50 Years IN SRI LANKA

"Nature-based Solutions" for Sustainable Development

30 Years in Sri Lanka

"Take nothing but memories, leave nothing but footprints!"

- Chief Si ahl

Illustrated by Kelum Gunasekera

Credits

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Acronyms

BMZ	The Federal Ministry of Economic Cooperation and Development (Germany)
BSL	Biodiversity Sri Lanka
CBO	Community-Based Organization
CC&CRMD	Department of Coast Conservation and Coastal Resource Management
CCD	Coast Conservation Department
CEA	Central Environmental Authority
CEB	Ceylon Electricity Board
CIDA	Canadian International Development Agency
CR	Critically Endangered Species
DD	Data Deficient Species
DSD	Divisional Secretariat Divisions
DWC	Department of Wildlife Conservation
EIA	Environmental Impact Assessment
EN	Endangered Species
EPA	Environmental Protection Area
EX	Extinct Species
FAO	Food and Agriculture Organization
FD	Forest Department
GEF	Global Environment Facility
GIS	Geographic Information System
GoM	Gulf of Mannar
HEC	Human Elephant Conflict
HSBC	Hongkong and Shanghai Banking Corporation
IAS	Invasive Alien Species
IUCN	International Union for Conservation of Nature
IWMI	International Water Management Institute
MASL	Mahaweli Authority of Sri Lanka
MEPA	Marine Environment Protection Authority
MFF	Mangroves for the Future
MMD&E	Ministry of Mahaweli Development and Environment
MoU	Memorandum of Understanding
NARA	National Aquatic Resources Research and Development Agency
NGO	Non-Governmental Organisation
NT	Near Threatened Species
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
VU	Vulnerable Species

OUR VISION

A just world that values and conserves nature

OUR MISSION

To influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable

Ananda Mallawatantri, Ph.D.
IUCN Country Representative

Foreword

The International Union for Conservation of Nature—IUCN in 2018 takes great pride in celebrating 70 years of global contributions towards conservation and sustainable development. The Organization has paved the way to set forth science-based approaches as a precedence to understanding ecosystems; has focused on creating valuable partnerships to share knowledge and to work together; and has given prominence to innovations in order to conserve ecosystems while saying 'yes" to development.

While IUCN is celebrating 70 glorious years globally, in Sri Lanka, we are completing a milestone by delivering unconditional 30 years of service. We thank the Government of Sri Lanka for hosting us and providing us with the room to be engaged in the national arena to contribute our inputs in many important tasks and events to the betterment of the nation. When we look back at the work accomplished and the contributions, they are amazing, relevant and timely.

IUCN believes in "Nature Solutions" and we promote them to facilitate sustainable growth and development and to meet the emerging challenges of climate change. As a Union, we work with member organizations, scientists and multiple stakeholders. In Asia, we maintain ten offices while having 50 offices around the globe. In all aspects, we strive to work closely with our host governments and other national and non-government counterparts. Working side-by-side, we help government agencies to adopt and mainstream science and tools related to nature in the development efforts. In addition, our work has brought in Government Agencies, Development Partners, the Private Sector and Non-Governmental agencies together to work towards common solutions.

This compilation is a humble effort to record selected impressions that IUCN has made towards the sustainable development in the Sri Lankan landscape and seascape while building capacity of many and adding a wealth of nature related information to the national domain.

We wish to take this opportunity to appreciate the warm reception we have received, and the continuous support given by the Government, partners and communities we worked with during the last 30 years. We hope our efforts in the past and the planned work into the future will help Sri Lanka to conserve nature, culture and heritage for a better future.

We remain committed and assure our best service towards a sustainable and resilient Sri Lanka.

Maithripala Sirisena

President of Sri Lanka
Minister of Mahaweli Development and Environment

Let Us Manage the Impact of Climate Change

Sri Lanka is a tropical island country of the Indian Ocean presently facing enormous challenges of climate change due to the change of weather patterns. Seasonal raining which existed over the past centuries have been drastically changed in recent times. We have observed that the dry zone areas of the country getting drier and as a result required water of drinking and agriculture has been severely affected. The traditional famers living in dry zone areas loose their income, and indulge in poverty with no means of living.

On the other hand, wet zone areas are getting wetter resulting in flash floods and land slides due to heavy rains. Valuable water resources of the country have been affected due to human interventions including deforestation, haphazard land use practices and unplanned waste management.

It is ideal time that we all get together and face these undesirable changes and improve the natural resource base of the country through effectively managing natural resources including forest, water, land, etc.

I am happy to note that IUCN Sri Lanka joins hand with the Ministry of Mahaweli Development and Environment with a view to improving the natural resource base in the country.

IUCN National Committee is Chaired by my Ministry with the representatives from leading Govt. Agencies and selected Non-Governmental Agencies working together in the management of IUCN Sri Lanka. This balance of Govt. and Non-Govt. representation in the national committee provides for a unique multi-sector and multi-stakeholder model to select priority areas to focus IUNC programmes.

IUCN programme contributed significantly to the growth of Sri Lanka by way of helping the development projects to be environmentally friendly. The species recovery and relocation carried out with IUCN support in the Moragahankanda - Kaluganga Multipurpose Irrigation Project is unique example of development enderours among others.

As IUCN Sri Lanka celebrates successful 30 years of contributions to this beautiful nation that is filled with many natural wonders, I would like to congratulate the organization on their accomplishment and commend them for not forgetting the country's quest for development in their attempt to conserve and safeguard the natural resources of Sri Lanka. I believe that together we can move forward for a better tomorrow, which takes into consideration the balance between the socio-economic needs of the nation and the endurance of nature.

Challenges for Greening Sri Lanka

It is my great pleasure to write this message at a time the International Union for Conservation of Nature – IUCN is completing 30 years of national contribution in Sri Lanka. IUCN and our Ministry have worked and continuing to work closely on many different areas, such as biodiversity conservation, natural resource management including forestry, human – wildlife conflict, climate adaptation and mitigation, land use planning, improving the management of plastic related waste.

The Ministry of Mahaweli Development and Environment is continuously striving to introduce ways to capitalize the natural environment in a sustainable manner while supporting the development endeavours of the country. Accordingly, the IUCN developed baseline data, tools for landscape planning and management, ecosystem valuation etc. which are extremely valuable.

Further, IUCN will be an important partner in our effort to increase the forest cover up to 32% from existing 29%. IUCN also has supported many of our activities, as an implementing entity and it has helped the ministry to formulate an ambitious project proposal to the Green Climate Fund (GCF) on restoration of Knuckles watershed.

The Ministry has embarked on a Blue – Green Era where the natural resources of the country will be used sustainably to the benefit of the people while preserving them for future generations. This Ministry is pleased to continue working together with IUCN on conservation, disaster resilience, ecosystem service improvements while focusing on climate induced challenges.

I congratulate IUCN on celebrating successful 30 years in Sri Lanka.

Anura Dissanayake

Secretary,
Ministry of Mahaweli Development and Environment

Aban Marker Kabraji

IUCN Asia Regional Director and
Director of the IUCN Regional Hub for Asia-Oceania

It is my honour and pleasure to write the foreword for this coffee-table book on IUCN's 30 years in Sri Lanka.

IUCN began operations in Sri Lanka in 1988 with the establishment of the Country Office in Colombo, following a Memorandum of Agreement signed with the then Ministry of Land and Land Development.

IUCN Sri Lanka has since played a pivotal role as a neutral convenor that brings stakeholders together to engage in dialogue, and is working extensively on the ground, developing and implementing various projects across the country.

