LAKE HOUSE
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Benefits we get from Environmentally Sensitive Areas

The road on the tank bund runs across the village. A lush paddy field lies next to the tank while the upstream area is covered with the green forest. The mountain beyond is the protected forest reserve. A river runs at the end of the paddy land which is scattered with the houses of the villagers.

The above scenery is a common sight in most of the dry-zone in Sri Lanka. However, these areas are also home to various endemic, rare or threatened species of plants and animals and are vital for the long-term maintenance of biodiversity. In addition, the sustained wellbeing of this natural environment is crucial for providing water and other resources for the livelihoods of the local communities. That is why these areas, though not designated protected areas, are of such importance. Such areas with a high biodiversity and ecosystem services which are situated outside of protected areas and are among human settlements and agricultural lands, are known as 'Environmentally Sensitive Areas' (ESAs).

ESAs are crucial not just for the environment but also for the people. Conserving and managing these ESAs while allowing wise and sustainable use of natural resources will ensure that the entire country benefits from ecosystem services. We hereby discuss such benefits.

Handicrafts made of water hyacinth plants

Ancient ruins as a tourist attraction

Cane products of Wewelkele

Ecotourism and other tourism activities

There are many opportunities for tourism in most of the identified ESAs. Areas with a high biodiversity and scenic beauty are particularly suitable for ecotourism. Ecotourism emerges as the best option among tourism sectors as it is the most eco-friendly type of tourism, since it can reduce the impact on the environment while providing direct benefits to the local communities. For instance, providing guiding and hospitality services create livelihoods and bring in additional income for local communities.

For instance, the Gange wadiya ESA consists of diverse ecosystems including mangroves, coastal ecosystems and dry zone forest types with a variety of flora and fauna. There are also agricultural lands, chena lands and a traditional fishing village in the area making it an ideal destination for ecotourism. It is already emerging as a hot-spot for tourists.

ESAs are also suitable for tourism which involves study and research on the environment. The Villu ecosystems situated in the Wanatawilluwa area are important sites for ecotourism as well as environmental studies.

Cultural tourism targeting archaeological and historical sites is another major tourist attraction. There are several sites situated in ESAs that can be promoted for this form of tourism. Some sites contain 25 million year old Miocene fossils. Fossils of marine animals of this period have been unearthed at Aruwakkalu area in Puttalam during limestone mining for cement production, making this sitein the Gangewadiya area a potential place for cultural tourism. Furthermore, the Manewakanda ESA contains ruins from the Anuradhapura period. There are also several other cultural heritage sites in the Kala Oya-Awukana ESA, including the Awukana archaeological site as well as the Kalawewa tank, Kala Oya and Yoda Ela which are well-known historical irrigation monuments.

Livelihood based tourism activities are also becoming popular now among tourists. The fishing village of Gangewadiya and the Wewel-Kele village where cane products are made are such attractions. There are many sites in the ESAs that could cater to agro-tourism which is based on the village, the tank and the paddy land.

Eco friendly products

ESAs supply a variety of natural resources. Creating eco-friendly products using raw materials extracted from the natural environment is crucial in the conservation of ESAs. The economic benefits it provides the local community prompt them to conserve the site.

Villagers of the Wewel-Kele area manufacture cane products for their livelihood. The raw materials for their cottage industry are obtained from the Wewel-Kele, the cane forest. The villagers themselves took the initiative to conserve the area as an ESA after they realised the importance of it. They can now obtain raw materials in a sustainable manner while protecting the plants and animals living in the forest.

Meanwhile innovative products are being developed by villagers using Water Hyacinth plants, known as Japan Jabara, which is an invasive species that clogs water bodies. Farmers in Habarawatta use these plants to make compost while the people of Swasthigama and Miriswatte use the dried reeds to make handicraft items.

