

Khasi Hills Community REDD Project, Meghalaya, Northeast India

Forest and Biodiversity Conservation, Watershed Restoration & Livelihood Development



India's 1st Registered & Certified Community-based REDD Project

In 2010, ten indigenous Khasi kingdoms of the Umiam Watershed in the East Khasi Hills District of Meghalaya formed a united Federation or Synjuk to manage their shared watershed. Through continued support by Community Forestry International, the Federation has completed the process to register their REDD+ project. The project has been validated and certified under Plan Vivo standards and is currently selling credits through the private voluntary carbon markets to finance REDD+ mitigation and livelihood activities.



Rural Khasi communities are concerned about deforestation that threaten upland watersheds, household livelihoods, while releasing substantial quantities of carbon. This community REDD+ project is slowing, halting and gradually reversing forest loss by providing institutional, financial and technical support to allow communities to better monitor their forests, protect them again forest fire, regulate fuel wood collection, and regenerate and replant degraded forest lands. Through this REDD+ Project 62 villages are creating, restoring, and protecting a forest wildlife corridor along the Umiam River, connecting sacred forests and regenerating forest fragments at the landscape level.

As India's first REDD+ strategy, the project provides a "proof of concept" for conserving and restoring the country's forests. The Khasi Hills REDD+ project offers 318,246 tons of CO₂ offsets over ten years, plus additional benefits including biodiversity, cultural conservation, and poverty alleviation. The project area has unique montane cloud forest ecosystems with 500 year old sacred groves riddled with standing stone megaliths that symbolize fallen warriors from ancient time and horizontal altar stones where rituals are still performed. The tradition of sacred groves in the project area has served as environmental protection for some of the old-growth forests, creating biodiversity "islands" and protecting the natural, clear streams.



The Khasi culture is matrilineal, with property rights transferred through the mother-line. This project represents a long-term strategy to address the extreme poverty facing rural families by supporting sustainable resource management, new livelihood opportunities, and capitalizing women-run micro-finance institutions. Women's organizations often spend their profits for the benefit of the whole community, funding health clinics, schools, and setting aside funds for emergencies.

Cultural Context

The small Khasi kingdoms situated on Meghalaya's upland plateau have governed the land for centuries. Dozen's of small hamlets are scattered across the rolling landscape. Khasi indigenous governments (hima) and village councils (dorbar) function as democratic institutions that manage society and the natural environment.



Sacred forests are protected while community forests function under mutually agreed upon rules. Sacred forests often include large stone monoliths around which rituals are performed. Strict community rules ensure that no human interference is allowed within sacred grove, banning any cutting, fires, or settlement.

The Government of India recognizes Khasi forest ownership in Meghalaya under the Sixth Schedule of the Constitution, providing secure tenure rights. The project area is managed by Khasi stewardship that integrates traditional practices with practices and science.



Ecological Context

Cyclonic air masses churning in the Bay of Bengal during the summer generate storms that slam into the Meghalaya Plateau that rises sharply from the flood plains of Bangladesh. These weather events create torrential monsoon rains that make the Khasi Hills one of the Earth's雨iest places.

Located between 150 and 2,000 meters the 27,138 hectare REDD+ project area is situated on a gently rolling plateau that slopes down steeply along the Umiam River. This wet



temperate forest is a unique habitat with impressive biodiversity, including 400 tree species, rare and abundant orchids, mushrooms, amphibians, and birds.



Large mammals include bears, flying foxes, leopard cats, hoolock gibbons, and porcupines. Fauna includes dense forest of oaks, rhododendrons, chestnuts, alder, and figs, with its prolific variety of

epiphytic growth including aroids, piper, fern allies and orchids. The discovery of a new toad species (*Odorana Mawphlangensis*) in a local sacred forests reflects the high biodiversity value of the area's unique ecosystem. As part of the project, the Khasi have conducted inventories to collect biodiversity data and how it is changing. The Khasi communities have

agreed to rules and regulations regarding harvesting, cutting, and gathering in the forest. They conduct eco-educational programs for Khasi youth teaching them about the importance of the area's abundant natural resources within the forest.