The country office has eight IUCN members: five state members and three non-governmental organisations (NGOs). The IUCN Sri Lanka National Governing Committee's role is to facilitate cooperation among Members and other parts of the Union, and to support the participation of Members in the Programme and governance of IUCN. The National Governing Committee is comprised of both Government and Non-Government members.

IUCN Sri Lanka focuses on a number of key thematic areas, such as biodiversity and ecosystems, coastal and marine resources, business and biodiversity, economics of conservation, water, and climate change. The office works closely with the Government, the private sector and local communities to support sustainable natural resource management interventions initiated by Members and partners.

Over the past 30 years, IUCN Sri Lanka achieved many important milestones. These include the introduction of the IUCN Red List to Sri Lanka, the development of Wildlife Management plans for major reservoir/canal projects, the development of the National Biodiversity Strategic Action Plan (NBSAP) for 2016-2022, the development of the Kelani River basin multi-sector multi-stakeholder strategy and action plan, and the development of policies, strategies and a National Action Plan for Marine Environment Protection in Sri Lanka. IUCN Sri Lanka has also raised awareness and fostered engagement amongst many Sri Lankan people on environmental issues, and supported the country's Department of Wildlife Conservation in becoming a member of the Asia Protected Area Partnership (APAP).

IUCN Sri Lanka also had substantial success working with the private sector, having collaborated over the last decade with companies such as Dilmah Conservation, HSBC, and Holcim Lanka - now known as Insee Cement - to protect and conserve nature. IUCN Sri Lanka also partnered with the Ceylon Chamber of Commerce, and the Corporate Social Responsibility arm of Dilmah Tea to establish Biodiversity Sri Lanka - a national platform owned and driven by more than 75 corporate entities.

By consistently providing key strategic inputs to a wide range of initiatives, IUCN has effectively established itself as a key player in the sustainable development of Sri Lanka. This position is enhanced by IUCN's ability to maintain fruitful relationships with the Government, the private sector and civil society.

While we remain committed to engage in dialogues at all levels as we implement our projects, we aim to be a formidably resilient organisation – one which will always stay true to its mission and continue to work with its Members, Commissions, like-minded partners and local communities to drive the conservation and sustainable development agenda forward.

We particularly like to thank the Government of Sri Lanka for hosting IUCN for the last 30 years. Such close collaboration between IUCN Sri Lanka and the Government has been and will remain vital to the protection and management of the country's precious and diverse natural treasures.

We hope that you enjoy reading more about IUCN Sri Lanka in this coffee-table book.

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What is IUCN?

We are the International Union for Conservation of Nature, a membership union that is comprised of both government and civil society organizations. As a body dedicated towards safeguarding the environment, we take a unique approach by striving to bring public, private and non-governmental organizations in a country together on a neutral yet distinct platform and impart "the knowledge and tools that enable human progress, economic development and nature conservation to take place together."[1]

Established in 1948, IUCN has grown from strength to strength to become the 'largest and most diverse environmental network' in the world. Priding ourselves as being "the global authority on the status of the natural world and the measures needed to safeguard it"[1], IUCN brings together about 1,399 members, 13,000 experts and 1,100 staff from around the globe. Along with such expertise, we are also equipped with an extensive knowledge and the technical know-how of the best and latest concepts.

Our member organisations are represented by the IUCN Council, which is the governing body of the Union. The Headquarters of IUCN is situated in Switzerland and the IUCN Secretariat comprises around 900 staff in more than 50 countries, in which Sri Lanka is part of.

IUCN with a broad presence, functions across a range of themes directly and indirectly related to conservation and environment

[1] www.iucn.org

IUCN
COMMISSIONS

A total of six commissions with nearly 13,000 experts who work on a voluntary basis to assess the state of the world's natural resources and provide IUCN with sound information and policy advice on conservation issues

Commission on Education and Communication

CEC drives change for the co-creation of sustainable solutions through leading communication, learning and knowledge management in IUCN and the wider conservation community.
Members: over 1,337

Commission on Environmental, Economic and Social Policy

CEESP provides expertise and policy advice on economic and social factors for the conservation and sustainable use of biological diversity.
Members: 837

World Commission on Environmental Law

WCEL advances environmental law by developing new legal concepts and instruments, and by building the capacity of societies to employ environmental law for conservation and sustainable development.
Members: 978

Commission on Ecosystem Management

CEM provides expert guidance on integrated ecosystem approaches to the management of natural and modified ecosystems.
Members: 1,153

Species Survival Commission

SSC advises the Union on the technical aspects of species conservation and mobilizes action for those species that are threatened with extinction.
Members: 8,178

World Commission on Protected Areas

WCPA promotes the establishment and effective management of a worldwide representative network of terrestrial and marine protected areas.
Members: 2,668

A Journey through the Years:
A Snapshot of IUCN Endeavors

1986

- Contribution to Sinharaja and Knuckles Conservation Planning
- IUCN was established as a project office in Sri Lanka

1991

- Designing an Optimum Protected Areas System for Sri Lanka's Natural Forests: National conservation Review (NCR)
- Financial Investment in Biodiversity Conservation: Sri Lanka Case Study

1992

- Capacity Building for Sustainable Development in Sri Lanka: Implementation of the National Environmental Action Plan

1993

- Biologial Conservation in Sri Lanka: A National Status Report
- IUCN Sri Lanka started to function as an Inter-Governmental Organization under an MoU with the Government of Sri Lanka
- Management Plans for 13 Wet Zone Conservation Forests

1994

- Management Plan for the Conservation of the Knuckles Forest

1995

- Conservation Management Plan for 10 Selected Mangrove Sites in Northwestern Sri Lanka
- Importance of Natural Forests in Sri Lanka for Soil Conservation and Hydrology
- Traditional Use of Natural Forests in Sri Lanka: A National Survey

1996

- Conservation of Peak Wilderness Sanctuary: The Management Plan
- Conservation of Small Cetaceans in Sri Lanka: Landing Catch Survey
- Preparation of Biodiversity Action Plan
- Preparation of the Biodiversity Conservation Action Plan
- The Biodiversity Skills Enhancement Project: Second Workshop Series for Personnel from the Public Sector

1997

- Global Coral Reef Monitoring Network (GCRMN)

We are governed by a National Governing Committee that includes Government and Non-Government members

IUCN Sri Lanka Membership

- Ministry of Mahaweli Development and Environment
- Ministry of Agriculture, Land, Irrigation, Fisheries, Animal Production & Health and Agrarian Development
- Forest Department
- Department of National Zoological Gardens
- Department of Wildlife Conservation
- Small Fishers' Federation Lanka
- Sevalanka Foundation
- Wildlife and Nature Protection Society
- Federation of Wildlife Conservation

1999

- An Assessment of the Status of Biodiversity in the Muthurajawela Wetland Sanctuary
- Conservation & Sustainable Use of Medicinal Plants
- Identification of Critical Habitats in the Muthurajawela Coastal Wetland Sanctuary
- Local Environment Fund (LEF)

2000

- Assessment of Biodiversity in the Madu Ganga Mangrove Estuary
- Conservation Management Plan for 10 Selected Mangrove Habitats South of Colombo

2001

- Assessment of Biodiversity in the Bundala RAMSAR Wetlands
- Assessment of the Economic Value of Muthurajawela Wetland
- Biodiversity Assessment of the Lower Walawe Irrigation Extension Area
- Conservation of Biodiversity through Integrated Collaborative Management in the Rekawa, Ussangoda and Kalametiya Coastal Ecosystems
- Conservation of Small Cetaceans in Sri Lanka: Phase 2

