



# Healthy Landscapes: Managing Agricultural Landscapes in Socio-ecologically Sensitive Areas to Promote Food Security, Well-being and Ecosystem Health

Biodiversity, ecosystems and the essential services that they provide are central pillars for all life on the planet. They are sources of food, medicines, fuel, as well as cultural and spiritual enrichment- all important for human health and well-being. They also contribute to the provision of clean water and air, and perform critical functions that range from the regulation of pests and disease to that of climate change and natural disasters.

## The Challenge

Poor agricultural and unsustainable land management practices, worsened by the effects of climate change, are negatively impacting biodiversity in Sri Lanka. This is contributing to the degradation of ecosystems and the loss of ecosystem services they provide to communities. Specifically at risk is the Village Tank Cascade System (VTCS) - an ancient, man-made water management system unique to the country's Dry Zone. The VTCS consists of a series of interconnected tanks that store water from seasonal streams. While irrigation is its main function, it has several others (See Figure 1). Limited understanding of the multiple and varied functions of the VTCS and continual overexploitation of its known services has led to the degradation of these complex landscapes.

## The Solution

The Healthy Landscapes project addresses threats to Sri Lanka's rich biodiversity by rehabilitating and promoting the sustainable management of VTCSs. Engagement with local communities, other key stakeholders and experts ensures that the many traditional, ecological, social, and economic functions of the landscape are safeguarded for use by current and future generations.

Project activities include actions with immediate results, such as the repair of the tanks' physical features (e.g., bunds) to improve their water holding capacity, as well as more complex actions, such as increasing the use of climate-smart, nutritious, and local agrobiodiversity (e.g., through the promotion of home gardens) which can have multiple long-term benefits, including improved food and nutrition security, increased resilience to climate shocks and better livelihoods for local communities and beyond.



## Actions for transformation

VTCSSs provide multiple provisioning, regulating, cultural and supporting services which the Healthy Landscapes project is enhancing by:

### RENOVATING EXISTING VTCSS



Rehabilitating tanks to meet changing human needs, while promoting greater integration of agrobiodiversity, minimizing pressure on the environment and securing the services of these tanks for both current and future generations.

### RAISING AWARENESS AND IMPROVING KNOWLEDGE MANAGEMENT



Establishing the concept of 'cascade ecology' among the project's beneficiaries and stakeholders, as well as the broader global community, as a basis to guide sustainable management of the VTCSSs.

### BUILDING PARTNERSHIPS AND CAPACITY



Fostering collaboration and building capacity among and across all levels of stakeholders to support the sustainable management of the VTCSSs.

### STRENGTHENING POLICY TO SUPPORT VTCSS



Engaging key local, national and global partners to build and strengthen the institutional arrangements that can guide the development of improved policies and actions to manage VTCSSs.



Figure 1: Adapted from Fig.3 (IUCN, 2018) in Dissanayake et al., 2021, Ecosystem Services from Cascade Tank Systems in Sri Lanka. Conference on Cascade Ecology & Management.

## Impact at and across all levels



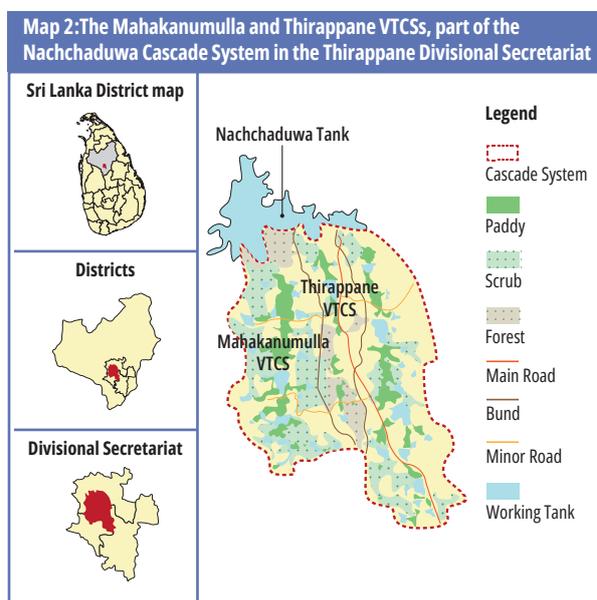
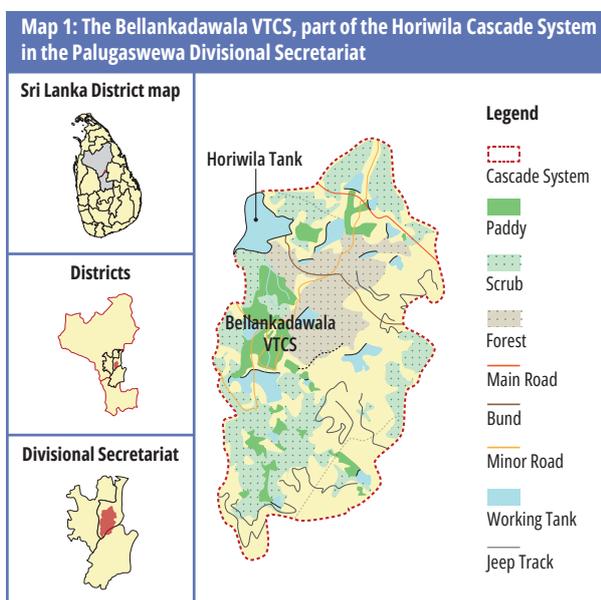
The most immediate impact of the Healthy Landscapes project is on the local community- farmers, households, families, women, youth and disadvantaged groups- who depend on the cascade systems for the tangible and intangible needs of their daily lives.

However, the impact of this project goes beyond the local level. At the national level, scientists, researchers, development practitioners and policy-makers are also among the intended beneficiaries in terms of participation, knowledge generation, networking and partnerships. The project also addresses multiple global challenges facing the international community by supporting the realization of multiple Sustainable Development Goals (SDGs).



## Project Sites

The Healthy Landscapes project targets multiple Village Tank Cascade Systems in the Palugaswewa and Thirappane Divisional Secretariats of the Anuradhapura District (see maps below). Increased severity of droughts, reduced water holding capacity of tanks, as well as a strong prevalence of vitamin and mineral deficiencies among local communities are some of the many challenges being addressed by the project in these pilot sites.



The Global Environment Facility (GEF), the world's largest public funder of international environmental projects, is supporting the [Healthy Landscapes: Managing Agricultural Landscapes in Socio-ecologically Sensitive Areas to Promote Food Security, Well-being and Ecosystem Health](#) led by Sri Lanka, through the Ministry of Environment as the Lead National Agency. The Alliance of Bioversity International and CIAT is coordinating the project with implementation support from the United Nations Environment Programme (UNEP).

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