeholder action groups capable of integrating the interests of upper and lower catchment communities and business will be a central theme utilized in education, training and outreach activities.

6.6. REGIONAL WORKPLAN: SPECIAL CONCERN AND IMPERATIVE AREAS

INTRODUCTION

ESP works in four Special Concern and Imperative Areas (SCIAs), including Balikpapan, East Kalimantan; Manado, North Sulawesi, and Manokwari and Jayapura, Papua. Due to substantial investments by USAID in environment and natural resources management activities in these areas over recent years, these sites provide a strong foundation of institutional capacity and experience with collaborative management especially for nearby watersheds that provide raw water resources for important urban and peri-urban areas. With limited additional investment, ESP will be able to leverage from USAID's previous investments and make links from watershed management work to related clean water delivery as well as health and hygiene work. In these sites, limited technical and financial investments from ESP are expected to leverage previous USAID investments in watershed management for significant results in environmental services delivery.

ESP manages the SCIAs as an integrated SCIA team. Each of the four SCIA sites includes a small office with administrative staff as well as an ESP technical representative. The four SCIA ESP technical representatives represent a team with diverse and complimentary sets of skills, including watershed management, water supply and clean water delivery, and sanitation and solid waste management. SCIA ESP technical representatives will have a primary task of representing ESP in day-to-day activities in their respective SCIA. Additionally, they will provide one another with relevant technical expertise on an as-needed basis to achieve discrete workplan outputs. There will thus be significant travel by technical representatives amongst SCIAs. Technical support will be further augmented by visits from technical staff from HPPs and/or Jakarta. Over the course of the first year, ESP may further streamline SCIA operations by closing SCIA offices, and providing technical assistance on an as-needed basis from Jakarta and/or other HPP offices.

A key feature to SCIA success will be leveraging support. In each SCIA, ESP presence will be significantly smaller than previous USAID investments. SCIA technical representatives will be expected to leverage into collaborative management forums established by previous USAID programs, as well as leverage further program support. The many watershed management forums established under NRM III provide examples of institutions ESP can tap into in order to stimulate collaborative discourse on clean water delivery, raw water resource management, sanitation, and health and hygiene. SCIA technical representatives will also leverage into other donor funded initiatives to broaden potential impact. For example, a consortium of Dutch utilities, WMD, is based in Manado and working with PDAMs in a number of SCIAs. ESP can leverage into this, providing complimentary capacity building at the field level, and supporting development of training modules in WMD's Manado-based training center.

This document provides a twenty-one month workplan for ESP's SCIAs, covering the period of January 2005 through September 2006. Each of the four SCIA workplans has been consolidated into this single document for efficiency as well as to stimulate a collaborative approach to managing SCIA among SCIA technical and administrative staff.

ESP SCIA SITE DESCRIPTIONS

Balikpapan is the commercial capital of East Kalimantan. Rich in natural resources and the taxes and revenues they generate, Balikpapan municipality has demonstrated a strong commitment to investing in sufficient infrastructure and services necessary for a prosperous future. At the same time, the population of Balikpapan continues to grow at a significant rate. This is taxing current infrastructure, and creates a challenge for planning for the future.

USAID has supported successful investments in natural resources management and coastal resources management in and around Balikpapan over the past ten years, primarily through the NRM and CRM programs. These programs have developed local capacity for collaborative management as demonstrated in successful collaborative management of Sungai Wain Protection Forest and Balikpapan Bay. ESP plans on building off of this work, especially through conservation management and livelihoods development initiatives in and around Sungai Wain and Manggar watersheds, key watersheds safeguarding current and potential raw water resources for Balikpapan.

ESP will work with the local PDAM to improve capacity in water delivery, as well as to explore alternative sources for additional water. This is an increasing problem in Balikpapan, especially in the dry season. As possible this work will be linked to WMD's initiatives in eastern Indonesia. ESP will also work with the municipal government a sanitation improvement plan, possibly through a sewerage system plan, as well as facilitate health and hygiene campaign work.

Manado is the capital of North Sulawesi, and rests at the bottom of the Tondano Watershed. Besides providing essential raw water resource for Manado municipality and Minahasa district PDAMs, the Tondano watershed also provides water supply to PLN's hydroelectric plant. Previous USAID investments through NRM and CRMP have built a strong awareness of environmental issues as well as institutional capacity necessary for collaborative, multi-stakeholder natural resources management. This is reflected well in increasingly collaborative management of the Tondano watershed through the Tondano Watershed Management Forum.