2002

- Assessment of Biodiversity in the Madu Ganga Mangrove Estuary
- Eastern Province Coastal Community Development Project
- Integrating Wetland Economic Values into River Basin Management

2003

- A Biodiversity Status Profile of Anawilundawa Sanctuary

2004

- Biodiversity Assessment of Upper Kotmale Hydropower Project Area
- Preparation of the 2007 National Red List of Threatened Species

2005

- Green Coast for Nature and People after the Tsunami: Sri Lanka Assessment Component
- Preparation of the National Sustainable Development Strategy (NSDS)
- Preparation of the 2006 National Wetland Directory
- Rehabilitating Coastal Ecosystems in a Post Tsunami Context: Restoration of Mangroves in Sri Lanka and Thailand – Sri Lanka Component
- Restoration and Sustainable Management in the Eastern Province of Post-Tsunami Sri Lanka

A Journey through the Years:
A Snapshot of IUCN Endeavors

2007
- Cement Industry's (HOLCIM/INSEE) Environmental Conservation Initiative with IUCN SL
- Ecologically and Socio-Economically Sound Coastal Ecosystem Rehabilitation and Conservation in Sri Lanka
- "Impact of Local Communities on Bundala National Park and Udawalawa National Park" for the Department of Wildlife Conservation in Sri Lanka
- Integrated Environment and Livelihood Enhancement Initiative of Pallansena Fishing Village with Dilma Tea Co.
- Post-Tsunami Ecosystem Restoration Project: Ampara District
- Solid Waste Management Projects

2006
- Biodiversity and Socio-Economic Survey of Panama Village and Tirukkovil in the South Eastern Coast of Sri Lanka
- Biodiversity Assessment of the Moragahakanda Agricultural Development Project
- Mangroves for the Future
- Raising Environmental Consciousness in Society (RECS)
- Resource Inventory of Wilpattu National Park

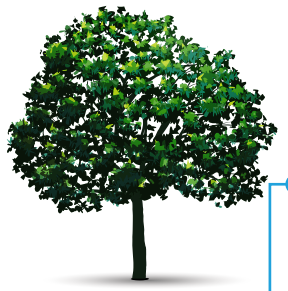
2008
- Artificial Reef Structures at Unawatuna

2009
- Improving Natural Resource Governance for Rural Poor in Sri Lanka

2010
- Biodiversity and Socio-Economic Information of Selected Areas of the Sri Lankan Side of the Gulf of Mannar
- Ecological Assessment of the Sampur Area
- Restoration of the Warawewa Tank

2011
- Biodiversity Assessments of Selected Plantations of Dilmah
- Sri Lanka Tropical Forest and Biodiversity Assessment
- Sustainable Development of Delft Island: An Ecological, Socio-Economic and Archaeological Assessment

2012
- Biodiversity Assessment of the Hiniduma Conservation Forest
- Enhancing Ecological Integrity and Services of the Halgolla Estate
- Implementation of Biodiversity Action Plans for the Moragahakanda and Kalu Ganga Reservoir Projects
- Rapid Biodiversity Assessment of the Nainamadu Forest Reserve



2013

- Bandula Barb Conservation
- Biodiversity Baseline Survey in the Hantana Mountain Range Environmental Protection Area
- Ecological Restoration of the Kapiriggama Cascade Tank System
- Moragolla Hydropower Project: Additional Studies in the Natural Environment
- National Conference titled 'Ecosystem Services for Linking Biodiversity with Livelihoods'
- Providing Communication Support to UN-REDD

2014

- Assessing the Status of Biodiversity of Rainwater Harvesting Systems of the Heladhanavi Power Plant and its Surroundings
- Introduction of a Community-Based Management Model for Vankalai Wetland Ecosystem, Mannar, Sri Lanka
- Management Plan for the Maragala Mountain Range Environmental Protection Area
- Wildlife Management Plan for the Proposed Yan Oya Reservoir Project

2015

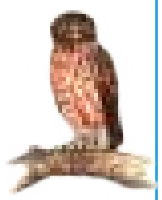
- Conservation of Two Globally and Nationally Endangered (EN) Dragonfly Species
- Dugong and Seagrass Conservation
- Knowledge Enhancement in Central Highlands World Heritage Sites
- Management and Conservation of the Kelani River Basin
- Preparation of Sri Lanka's National Biodiversity Strategic Action Plan (NBSAP) for 2016-2022
- Watershed Conservation and Restoration in the Knuckles Conservation Forest and Environmental Protection Area: Mini-Watershed of Puwakpitiya Oya

2016

- Development of an Eco-Tourism Plan for Pottuvil-Panama Region
- Integrated Strategic Environment Assessment for the Northern Provinces of Sri Lanka: Lessons Leaned
- Mainstreaming Biodiversity Conservation and use in Sri Lankan Agro-ecosystems for Livelihoods and Adaptation to Climate Change (BACC) Project
- The Wildlife Management Plan, including Human Elephant Conflict Management and Mitigation, for the Upper Elahera Canal Project
- The Wildlife Management Plan, including Human-Elephant Conflict Management and Mitigation, for the North Western Province Canal Project (NWPCP)

2017

- A Biodiversity Status Profile of Koskanuwala Watta
- Animal and Plant Rescue in Proposed Sanitary Landfill Site and Transfer Site in Aruwakkalu
- Conservation of Sea Turtles and Coastal Habitats around Anantara Peace Haven Tangalle Resort
- Development of Policy Strategies and National Action Plan for marine protection in Sri Lanka
- Integrating Biodiversity Conservation and Sustainable Use into Land Use Planning in Environmentally Sensitive Areas, Training Manual
- Providing Safe Drinking Water for Chronic Kidney Disease (CKD) Affected Communities in Rambewa
- Contributions to the Biodiversity Finance Initiative: BIOFIN