The ESA project has also enriched the environment by using plants that are of economic benefit for the community. For instance, eight thousand arecanut trees were used to demarcate the boundary of the Yoda Ela reserve in the Kala Oya Awukana ESA, creating a living fence for the canal reserve, while providing an additional income for the community in the future from the arecanut.

Disaster risk reduction

The reduction of the risk of natural disasters is another important ecosystem service from the ESAs. These disaster risks include storms, droughts and floods. The frequency and intensity of these extreme conditions have increased recently with climate change. Hence the conservationof these ESAs is vitalfor climate resilience.

Storms and the powerful waves created by the winds could damage the coastal environment, including man-made structures. The natural vegetation that exists in the coastal zone is crucial to protect the coast from this damage. Mangroves and other coastal vegetation can act as a barrier in this situation, a fact proved by scientific research. Areas such as Gangewadiya, with a rich mangrove cultivation, can play a crucial role in this.

Water scarcity and drought are among the most common disasters in the dry zone of Sri Lanka. The restoration of the ancient "Ellangawa" cascade tank system in Habarawatta in Galnewa, which had been abandoned for a long time, has found a solution to this situation. About 65 village families who faced immense hardships as they were able to cultivate crops only during a single cropping season a year from rainwater, are now farming both cropping seasons using tank water. Not only is the community reaping economic benefits, but now the area has an improved drought resilience too.

Wetlands reduce the risk of floods by storing rainwater during the rainy season. This can prevent floods in the downstream area. The Wewel-Kele ESA is a wetland ecosystem that keeps excess water stored for some time, reducing the threat of flooding.

Other ecosystem services

Wetlands like the Villus provide many other benefits that are known as ecosystem services. One such benefit is the retention of groundwater levels in the area. The removal of toxic materials from the water is another important ecosystem service provided by the wetlands. Further, these ESAs act as the catchment area of the waterways in that region and are vital for maintaining the soil quality.

Biodiversity

There are numerous examples to show that the conservation of ESAs can ensure the safeguarding of biodiversity, ecosystems, habitats, and various forms of life, i.e. plants and animals that are endemic, rare and threatened.

Gangewadiya is situated in the area where the Kala Oya reaches the Puttalam Lagoon. There are several natural ecosystems in the area including mangroves, salt marshes, mudflats, coastal ecosystems and types of dry zone forests. In addition, there are several man-made environments such as tanks, chena and paddy lands. Gangewadiya which is an area with a high mangrove diversity and a healthy population of some of the threatened mangrove species, provides a home for 14 of the 22 true mangroves found in Sri Lanka.

Villu ecosystems are natural ecosystems that are seasonally fed by rainwater. These are the home of several plants and animal species and provide many water-related ecosystem services. There are five such villu ecosystems identified in the Wanathavilluwa DS division and under co-management namely, Dematavilluwa, Periyanagavillu, Kuratiya Mottaivillu, Sihanagavillu and Iranavillu. The Kala Oya-Awukana ESA is a unique ecosystem with rich biodiversity in the riverine forest situated along the banks of the river. The riverine forest is a type of forest that is rare in Sri Lanka.

Villages situated along the borders of protected areas are important for biodiversity, for the long term survival of the plants and animals, and to keep the environmental balance. Wild animals may damage agricultural lands and home gardens when they do not have sufficient areas for their food and water needs. Toque monkeys, porcupines, wild boars and elephants are among the animals that cause significant damage to croplands and home gardens. However, if these ESAs are protected, the invasion of wild animals could be reduced, there by easing the human-animal conflict.