ESP will work with the Manado municipal government, the Manado and possibly the Minahasa PDAMs and the Tondano Watershed Management Forum on understanding the role of Tondano watershed in maintaining Manado's raw water supply. Relevant conservation and rehabilitation efforts will be supported. Additionally, ESP will support possible sanitation and solid waste management initiatives, as well as health and hygiene campaign work. The ESP SCIA Manado technical representative will be the primary link between ESP and WMD's activities in Eastern Indonesia. This includes capacity building and possible financing work with PDAMs in Manado, Manokwari, Jayapura and possibly Balikpapan. The Manado SCIA technical representative will provide extra support in development of training modules on watershed management, raw water resource conservation and other ESP technical activities for the WMD Manado training site.

Located on the tip of Papua's Bird's Head, Manokwari is the provincial capital of Irian Barat and the district capital of Manokwari. Manokwari town has experienced a recent surge in population as more and more people move to Manokwari from other parts of Papua as well as eastern Indonesia in order to seek new opportunities emerging from the positive financial impact of Papua's Special Autonomy as well as the potential financial impact of revenue sharing through the Tangguh LNG project. Increased population pressure is putting severe strains on Manokwari's public services, especially water delivery sanitation, solid waste

management and power. Previous USAID investments through NRM III, PERFORM and ACIDI VOCA have built capacity for participatory planning and collaborative watershed management. Recent USAID programs have contributed significantly to effective watershed management planning for Gunung Meja, as well as business planning for Manokwari's PDAM.

ESP will work with the Manokwari district government, PDAM, community groups, NGOs and the University of Papua to consolidate previous successes of USAID support and then focus on ESP objectives of raw water resource conservation, clean water delivery, sanitation, and health and hygiene. Working in collaboration with the PDAM, WMD and relevant stakeholders, ESP will support conservation and rehabilitation of existing and potential raw water resources from Gunung Meja and Maruni watersheds in order to stabilize and expand raw water supply. Additionally, ESP will support PDAM and WMD in building capacity for improved service delivery as well as possible service expansion. Finally, ESP will work with the district government and civil society stakeholders on the development of a solid waste management plan, and will support limited health and hygiene campaigns.

Jayapura is the capital of Papua province. Administratively, Jayapura comprises Jayapura municipality and Jayapura district. Geographically, Jayapura comprises the three main population centers of Jayapura, Kotaraja and Sentani surrounded by the Pacific Ocean to the north and the Cyclops mountains and Nature Reserve to the south. Jayapura is facing rapid population growth as a result of Special Autonomy and perceived economic opportunities to be found in and around the provincial capital. This is putting significant pressure on public services including clean water delivery, sewerage and solid waste management, and power. An additional complexity is trans-boundary conflict over natural resources like water. Conflict mitigation amongst municipal, district and provincial level stakeholders is essential. USAID has supported sustainable natural resources management initiatives in Jayapura over the past five years through the Natural Resources Management project. This has led to strong political will and institutional capacity for collaborative management as demonstrated by on-going collaborative management of the Cyclops Nature Reserve. This is important for ESP, as Cyclops provides key raw water resources for the people of Jayapura.

ESP will work with the Cyclops collaborative management team, Jayapura district and municipal governments, the provincial government and a broad range of civil society partners to achieve ESP objectives in clean water delivery, sanitation, and health and hygiene. Working in collaboration with the PDAMs, governments, WMD and other partners, ESP will support effective raw water resource conservation from Cyclops Nature Reserve, and also work with PDAMs on service delivery and possible expansion. The potential for such expansion is enormous as PDAM pipes currently only serve three of four sub-districts in Jayapura municipality, service remains quite irregular, and NRW is over 40%. Capacity building matched with financing support could lead to significant expansion of water service delivery. Finally, ESP will support the development of a Jayapura solid waste management plan, as well as limited health and hygiene campaigns.

ENVIRONMENTAL SERVICES PROGRAM

Ratu Plaza Building, 17th. Fl.

Jl. Jend. Sudirman No. 9

Jakarta 10270

Indonesia

Tel. +62-21-720-9594

Fax. +62-21-720-4546

www.esp.or.id