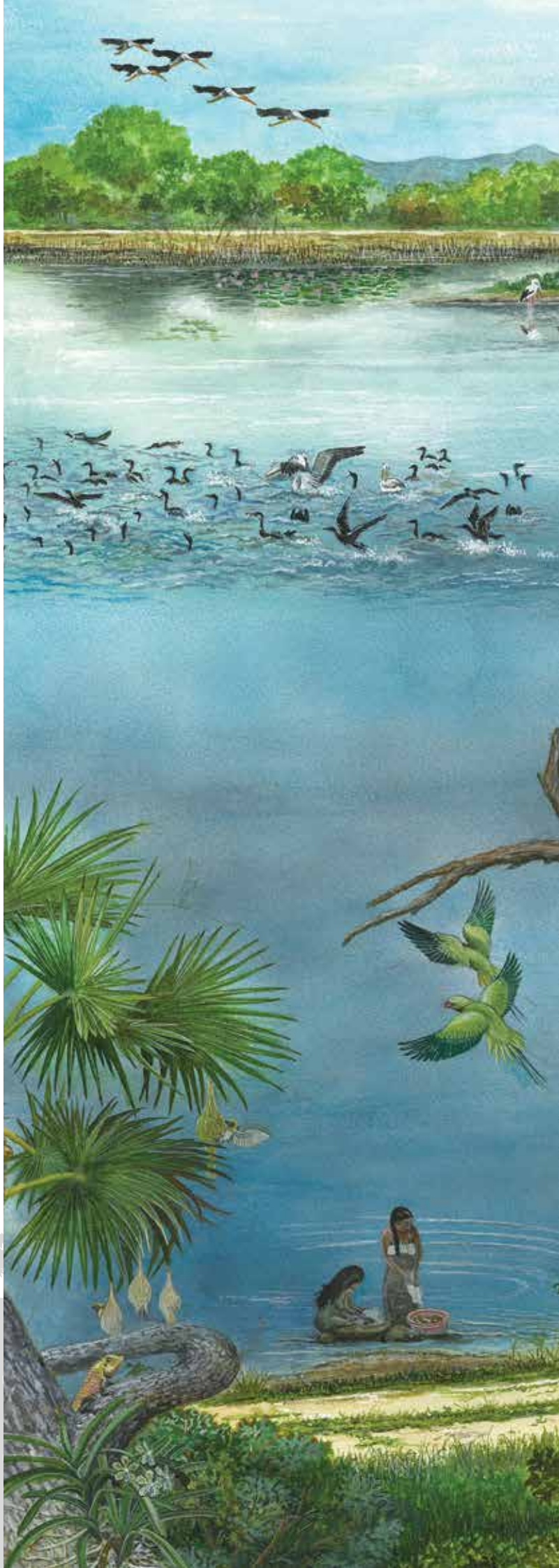
2018

- Managing Together: Integrating Community Centered, Ecosystem-based Approaches into Forestry, Agriculture and Tourism Sectors
- Restoration and Management of a Degraded Fern Land within the Kanneliya Forest Reserve
- Supporting to formulate climate resilient and environmentally sustainable rural development project (Blue-Green Villages)
- Women and Child Centered Climate Risk Assessment in Sri Lanka (WCCCRA)
- Youth Led Ecosystem Based Disaster Risk Reduction (Youth-Eco-DRR)

1986-2000: Highlights

"Nature is not a place to visit. It is home."

- Gary Snyder



Illustrated by Kelum Gunasekera

Contribution to Sinharaja and Knuckles Conservation Planning

Duration: 1986–2012

Other Partner/s: Forest Department (FD), Ministry of Lands & Ministry of Environment

Donor/s: Several

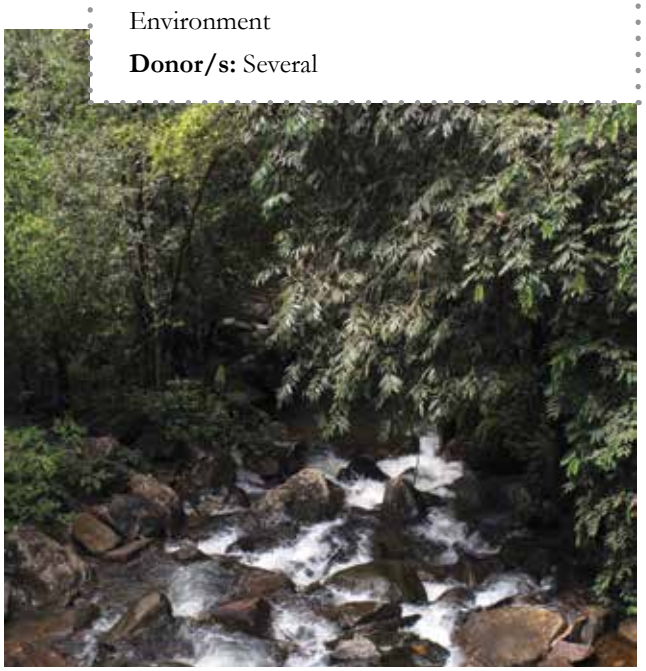
IUCN's presence in Sri Lanka formally began with the preparation of the 'Conservation Plan for the Sinharaja Forest' together with the World Wide Fund for Nature (WWF) under the guidance of the Ministry of Lands and Land Development in 1986. This was a pioneering effort in conservation of the Sinharaja Forest, immediately after the logging ban enforced in late 1970's. The conservation plan for Sinharaja and the subsequent Management Plan for the forest with IUCN contributions were used to provide the highest level of projection by declaring it the first and only national Heritage Wilderness Area. Furthermore, Sinharaja subsequently became the first natural World Heritage Site in Sri Lanka.

IUCN's engagement in Knuckles conservation planning goes back to the early 1990s, where the organization together with the FD prepared 'The Management Plans for the Conservation of the Knuckles Forest' in 1994.

Similarly IUCN assisted in preparing such plans for 13 wet zone forests of Sri Lanka together with the FD. When Knuckles conservation forest became a part of the Central Highlands World Heritage Serial Property in 2010 as the second such in Sri Lanka, IUCN prepared the management framework for the Central Highlands in 2012.

FAST FACTS:

IUCN contributions to conservation planning of forests paved the way for more elaborated management planning of Sinharaja and Knuckles and other forests in Sri Lanka



Sinharaja Conservation Forest
© Naalin Perera

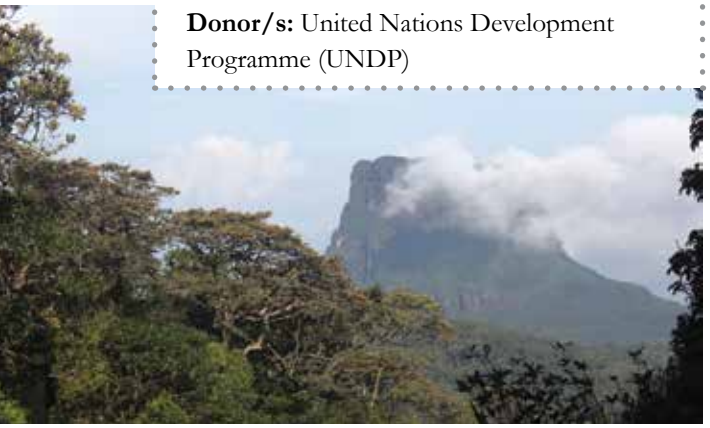
Designing an Optimum Protected Areas System for Sri Lanka's Natural Forests: National Conservation Review

Duration: 1991-1996

Location: Islandwide excluding the Nothern Province

Other Partner/s: FD, Food and Agriculture Organisation (FAO), World Conservation Monitoring Centre (WCMC)

Donor/s: United Nations Development Programme (UNDP)