Future of Environmentally Sensitive Areas

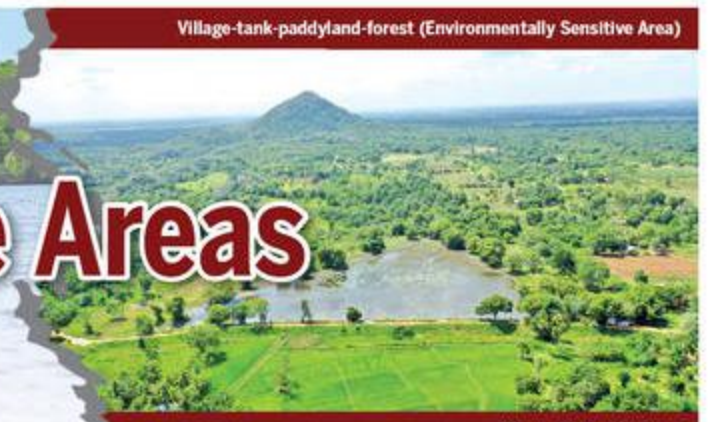
A pilot project was launched in 2015 by the Ministry of Environment and the United Nations Development Programme to protect ESAs from the threats they are faced with. The objective of the "Enhancing Biodiversity Conservation & Sustenance of Ecosystem Services in Environmentally Sensitive Areas Project" was to establish an effective system of environmental conservation and management in these areas. The project was implemented in the Kala Oya basin in the Anuradhapura and Puttalam districts.

A programme has been developed to conserve and manage the ESAs identified during this project. The government has taken steps to upscale the ESA concept to the national level and prepare a policy frame and national plan for the conservation and management of such areas based on the experience of the pilot project.

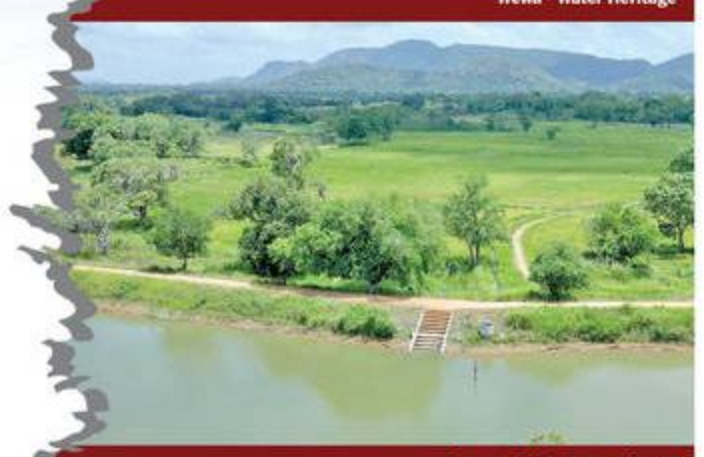
A fact to remember is that the importance of these ESAs is not limited to the environment or for biodiversity. The conservation of these ESAs are essential for the livelihoods and wellbeing of the community, as well as forsustainable development. Furthermore, biodiversity is a heritage of our country and we should be proud to be living here. We all have the responsibility to protect these ecosystems. We need to come together as a nation to fulfil our role in conserving these ESAs. Otherwise the impact will not be limited to the communities living in these areas only, but will affect the entire country.

"For further information regarding Environmentally Sensitive Areas, please scan this QR code"

Ecotourism is eco-friendly

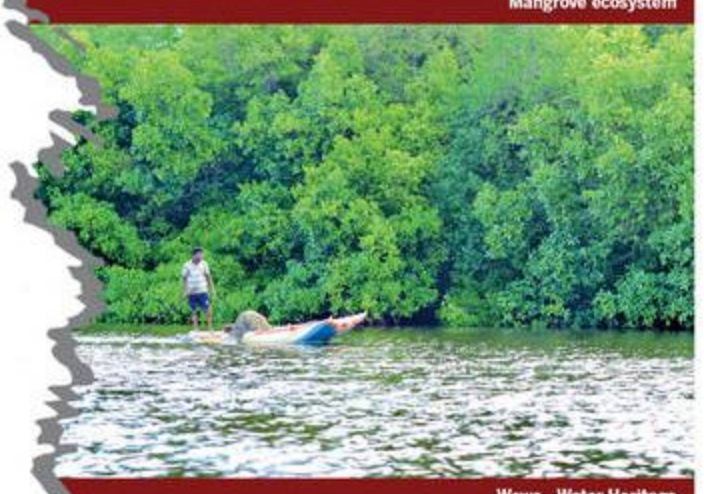


Village-tank-paddyland-forest (Environmentally Sensitive Area)