Goals and Strategy



This REDD+ project mobilizes participating communities to address local drivers of deforestation including forest fires, illegal logging, uncontrolled surface mining and unsustainable swidden farming. Performance based payments for ecosystem services (PES) are broken down into ANR contracts, opportunity cost compensation, and net revenue distribution designed to capitalize women administered micro-finance organizations. Federation technical staff, local NGOs and government work with communities to identify actions to strengthen indigenous resource management institutions by formalizing forest management committees, developing written by-laws, reviewing, codifying resource use rules and regulations, and developing new partnerships with local government and private sector organizations. Under the project, each community formulates a long-term natural resource management plan and village development strategy.

Social & Economic Benefits

- ⇒ Build community Institutions including the Local Working Committee as an operational NRM management unit and a form Self-Help Groups (SHGs) to foster entrepreneurial activities.
- ⇒ Establish financial accounts with local banks and operate women administered micro-finance institutions.
- ⇒ Provide Jobs through constructing 50 km of fire lines and 500 hectares of forest restoration activities each year.
- ⇒ Initiate commercial animal husbandry enterprises by exchanging low quality community cattle and goats for stall-fed pigs and chickens, develop sustainable organic farming and horticultural systems.
- ⇒ Adopt fuel-efficient, smokeless stoves
- ⇒ Create partnerships with Government of India NRM and livelihood projects
- ⇒ Establish payment for ecosystem services (PES) contracts, including carbon sales

Biodiversity Benefits

Community conservation activities focus on protecting and expanding existing habitat for endemic and endangered orchids and other epiphytes, and amphibians. Sacred Groves and community old growth forests cover 9,270 hectares while degraded forest restoration will connect an additional 5,947 hectares creating wildlife corridors and buffering the refugia of the core area. Community-based monitoring of biodiversity will include inventorying endemic and red listed amphibians, orchids, mammals, and birds.

Hydrological Benefits

Restoring the hydrological functions of the Umiam watershed involves vegetative restoration as well as closure of surface quarrying and mining operations. Total area in the project area of the watershed is 27,138 ha. The project will support watershed restoration activities including fire control and assisted natural regeneration of forests, as well as the protection of riparian habitat. Carbon revenues will be used to fund project activities that enhance the hydrology of the watershed, improving water storage capacity and dry season flows.

Carbon Benefits

The project estimates carbon addtionality of approximately 318,246 tCO₂ between 2012 and 2021. Of the total carbon credits projected, approximately 69% would be from avoided deforestation and forest degradation while an additional 31% would be generated through sequestration as degraded forests are restored through assisted natural regeneration. Additional carbon credits may be created through the fuel efficient stove programs and other initiatives.

Project Profile

Project Location	Umiam Watershed, Khasi Hills District, Meghalaya, India	<ul style="list-style-type: none">India's 1st certified, community REDD+ forest carbon project."Proof of concept" for conserving and restoring India's forests.Biodiversity conservation of unique flora, fauna, and montane cloud forest ecosystems.Preservation of 500-year old sacred groves with ancient megaliths that characterize Khasi indigenous culture.Alleviating poverty with new livelihood strategies and capitalizing women-run Self-help groups.Restoring and protecting a forest wildlife corridor along the Umiam River, connecting sacred forests and regenerating forest fragments at the landscape level.Support for sustainable animal husbandry and farming systems.Potential eco-tourism area.
Project Area	27,138 hectares	
Estimated CO ₂	318,246 tCO ₂ over 10 years (2010-2021)	
Elevation	150-2,000 meters	
Ecozone	Temperate Rain Forest Native Pine Forest	
Tenure	Secure Title	
Project Impact	62 Communities	
Project Initiatives	52 Women-run SHGs 10 Farmer's Clubs Volunteer Youth Programs	
Benefit Sharing	Community-based	
Project Developers	Synjuk Federation, India Bethany Society, India CFI, USA Plan Vivo, UK	
Project Certification		

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