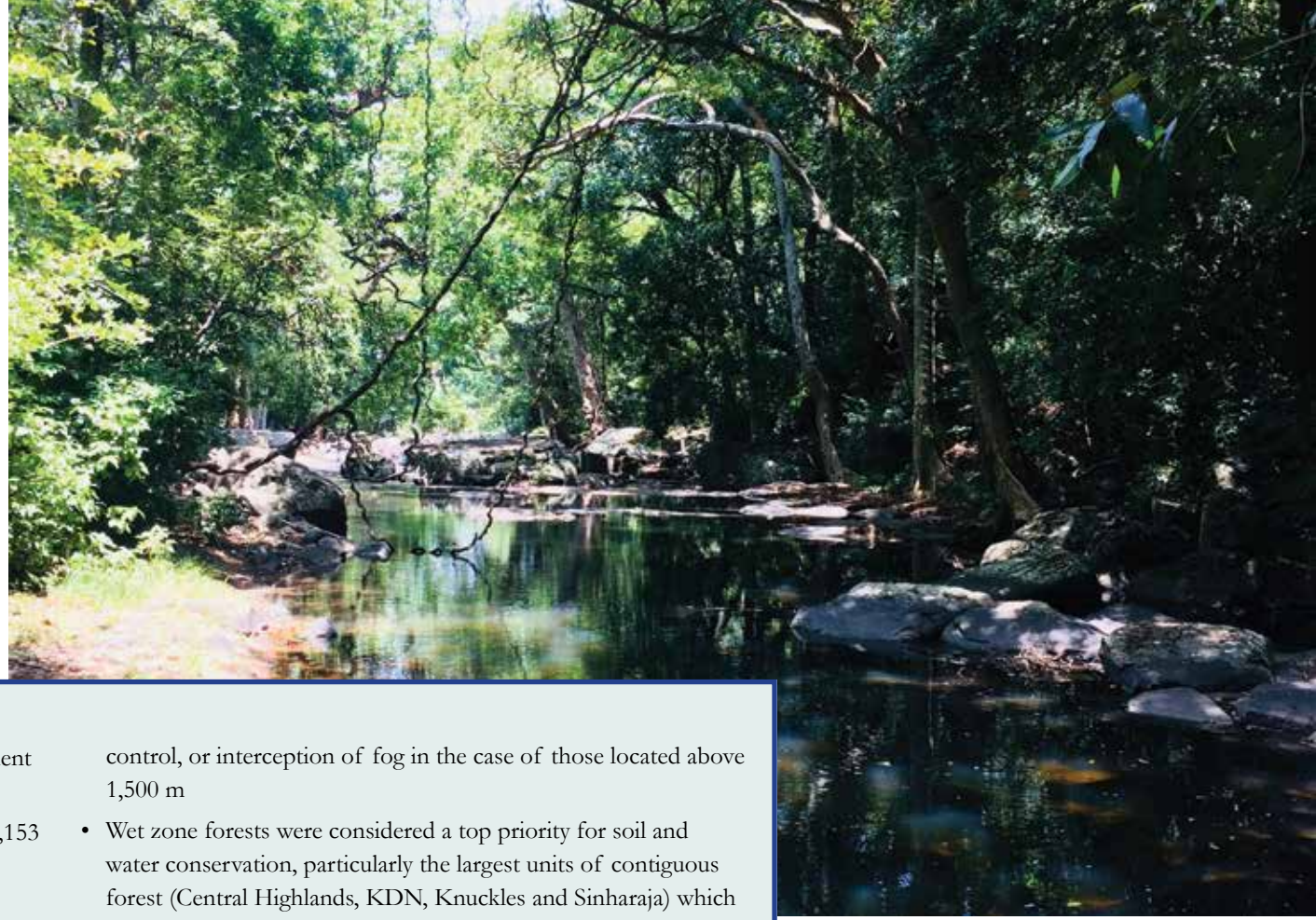


'Designing an Optimum Protected Areas System for Sri Lanka's Natural Forests', known as NCR was a historical undertaking. that showcased the expertise of IUCN Sri Lanka in the organization's early stages in the country.

The NCR was formed to assess the remaining natural forests in Sri Lanka and to define a national system of conservation in relation to forests where watersheds that are important for soil conservation and hydrology are protected, forest biodiversity is fully represented and cultural, economic and social needs are met. As such, the NCR focused on assessing the importance of forests for soil, water and biodiversity conservation. All natural forests that were 200 ha or more were included in the NCR, except those in the North and East of the Island as they were politically inaccessible back then. The biodiversity assessment was restricted to woody plants, vertebrates, molluscs and butterflies. Despite such limitations, the NCR was among the most detailed, comprehensive and innovative evaluations of its kind carried out in any tropical country.

Montane Forests of Peak Wilderness
© Naalin Perera

The results from the NCR showed that many of the most important forests for soil and water conservation were not protected. Furthermore, certain floristic regions and forest types were poorly represented within the existing protected areas system. It was also shown by this study that up to 15 percent of species diversity might have been absent from the Protected Areas System at that time.



Puwakpitiya, Knuckles
© Sampath Bandara

FAST FACTS:

- 1,725 plots (100 m x 5 m) were inventoried along 310 gradient directed transects in 204 forests
- Analyses were based on approximately 69,400 records of 1,153 woody plant species and 24,000 records of 410 species of selected animal groups
- 85 out of 281 forests were evaluated (with respect to their importance for soil and water conservation) and were identified as being extremely important for soil protection and flood control, or interception of fog in the case of those located above 1,500 m
- Wet zone forests were considered a top priority for soil and water conservation, particularly the largest units of contiguous forest (Central Highlands, KDN, Knuckles and Sinharaja) which protects the headwaters of the country's major rivers
- NCR was vital in declaring critical areas as Protected Areas (PA) since 1997

Global Coral Reef Monitoring Network (GCRMN)

Duration: 1997-2005

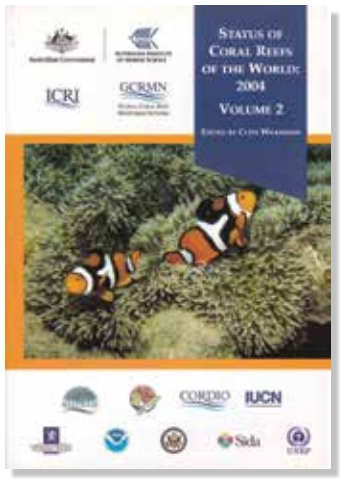
Partners/Donors: IOC & UNEP

Due to the rapidly declining health of coral reefs globally, the Intergovernmental Oceanographic Commission (IOC), United Nations Environment Programme (UNEP) and IUCN formed a partnership in 1997 to establish the Global Coral Reef Monitoring Network (GCRMN). The goal of the GCRMN was to provide data and information for the conservation and sustainable use of coral reef ecosystems. The GCRMN contributed to the Convention on Biological Diversity, and the Global Programme of Action for the Protection of the Marine Environment from land-based activities.

IUCN Sri Lanka hosted the Regional Coordinator of the South Asia Regional Network of the GCRMN and functioned as a hub for operationalizing the activities of the network. Sri Lanka's national focal point was the National Aquatic Resources Research and Development Agency (NARA).

FAST FACTS:

- Biophysical and socio-economic monitoring of coral reefs were the main capacity building activities
- The South Asia Network produced five regional reports between 1997 and 2005



Conservation and Sustainable Use of Medicinal Plants

Duration: 1999-2006

Partner/s: Ministry of Indigenous Medicine, Department of Ayurveda and BMARI

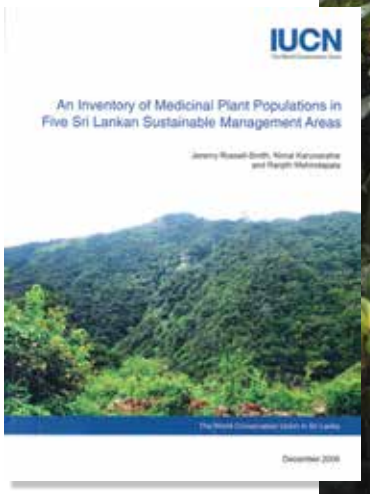
Donor/s: GEF/ World Bank

The Sri Lanka Conservation and Sustainable use of Medicinal Plants Project spanned for six years starting from June 1999. This is one of the first Global Environment Facility (GEF) projects implemented in Sri Lanka. World Bank took the lead as the GEF Agency while IUCN Sri Lanka provided technical and operational assistance. The primary objectives of the project were to conserve globally and nationally significant medicinal plant species, their habitats and genomes, and promote their sustainable use.

