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# ENVIRONMENTAL SERVICES PROGRAM

## Watershed Management and Biodiversity Conservation

Basic human services of clean water and sanitation have not adequately met the needs of Indonesia's poor. Nearly a third of Indonesia's population lacks access to safe and affordable drinking water. Diarrhea remains the second largest killer of children under five, accounting for over 100,000 deaths per year. The ecosystems that provide clean sustainable sources of water on which communities depend are seriously threatened.

ESP's Watershed Management Team works with government, community, NGO and private sector partners to stabilize and improve the supply of raw water to urban and peri-urban population centers in High Priority Provinces by protecting and rehabilitating raw water supplies and areas of high conservation value in Indonesia's upper watersheds.

ESP takes a landscape approach to improved land stewardship, integrating conservation of natural forests with high biodiversity value, restoration and rehabilitation of degraded forests and critical land, and 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.

ESP facilitates a participatory approach to upper watershed planning and management, starting at both the community level for direct field impact as well as the provincial and national level to ensure adequate policy and budget support to sustain and expand impact.

### Community-Based Field Schools

ESP supports community participation in watershed management through the facilitation of Field Schools. This adult education approach integrates the Sustainable Livelihoods Assessment process within a framework of water ecology, and enables communities to gain greater control over their livelihoods and the environment where they live.



*ESP facilitates a multi-stakeholder approach to watershed planning and management. The use of maps and spatial planning ensures appropriate focus of activities that will have the greatest impact on improved watershed functions and biodiversity conservation.*

Over a three month Field School, participants learn how to apply skills in land rehabilitation, biodiversity conservation, community-based clean water and sanitation, and health and hygiene behavior change.

### Watershed Management Forums & Action Plans

ESP ensures impact and sustainability of watershed management and biodiversity conservation work through the development of Watershed Management Forums and Action Plans. Adapted to the specific issues, ecology, culture and institutional relationships of each watershed, these multi-stakeholder Forums guide policy development and implementation of Action Plans. These Forums set targets and ensure budgetary support for land rehabilitation, biodiversity conservation and community development.

### Rehabilitation of Degraded Land

Starting with a spatial planning process, ESP works with partners to identify and map critical land and areas of high conservation value in upper watershed areas. ESP works with local communities through Field Schools to develop nurseries, grow seedlings and then plant-out seedlings on privately-held critical land or on critical land managed collaboratively by local communities and other entities. ESP also provides technical support to the Ministry of Forestry, Perhutani and a range of local reforestation initiatives to ensure local community involvement and benefits. With active community involvement in Watershed Management Forums, specific attention is given to establishing clear land tenure arrangements that provide communities the incentive to actively participate in land rehabilitation.

## Decentralized and Collaborative Biodiversity Conservation

ESP supports decentralized and collaborative management of protected areas of high conservation value through a range of activities. In close collaboration with the Ministry of Forestry's PHKA, ESP supports the implementation of both the model National Parks program as well as the development of the Conservation Village program. The Conservation Village program evolves from Integrated Conservation and Development, and places greater emphasis on community management of protected areas as well as community development activities based on clear links to conservation of adjacent protected areas. ESP also works on strengthening management of Grand Forest Parks, and supports local Pride in Conservation Campaigns. ESP is developing various approaches to Payment of Environmental Services (PES) to sustain this conservation work as well as to demonstrate the important relationship between upper and lower watershed communities in terms of water resource and biodiversity conservation.

### ACHIEVEMENTS TO DATE

Among key achievements in ESP's watershed and biodiversity portfolio through 2006 are as follows:

- **Critical Land Rehabilitation.** In 2006, ESP facilitated the rehabilitation of 22,867.55 hectares of degraded forest. This includes the planting-out of 696,427 seedlings from community nurseries established through more than 100 ESP Field Schools and Sustainable Livelihoods Assessment processes, as well as through partnerships between local community organizations and the Ministry of Forestry as well as Perhutani.
- **Biodiversity Conservation.** In 2006, ESP and our partners helped ensure more than 32,800 hectares of forests with high biodiversity value were under improved local management. Significant focus was given to provincially-managed Grand Forest Parks as well as Ministry of Forestry PHKA's model National Parks and Conservation Village programs. In collaboration with Rare and IPB, a Diploma Program for Social Marketing in Conservation was established and a first round of five students is commencing Pride Conservation campaigns in ESP sites. ESP is also developing three approaches to Payment for Environmental Services, and expects to expand this in coming years.
- **Coastal Rehabilitation in Aceh.** ESP has made significant progress in the establishment of community-based land rehabilitation activities along the coastal margins directly impacted by the Tsunami in seven communities. Three community nurseries were established in Lamseunia, Banda Aceh, and in Sawang and Kuala Meurisi in Aceh Jaya. 5.7 kilometer of coast line was replanted in Babah, Sawang and Krueng Pandee. These activities directly benefits more than 2,840 people.

- **Community Mobilization through Field Schools.** In 2006, ESP facilitated Field Schools with 74 community groups now implementing land rehabilitation, biodiversity conservation and community-based water and sanitation projects. This results in a current total of 126 community groups working with ESP. This year, ESP also increased human resources for expanding community-based work through the facilitation of a 12-week ESP Field School Training of Trainers program in Solok, West Sumatra. Thirty-six Field Assistants and Program Partners are now ready to significantly ramp-up ESP Field Schools in hundreds of communities across Indonesia.
- **Establishment of Watershed Management Forums and Action Plans.** ESP is facilitating the development, financing and implementation of multi-stakeholder driven watershed management plans in the Krueng Watershed in Aceh; Deli watershed, Lau Petani sub-catchment, and Wampu sub-catchment in North Sumatra; the Batang Arau, Batang Dingin and Batang Kranji watersheds (combined) in West Sumatra; the Cipunegara-Ciasem and Citarum-Cikundul-Cilaku watersheds in West Java; the Tangsi sub-catchment of the Progo watershed in Central Java/Yogyakarta; and the Upper Brantas watershed in East Java.
- **Policy Development to Support Watershed Management and Biodiversity Conservation.** ESP is making significant progress on seven local policy initiatives for increased community access rights and/or management responsibility for land rehabilitation and/or forest conservation. At the national, ESP has worked successfully with the Ministry of Forestry's PHKA to strengthen and rationalize the zonation process for National Park and Protected Areas management.
- **Integration of Services Delivery, Health and Hygiene in Watershed Management Activities.** The Watershed Management Team paid special attention to integrating community-based clean water, sanitation, solid waste management and hand washing with soap activities through both Field Schools and Watershed Management Action Plans. Field Schools approach livelihoods development through water ecology, and clear links are made between environmental and community health issues. Field School curriculum includes modules on clean water, sanitation, solid waste management and hand washing with soap, and Field School implementation plans include strike a balance between environmental protection and community health. As hand washing with soap provides the clearest link to reducing the prevalence of diarrhea, all ESP activities include hand washing with soap activities. An interesting evolution this year is the development of a specific Solid Waste Management Field School.

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