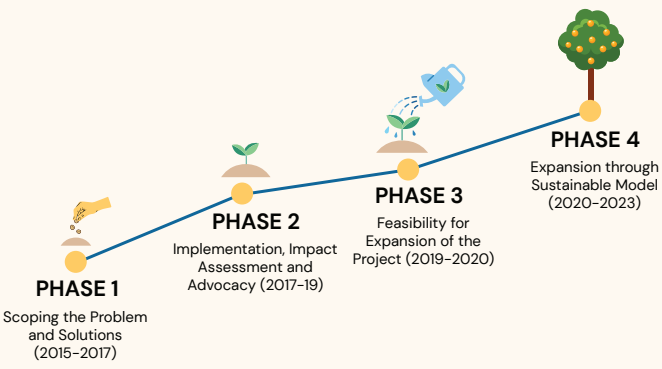
Next Generation Low Carbon, Climate-resilient Eco-Village Development in South Asia (EVD-4)

Eco-Village Development (EVD) Concept is a bottom-up, integrated development approach, capable to empower local communities in climate smart practices by engaging them actively in the development and decision making through a participatory planning process. The overall objective of the Eco-Village Development intervention is to achieve an improved standard of living for climate-vulnerable rural communities in South Asia by integration of local sustainable solutions that contribute to climate change mitigation, adaptation, and resilience building. The concept honours the cultural practices and traditions of the communities, meanwhile meeting their needs, contributing to acceptance by the community members.

This concept is a prosperous and proven development concept and have the competence to scale-up, through eight years of cooperation, and much longer individual experiences. In financial support of CISU-Denmark, CRT/N, together with development partners: Grameen Shakti-Bangladesh, INSEDA-India and IDEA-Sri Lanka, in collaboration with DIB-Denmark, INFORSE and CANSA has been promoting the Eco-Village Development (EVD) since 2015 in four South Asian Countries.



The EVD provides a basket of low-cost climate smart solutions such as household biogas plants, improved cookstoves, solar PV, solar thermal, solar drying units, improved water mills (milling service plus hydro-electric power), and stand-alone systems like Pico /micro-hydro power for rural electrification. It also includes adaptation measures such as climate-smart farming (poly-tunnel farming, rainwater harvesting, gray water reclamation, bio-fertilizer and bio pesticides) and water-lifting technologies like hydraulic ram pumps, portable solar pumps, and solar water lifting for drinking and irrigation. The beneficiaries choose among these solutions based on their needs.

Beside introducing a climate-friendly technology; EVD concept include the maintenance, training, and support for sustainability as well as other frameworks such as sensitizing local schools on climate science and eco-village, financial linkage to improve access to climate-smart solutions, developing entrepreneurs while facilitating market linkage and agency-based empowerment enabling the women members of the communities to have their voice in selecting appropriate climate-smart solutions for their livelihood. The project also advocates local government to include the eco-village agenda in their annual plan and budget.

EVD concept is in sync with national development and climate plans, allowing synergy between the development objective of poverty reduction and the climate objectives of reducing emissions and developing climate resilience at the village level.

EVD Projects Contributing to SDGs

Helps increase in income- solar dried produce and products grown using solar poly-greenhouse, kitchen garden, and from making bamboo products etc.

Reduction in hunger- availability of Improved **quality of produce**- vegetables and fruits from kitchen garden.

Good health because of clean kitchen, **reduced indoor and outdoor pollution**, drudgery reduction, increased income and nutrition food IHME estimates 1.6 m deaths/year, WHO-4.3 m

Helps in **skill development of women and farmers**

Focus on women, participation in planning, income generation and implementation, Reduces drudgery of women in fuelwood collection, cooking etc.

Availability of **clean water** because of roof water harvesting unit and sanitation because of biogas and composting

Clean Energy is central to EVD conceptthrough improved Cookstove, biogas, solar home system, etc. Reduces use of firewood 1 million tons of wood is used every day for cooking.

Helps in **economic growth** through income generation activities

The project focuses on **reducing inequality** and involves most vulnerable population

Responsible production through **organic manure, Soil and water conservation** because of bamboo and fruits/fuel and fodder tree plantation, **Improved soil health**.

Climate action- mitigation, adaptation, reduction in **movement in forest areas** (wood collection), **carbon sequestration**, GHG reduction, **climate resilience**.

The EVD concept includes promotion of home forestry and soil and water conservation helps to **halt and reverse land degradation**

The concept involves **responsive, inclusive, participatory and representative decision-making at all levels**

Work in partnership: participatory planning, project partnership in 4 countries

Relevance of EVD in Nationally Determined Contributions Targets of Nepal

- A By 2030, ensure 25% of households use electric stoves as their primary mode of cooking.
- B By 2025, install 500,000 improved cookstoves, specifically in rural areas.
- C By 2025, install an additional 200,000 household biogas plants and 500 large scale biogas plants (institutional/ industrial/ municipal/community).
- D Develop enabling environment to provide power to small and mid-size enterprises (SMEs) using distributed renewable energy generation sources.
- E By 2030, the number of additional improved cattle sheds will reach to 5,00,000 for quality farm-yard manure production and use.
- F By 2030, soil organic matter content of agriculture land will reach to 3.95%.
- G By 2030, mulberry and fruit orchard areas will be expanded to 6,000 ha.
- H Ensure increased access of climate-smart agricultural technologies
- I Waste: Promote the 3Rs (Reduce, Reuse, Recycle) approach to waste management
- J By 2030, develop an Action Plan for integrating GESI in achieving NDC targets

By 2030, establish 200 climate-smart villages and 500 climate-smart farms.

In the present phase, CRT/N is implementing the EVD concept in Bhalumara village, Marin Rural Municipality-3 of Sindhuli district in the lower plain area of Nepal by CRT (July 2020 to October 2023). The major problems identified were lack of water for drinking and irrigation, infertile soil, high wood consumption and indoor air pollution with inefficient cookstoves, poverty, and increasing migration of younger men for sustaining family needs. Some of the EVD solutions chosen by beneficiary households are illustrated below:

Achievements Obtained from the Implementations of Eco-Village Development Plan Built with Community Participatory Planning Approach

100% households have

- Access to clean cooking technology
- Access to clean electricity
- Access to safe drinking water
- Access to waste management
- Access to small scale irrigation
- Kitchen garden and fruit plants
- Productively used gray water

- ✓ 21% households practice off-seasonal vegetable farming
- ✓ 90% agriculture is free of chemical pesticides
- ✓ 30% households have improved income
- ✓ 100% DAG households are engaged in income generating activity
- ✓ Improved women economic empowerment
- ✓ Behavioral change towards environmental conservation
- ✓ 197 tons CO2e/year emission reduction

A happy mother and her daughter with a portable solar pump, a contribution from the EVD project.

Implemented by

Partners

Supported By

Federal Ministry for Economic Cooperation and Development

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For more information

https://crtnepal.org/

https://ecovillagedevelopment.net/

https://inforse.org/evd/output/solution_list.php

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