The socio-economic, ethno botanical and resource inventory surveys led to the collection of valuable data. The processed information from these data sets were transferred to a database established at the Bandaranaike Memorial Ayurvedic Research Institute (BMARI).

FAST FACTS

- In situ conservation of medicinal plants were enrichment and planting of about 205 ha and 45 km of stream banks
- Establishment of fire lines and zonal demarcation of forests
- Plant propagation research leading to the development of protocols for mass production of planting material for 22 widely used species
- Created a new interest in home-gardens and commercial cultivation by a few local entrepreneurs contributing to in situ conservation and intensively strengthening the ex situ conservation of medicinal plants



Venivel Medicinal Plant
© Naalin Perera

Duration: Nov 1999-Apr 2003

Location: Islandwide

Donor/s: Royal Netherlands Embassy

Local Environment Fund (LEF)

The Local Environmental Fund (LEF) of the Netherlands Government was created to support small-scale local environmental activities, in particular innovative or catalytic projects for which no other financing was available at the time. This was the first small grant scheme implemented by IUCN Sri Lanka and was carried out in three phases while grants were awarded to Non-Governmental Organisations (NGOs) and Community-Based Organizations (CBOs).

The principal objective of the LEF was to support local activities aimed at development, operationalisation and implementation of environmental policy in Sri Lanka, primarily through strengthening the participation and mobilization of local people, initiatives and organizations. Within this framework, LEF supported small-scale activities aimed at the improving the environment; increasing the knowledge and awareness of the local population on environmental issues along with preparation and development aimed at improving the environment.

Pottuvil Lagoon
© Kumudini Ekaratne

FAST FACTS

A total of 18 grants were awarded to activities ranging from:

- Mangrove plantation in Pottuvil and Urani lagoons
- Implementing a solid waste management system at Adam's Peak (Sri Pada) during the festive season
- Awareness raising on sea turtle conservation
- Awareness programmes on environmental management and promoting ISO 14000 and cleaner production as an effective environmental tool to industries
- Biodiversity conservation at Rumassala and Nilgala forests
- Introduction of the technology of mixing paddy husk and saw dust with clay to reduce the amount of clay used
- Improving the quality of bricks produced by small and medium scale brick makers

An Assessment of the Status of Biodiversity in the Muthurajawela Wetland Sanctuary

Duration: Nov 1999-Apr 2000

Location: Muthurajawela, Western Province

Donor/s: Royal Netherlands Embassy

Muthurajawela is the largest coastal peat bog in Sri Lanka, located on the West Coast of the Island. During the period of the assessment, the biodiversity of the Muthurajawela Wetland was threatened by unplanned development activities and a growing human population. Therefore, a six-month long ecological survey was designed to assess the present status (2000) and to identify critical habitats for the conservation of biodiversity in the Wetland. According to the survey, several crucial recommendations were made.

FAST FACTS:

Flora & Fauna

- 192 species of flora were recorded
- 40 species of vertebrate fauna were documented among which 17 species were endemics and 26 were Nationally Threatened
- Invertebrates documented consisted of 48 species of butterflies and 22 species of odonates

Threats

- Direct exploitation (poaching, cutting of trees)
- Habitat degradation/modification (land reclamation, dumping of garbage, clearing of natural vegetation, pollution and eutrophication)
- Spread of several invasive alien species (IAS) including unmanaged domestic animals

Key Findings

- It was observed that the composition of dominant flora had changed over a period of 10 years in most of the site as a result of human disturbances
- Data on the avifauna highlighted a considerable decrease in migrant birds at Muthurajawela, possibly due to habitat deterioration

Whistling Ducks
© Sampath Goonatilake

© Madhushan Indika De Silva

Value and Conserving Nature

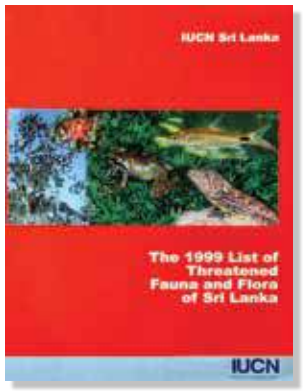
"Earth provides enough to satisfy every man's needs, but not every man's greed."

- Mahatma Gandhi

© Arjan Rajasuriya

The IUCN Red List

The IUCN Red List of Threatened Species, founded in 1964, is accepted globally as the "most comprehensive, objective global approach for evaluating the conservation status of plant and animal species". Starting from[2] modest beginnings, it has grown in prominence to play a vital role in steering "conservation activities of governments, NGOs and scientific institutions" of a country. The main objective of the IUCN Red List is "to provide information and analyses on the status, trends and threats to species in order to inform and catalyse action for biodiversity conservation". [2]



The IUCN Red List categories and criteria were reviewed between the years of 1997-1999 and was revised and formally adopted by the IUCN Council in February 2000 and is now used widely by many countries at regional and national levels and it is also utilized as a standard system for National Red List assessments in Sri Lanka. The most recent publication of the Red List was carried out by The Ministry of Environment and Natural Resources (now Ministry of Mahaweli Development and Environment: MMD&E) in 2012.

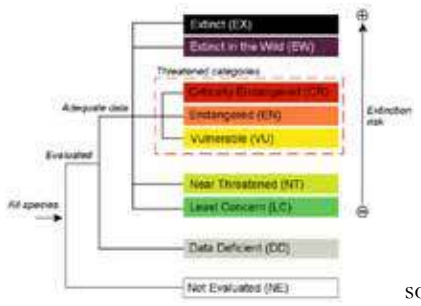
1999

IUCN SL has been part of the Red Listing process since the year 1989. The 1989 Red Listing was carried out by the National Science Foundation – NSF (previously the Natural Resources, Energy and Science Authority of Sri Lanka - NARESA) and IUCN SL played a major role in the process. The list was updated yet again in 1993 by IUCN.

In 1997, IUCN took steps to develop a national criteria for evaluating the threatened fauna and flora species list. Accordingly, the first IUCN Red Listing in Sri Lanka was published in 1999 and was an update of the previously compiled provisional lists of nationally threatened fauna and flora of the country. The process of developing the Red List included the consultation of many experts in the field and included the establishment of a national criteria.

FAST FACTS

- A total of 560 fauna and 690 species of plants were found to be highly threatened or threatened



source: [1]

[2] http://www.iucnredlist.org/about/introduction

2007

Duration: March 2004-December 2006

Donors/Partners: Ministry of Environment and Natural Resources PAM&WC Project

IUCN spearheaded the introduction of the Red List Global Criteria to Sri Lanka by publishing the 2007 Red List. This was done in collaboration with the Ministry of Environment and Natural Resources and IUCN also contributed to institutionalize the Red Listing process in Sri Lanka. IUCN was also involved in establishing a digital database related to species and in updating the 1999 list of threatened plants and animals.

FAST FACTS:

Flora

- 1,099 plant species were evaluated out of which 72 species (6.5%) were extinct (EX) and 675 species (61%) were found to be threatened
- Among the EX species nearly 60% were endemics and one species (*Alphonsea hortensis H. Huber*) was "Extinct in the Wild" (EW) while among the Threatened species, 412 (61%) were endemic to Sri lanka and about 37% were Critically Endangered (CR)
- 69 species (six percent) were Near Threatened (NT) while five percent fell under the category of Data Deficient (DD) Species
- There were a total of 677 species of Inland Indigenous Vertebrate Fauna, out of which 57 were CR, 99 were EN and 67 were VU. In total there were 223 threatened species
- Out of these segregrations 34 CR, 68 EN and 36 VU were endemic species respectively
- There were a total of 667 Inland Indigenous Invertebrate Fauna out of which 73 were CR, 54 were EN and 30 were VU. In total there were 157 threatened species

2017

IUCN in collaborations with the National Herbarium of Peradeniya Royal Botanical Gardens, the Institute of Fundamental Studies and Biodiversity Secretariat, Ministry of MMD&E and the Missouri Botanical Garden of USA organised a Red List workshop to carry out an assessment for species, which belongs to the family of Ebanacea.