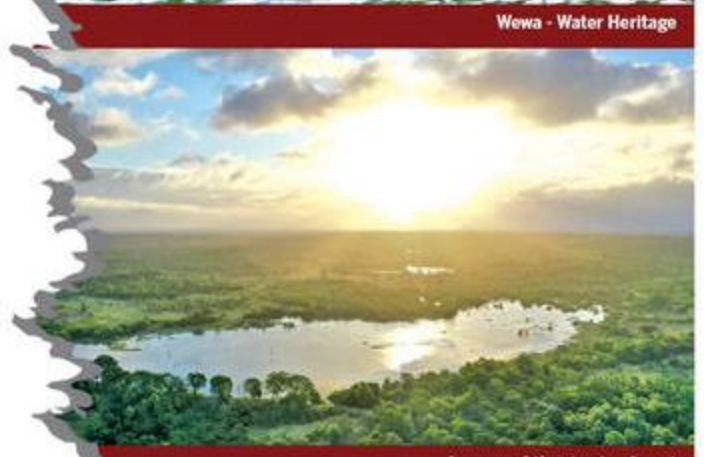


Wewa - Water Heritage

A scene of the riverine forest



Mangrove ecosystem



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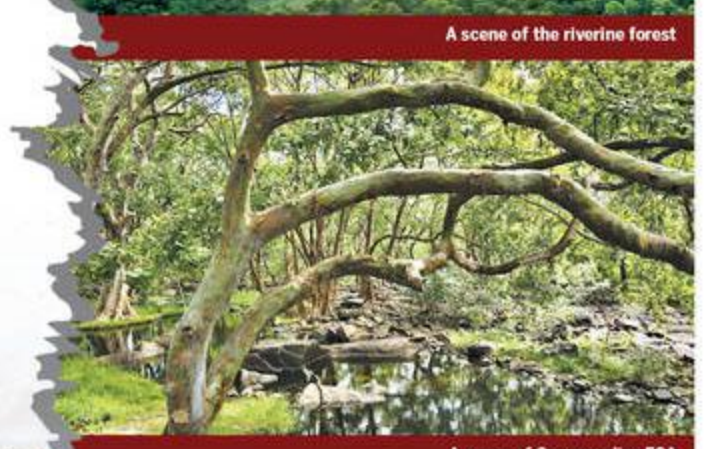

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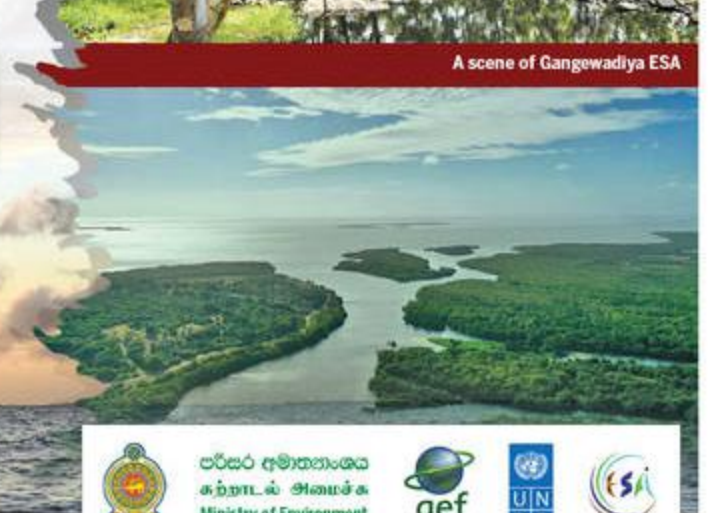

A scene of Gangewadiya ESA