# CAMBODIA

## Ecosystem-based Adaptation 2013-2019

UN environment
United Nations Environment Programme

### SUSTAINABLE DEVELOPMENT GOALS

The project has trained 500 households (~5 people per house) in sustainable income-generating strategies such as chicken-raising, cricket-raising, ecotourism, and selling vegetables.

Rice harvests were improved with drought-tolerant seeds (benefitting 872 families). The project set up households and schools with training to create home-gardens of vegetables (benefitting 1,193 families).

80% of the 1,900 households in the project sites report an improvement in access to water. Rainwater harvesting tankers and pumping wells were built to improve water security.

Climate forecasts were used to inform and adjust planting schedules. The project is aiming for a 20% decrease in the climate change vulnerability index at all project sites, covering a total population of 9,271 people.

A total of 1,875 hectares of degraded forests have been restored. The project donated saplings and supported patrol groups during the planting of more than a quarter of a million trees.

## PROJECT TITLE:

ENHANCING CLIMATE CHANGE RESILIENCE OF RURAL COMMUNITIES LIVING IN PROTECTED AREAS OF CAMBODIA

## EXECUTING ENTITY:

Ministry of Environment, **Government of Cambodia**

## KEY FIGURES:

**1,875**
Hectares of community forests improved and restored

**1,900+**
Families benefitting from increased agricultural yields

**900,000+**
Trees planted by the project.

## FUNDING:

ADAPTATION FUND

**USD $4,955,000**

## PROJECT PARTNERS:

Ministry of Agriculture, Forestry and Fisheries; Ministry of Water Resources and Meteorology; Ministry of Land Management, Urban Planning and Construction; Department of Research and Community Protected Area Development (DRCPAD) of the General Department of Administration for Nature Conservation and Protection (GDANCP).

## INTRODUCTION

- Cambodia is a country of 16 million people in Southeast Asia. The most prominent geographical feature is the Mekong River that extends across the country from north-to-south. Approximately 80% of people live along the river in the low-lying central plains, where agriculture is highly dependent on rainfall.
- The project is building climate adaptation near 5 community protected forests across the country. These areas are extremely vulnerable to climate change due to increasingly erratic rainfall, where dry seasons are getting drier and wet seasons are wetter, causing devastating floods and droughts.
- The main approaches of the project are to **reforest natural land** to regulate soil waterflow; create **patrols to halt illegal logging**; establish **'home-gardens' with irrigation** to diversify sources of food and income; and develop **early warning climate systems** to inform farmers' planting decisions.

## CLIMATE IMPACTS

- Climate change is producing erratic rainfall in Cambodia, the effects of which are increased erosion on people's farms, crop failures from droughts, and damaged infrastructure that hobbles rural markets.
- Only 19.5% of cultivated land in Cambodia benefits from irrigation, so the agricultural sector is dependent on rainfall.
- To counter the falls in agricultural yields, communities rely on illegal logging in protected forests to supplement food and income, whether it be collecting fuelwood or charcoal. These decimated forests once provided both climate and soil water regulation in the agriculturally vital Mekong River Basin.
- As the tree-cover has shrunk, people living on the mountains watched the once-abundant rain clouds disappear. With more than 80% of the population relying on agriculture for their livelihood, the risks are high.

***"The big trees that used to be here attracted the rain. When they went, we found we had no water and our area was drying up."***

- Yuth Thy, 46, local farmer.

***"I've seen how when this nursery produces seedlings and restores forest cover, we get more rain and a better rice harvest."***

- Thuch Ron, head of a local Community Protected Area (CPA)

## VIDEOS & STORIES

**Video:**
https://youtu.be/SnotF8PPUVU

**Human imapct stories:**
https://www.unenvironment.org/news-and-stories/story/im-proud-have-brought-rain-back-reforestation-revives-cambodian-mountains

https://www.unenvironment.org/news-and-stories/story/seeding-future-school-children-cambodia-pave-way-climate-adaptation

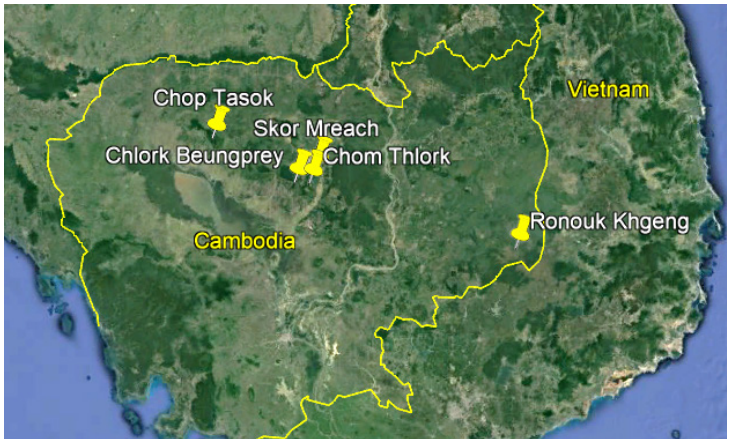
## CONTACTS


UN Environment Task Manager:
Atifa Kassam
**atifa.kassam@un.org**
Country Team Contact:
Navann Ouk
**navanouk@gmail.com**


## TECHNOLOGIES & METHODS

- **Ecosystem-based adaptation (EbA)** was central to the project's activities. EbA is the tactic of using nature and healthy ecosystems to reduce the impacts of climate change.
- The forest restoration was carried out using **multi-use native tree species** that provide food, erosion control, timber, medicine, and fruit. The project also planted trees alongside 2,200 hectares of rice paddies to reduce erosion and enhance soil productivity.
- The project **supported patrol groups** during the planting of more than a quarter of a million trees. Local communities have expressed relief that rains are now returning.
- Rice harvests have greatly improved at project sites by using **climate forecasting to inform planting schedules**, thus reducing the impacts of drought and heat-stress.
- Rice yields were increased by distributing **drought-tolerant rice varieties** that are especially adapted to the local ecosystems. Households in the five community protected areas were also given access to improved **rice storage techniques**.
- Training has been given to households and schools to **create 'home-gardens' of vegetables**, which diversifies families' agricultural produce. Previously, when rice harvests failed due to drought, people had to sell their animals or possessions to buy food.
- The project boosted the availability of water by supplying **pumping wells and rain harvesting tankers.**
- **Sustainable alternative livelihood strategies** have been adopted by over 500 households so far, including chicken-raising, cricket-raising, and ecotourism.
- Over **450,000 fruit trees were distributed** to all 1,900 families in the 5 target areas.

## PROJECT LOCATION




*The project was carried out at 5 community protected areas, which are contained within 4 provinces: Siem Reap Province; Mondulkiri Province; Preah Vihear Province; and Kompong Thom Province.*

ADAPTATION FUND

UN environment