A workshop on the Red List underway at Peradeniya in 2017
© Naalin Perera

The key resource person during the workshop was Dr George Schatz of the Missouri Botanical Garden and he acted as the global red list assessor. The workshop was funded by the Global Ebony Assessment and focused on training Sri Lankan botanists to assess Sri Lankan plant species by using global threatened species assessing criteria.

OTHER FACTS

- Development of a national database on Species in Sri Lanka.
- Establishment of a Red Listing unit in the MMD&E

Dugong and Seagrass Conservation

Duration: 2015-2018

Location: Gulf of Mannar (GoM) and Palk Bay

Donor/s: GEF through MbZSCF

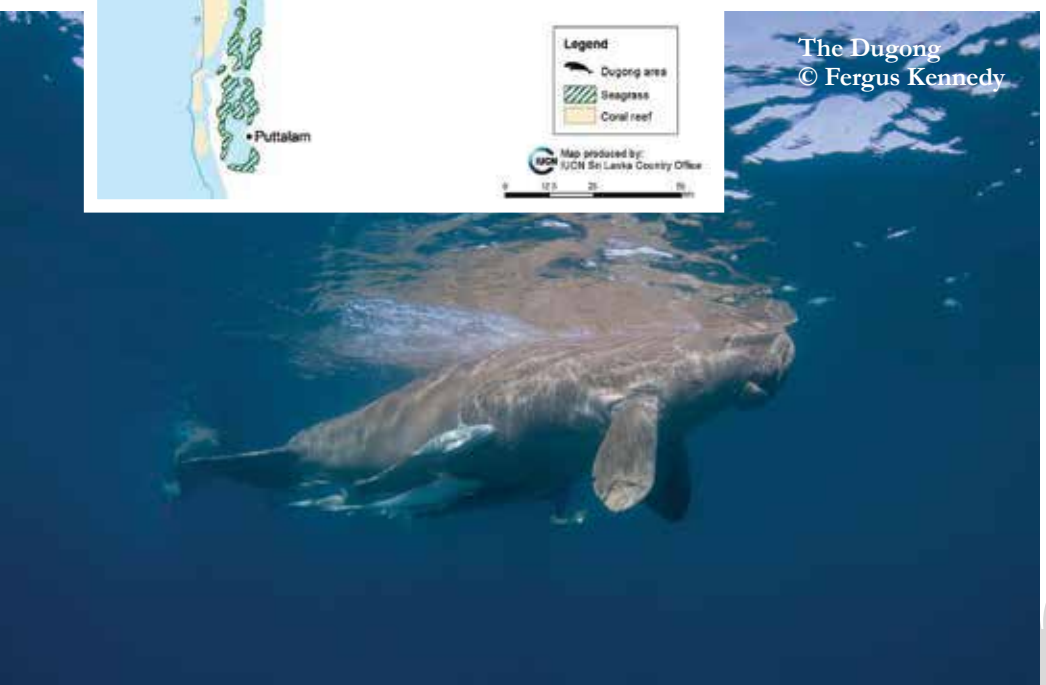
Other Local Partner/s: DWC, NARA, BEAR, ORCA and SLTCP

The IUCN Red List of Threatened Species identifies that the dugong falls into the category of 'Vulnerable to Extinction'. The global project titled "Enhancing the Conservation Effectiveness of Seagrass Ecosystems Supporting Globally Significant Populations of Dugong Across the Indian and Pacific Oceans Basins" aims to protect the Dugong and its habitat, which is the seagrass meadows. It is implemented in eight countries; Indonesia, Madagascar, Malaysia, Mozambique, Solomon Islands, Sri Lanka, Timor-Leste and Vanuatu. The project is funded by GEF with implementation support from the UNEP. It is executed by the MbZSCF (Mohamed bin Zayed Species Conservation Fund) in partnership with the Secretariat of the Convention of Migratory Species'(CMS) and Dugong Memorandum of Understanding (MOU).

IUCN Sri Lanka implemented one of the components, namely Lk4 in 2015. The dugong focal point in Sri Lanka is the Department of Wildlife Conservation (DWC) based on the Dugong MOU. Other local partners include DWC, National Aquatic Resource Research Development Agency (NARA), Biodiversity Education and Research (BEAR), Ocean Resources Conservation Association (ORCA) and Sri Lanka Turtle Conservation Project (SLTCP).

FAST FACTS:

- Stakeholders contributed to the protection of the dugong and its habitats:
  - o Improved awareness among all stakeholders, especially the local communities on protection of the dugong, seagrass meadows and other marine resources
  - o Sustainable alternative livelihoods developed at specific locations around the Puttalam Lagoon
- Dugong is protected and its habitats restored
- Improved governance
  - o Policy gaps were identified
  - o Operational framework to implement policies and regulations
  - o Expansion of the knowledge among law enforcement authorities on the existing policies and regulations regarding marine protected areas and species.
- Improved knowledge on the dugong and seagrasses where the information gap is reduced


The Dugong
© Fergus Kennedy


The Dugong
© Fergus Kennedy


Seagrass
© Arjan Rajasuriya

Assessment of Biodiversity in the Madu Ganga Mangrove Estuary

Duration: May-Oct 2000

Location: Galle District, Southern Province

Donor/s: SAVIYA Development Foundation Galle & The Royal Netherlands Embassy

Madu Ganga
© Naalin Perera

The Madu Ganga estuary and mangrove islets are a complex coastal wetland ecosystem situated in the Galle District of Southern Sri Lanka. The total area of the estuary is 915 ha, of which 770 ha consist of open water, while islands account for 145 ha. With the view of safeguarding the ecological functions, resources and values of the estuary, IUCN SL carried out a systematic assessment of biodiversity and provided valuable recommendations in one of the last remaining tracts of pristine mangrove forests in Sri Lanka.

FAST FACTS:

Flora & Fauna

- There were 302 species of plants belonging to 95 families, which included 19 endemics, eight Nationally Threatened species and nine IAS
- The fauna included a total of 248 species of vertebrates

Threats

- Spread of invasive alien species
- Poaching
- Exploitation of species
- Deterioration/degradation of habitats

Assessment of Biodiversity in Bundala Ramsar Wetlands

Duration: Jan-Dec 2001

Location: Hambantota District, Southern Province

Donor/s: RAMSAR Bureau/DWC

The Bundala National Park (6,216 ha) is located within the Southeastern Arid Zone of Sri Lanka. The Park consists mainly of dry thorny scrubland and lagoons; namely, Koholankala (390 ha), Malala (650 ha), Embilikala (430 ha) and Bundala (520 ha). These shallow water lagoons form a complex wetland system that harbours a rich bird life, including several species of migratory waterfowl. Bundala is Sri Lanka's first Ramsar wetland. This survey was conducted to document the status (as of 2001) of biodiversity in this protected area.

