



# USAID | INDONESIA

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## GLOBAL CLIMATE CHANGE

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*Indonesia emits large amounts of greenhouse gases, which are the root cause of climate change. Deforestation is Indonesia's largest source of emissions, amounting to five times its emissions from non-forestry sources. Through collaborative efforts, USAID works to strengthen policies, apply sustainable forest management practices, and reduce energy emissions.*

### BACKGROUND

Indonesia is home to the richest biological diversity on the planet. It has the world's highest marine diversity and second largest area of rain forest after the Amazon Basin. But it is also one of the top greenhouse gas (GHG) emitting countries in the world<sup>1</sup>. While Indonesia is richly endowed with natural resources, environmental degradation is proceeding at rapid pace, with far reaching global impacts. And while it is a major emitter, Indonesia is also highly vulnerable to the impacts of climate change.

Deforestation and subsequent fires are by far the largest contributor to GHG emissions in Indonesia, accounting for 80% of national emissions. In 2007, Indonesia's forest related emissions amounted to 10% of global carbon emissions. By contrast, on a global scale, deforestation accounts for some 20% of the world's carbon emissions. Indonesia is particularly vulnerable to the effects of climate change, which include rising sea levels and erosion of coastal areas, increased frequency and intensity of extreme weather events, species extinction, and the spread of vector-borne diseases.

USAID is supporting several programs and activities that help Indonesia mitigate climate change while fostering key development priorities. These initiatives can be broadly categorized into those that stop further deforestation and thereby prevent the release of sequestered carbon, and those that reduce energy related carbon emissions.

### SECTOR-SPECIFIC CLIMATE CHANGE ACTIVITIES

#### SUSTAINABLE FOREST AND BIODIVERSITY MANAGEMENT

Through the *Aceh Technical Assistance Recovery Project (ATARP)*, USAID facilitated discussions between provincial governments and the World Bank, culminating in the Governors of Aceh, Papua and Papua Barat provinces declaring logging moratoriums. The three Governors embraced carbon sequestration as a means of slowing climate change and pledged engagement on the global carbon trading system, to bring economic benefits to local areas in exchange for dedicating large forest areas as carbon sinks. Papua and Papua Barat provinces committed to reallocating up to five million hectares of forests for carbon trading; these forests were originally slated for conversion to palm oil plantations and other carbon producing uses.

<sup>1</sup> A World Bank study estimated in 2007 that Indonesia is the world's third highest emitter of greenhouse gas emissions.

## PARTNERS

USAID's partners in climate change activities in Indonesia include:

- Approximately 75 Indonesian NGOs
- Development Alternatives, Inc. (DAI)
- FIELD
- Flora Fauna International
- Indonesian Ministry for Development Planning (BAPPENAS)
- Indonesian Ministry of Forestry's Directorate of Forest Protection and Nature Conservation (PHKA)
- National Park Authorities
- The Nature Conservancy
- World Wildlife Fund

Because partners change as new activities arise, this list of partners is not comprehensive.

The USAID-funded *Orangutan Conservation Services Program* (OCSP) helps Indonesia preserve some of the world's most highly valued biodiversity in Kalimantan (Borneo) and Sumatra. Since peatland forest is ideal orangutan habitat, its conservation is a "triple win," storing enormous carbon stocks underground, protecting valuable forests, and saving the endangered orangutan. OCSP works to reduce the rate of forest loss by working closely with the Government of Indonesia, the private sector and non-governmental organizations (NGOs) to address the key threats of unsustainable and illegal logging, forest conversion, and fires. OCSP supports and helps operationalize Indonesia's National Strategy and Action Plan for Orangutan Conservation both in specific sites, and in the broader policy context. In Kalimantan today, about 70% of wild orangutans live on concession land, be it timber, palm oil, or mining concessions. Thus, OCSP works with all stakeholders to develop land use agreements, conservation set asides, and enforcement, so that development and conservation both win.

The USAID funded *Environmental Services Program* (ESP) has field activities that improve understanding of the role that forests can play in mitigating climate change. Over its five year term, ESP will bring improved local management to 82,000 hectares of high conservation value forests and facilitate the rehabilitation of 35,000 hectares of degraded forests in important watershed areas.

## REDUCING ENERGY EMISSIONS

The USAID supported Agribusiness Market and Support Activity (AMARTA) program is developing a pilot project for small scale production of biofuel from *Jatropha curcas* (castor oil trees) in Flores, Nusa Tenggara Timur. AMARTA is providing a local producers cooperative with equipment to press *Jatropha* seed, producing a kerosene substitute and other valuable compounds. AMARTA is also providing approximately 140,000 *Jatropha* seedlings; assistance in establishing a nursery; and secondary equipment with which to produce biodiesel fuel suitable for small engines. This is a promising demonstration project for two reasons. First, *Jatropha* thrives in dry, marginal soils and might serve as an alternative to palm oil, which often leads to the clearing of high carbon, high biodiversity value forests for the creation of new plantations. Second, biofuel produced with *Jatropha* oil emits 78% less greenhouse gases than conventional diesel fuel.

For more information, visit:  
<http://indonesia.usaid.gov>  
 and  
<http://www.esp.or.id>