FAST FACTS:

Flora & Fauna

- 383 plant species belonging to 90 families were documented which included six endemics, seven Nationally Threatened species (IUCN Sri Lanka, 2000) and 15 IAS
- 324 species of vertebrates were recorded from which 11 species were endemic, and 29 species were Nationally Threatened
- Among the invertebrates, 52 species were butterflies

Threats

- Habitat deterioration/degradation, direct exploitation of species, inadequately planned land-use practices, prolonged drought and spread of IAS

Recommendations

- Re-demarcate the Park boundary
- Initiate a programme to manage the entry and spread of IAS
- Create appropriate irrigation structures to halt the flow of irrigation water into Malala and Embilikala lagoons, and create new tanks/ponds to store water
- Action to mitigate poaching activities
- Management of livestock in the villages around the Park
- Action to mitigate the expansion of the death of *Manilkara hexandra* trees

A crocodile at Bundala National Park
© Sampath Goonatilake

Conservation of Biodiversity through Integrated Collaborative Management in the Rekawa, Ussangoda and Kalametiya Coastal Ecosystems

Duration: 2001-2005

Location: Rekawa, Ussangoda and Kalametiya, Southern Province

Donor/s: GEF/ UNDP

Other Partner/s: DWC, FD

The main objective of the project, funded by UNDP through GEF, was to ensure the conservation and sustainable use of the biodiversity of the area comprising of Rekawa, Ussangoda and Kalametiya through the development of a collaborative management system, actively involving local communities, NGOs and governmental agencies. The Ministry of Fisheries and Ocean Resources acted as the Executing Agency, while the Coast Conservation Department (now CC&CRMD) functioned as the Implementing Agency. IUCN Sri Lanka functioned as the facilitating organization.

FAST FACTS:

- An assessment of turtle nesting habitats from Tangalle to Pilinnawa was carried out and the findings led to the declaration of the Rekawa and Godawaya Wildlife Sanctuaries under the Fauna and Flora Protection Ordinance by DWC on 6 August 2006. These were the fist Wildlife Sanctuaries for marine turtles in the country
- A coastal environmental profile and a replicable special area management plan for Rekawa, Ussangoda and Kalametiya was prepared
- Participatory mechanisms for resource management developed and livelihoods of the local community improved through the introduction of nature-based tourism initiatives and other sustainable sources of income
- Conservation programmes for globally significant biodiversity established at the project site and local biodiversity units established to enhance community awareness
- Efficient policy level coordination and law enforcement established to improve biodiversity conservation
- An effective monitoring system was put in place to assess development activities and their impact on biodiversity

Ussangoda © Naalin Perera

Integrating Wetland Economic Values into River Basin Management

Duration: 2002-2005

Location: Kala Oya, Anuradhapura District

Other Partner/s: Mahaweli Authority of Sri Lanka (MASL)

Donor/s: WANI/ Department for International Development (DFID)

IUCN SL conducted a regional project titled "Integrating Wetland Economic Values into River Basin Management", as part of the Water and Nature Initiative of IUCN-WANI. The objective of the project was to provide economic rationale for considering wetlands at river basin management scale. In Sri Lanka, the project worked closely with the 'Kala Oya Pilot River Basin Management Project' of MAS and conducted numerous awareness and capacity building programmes for water sector professionals. The project attempted one of the initial valuation studies on traditional tank systems in Sri Lanka in order to consider vital components of both the natural and manmade landscape in Sri Lanka.

Kala Oya at Gangewadiya
© Naalin Perera

The study quantified the benefits associated with tank goods and services, and underlined their high economic and livelihood value to local communities. It also looked at the economic returns to different options for restoring and maintaining the traditional tank system.

These results revealed that removing silt and rehabilitating the tank reservation were the most feasible options, and could, not only, improve the services provided for a longer period of time but could give the highest economic return as well.

Based on studies undertaken, policy briefs, case studies and wetland valuation issues papers were produced in Sinhala, Tamil and English and disseminated as one of the pioneering efforts in Sri Lanka during 2002 and 2005.

FAST FACTS:

Flora & Fauna

- Wetland Valuation Issue Paper No. 1: May 2003, Valuing Wetlands in Decision-Making: Where Are We Now?
- Case Study in Wetland Valuation No. 1: May 2003, Muthurajawela Marsh, Sri Lanka: Safeguarding Wetland Protected Areas in Cities
- The Value of Traditional Water Schemes: Small Tanks in the Kala Oya Basin, Sri Lanka
- IUCN Water, Nature and Economics Technical Paper No. 6, 2005
- Working papers
- Muthurajawela and Traditional Water Scheme Valuation were included by 'The Economics of Ecosystems & Biodiversity' (TEEB), the only such case studies to be included from Sri Lanka

Duration: Sep 2003-Jan 2004

Location: Puttalam District, North Western Province

Donor/s: Small Grants Fund of the Ramsar Convention on Wetlands & the Royal Netherlands Government

A Biodiversity Status Profile of Anawilundawa Sanctuary

The Anawilundawa Wetland consists of an ancient group of shallow cascading tanks, ranging from 12-50 ha in extent, built around 1140 AD by King Parakramabahu. A number of local communities continue to live within the Sanctuary and directly depend on it for their livelihoods and food security. The Ramsar Convention required contracting parties to assess the biodiversity status of sites declared as Ramsar Wetlands, followed by subsequent monitoring at regular intervals. It had been observed that this wetland of global significance is deteriorating due to several anthropogenic factors. Therefore, establishing a baseline of biodiversity status of the sanctuary was of utmost importance. With a view of contributing towards the future conservation and participatory management of this Ramsar site, IUCN SL undertook this biodiversity assessment.

A fisherman at Anawilundawa
© Naalin Perera

FAST FACTS:

Flora & Fauna

- A total of 290 plant species, representating 95 families were recorded, which included one endemic and two Nationally Threatened species
- Among the 60 introduced plant species, nine IAS were recorded
- 24 aquatic plants, 120 woody tree species, 61 shrub species, 49 herbaceous species, 34 species of climbers and two species of epiphytes were recorded
- A total of 240 native inland vertebrate species, amounting to 34% of the recorded species in Sri Lanka were found
- 37 species of migrant birds and four introduced fish species bringing the total to 281 vertebrate species belonging to 116 families were recorded

- Ten species are endemic to Sri Lanka, while 21 species are Nationally Threatened
- The vertebrates consisted of 47 species of fish, 11 species of amphibians, 34 species of reptiles, 168 species of birds and 21 species of mammals
- Invertebrates included 78 specified of butterflies, belonging to five families with one endemic species and 13 Nationally Threatened species, 13 species of dragonflies and damselflies belonging to four families, and six species of aquatic mollusks representing six families

Major Threats

- Habitat loss • Degradation and modification
- Direct use and overexploitation of species
- Spread of IAS and natural factors

Recommendations

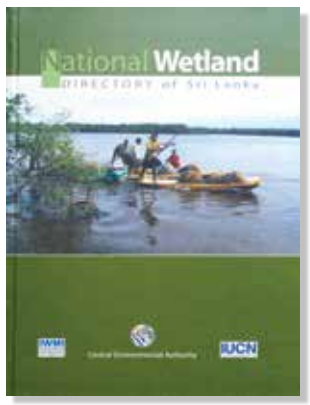
Recommendations were made including measures to enhance management of the sanctuary, mechanism to manage water in the wetland, establish a biodiversity monitoring programme, implement awareness raising activities and to promote regulated eco-tourism in the area in close collaboration with local communities

Anawilundawa Sanctuary
© Naalin Perera

Duration: Mar 2005-Dec 2006

Location: Island-wide

Donors/Other Partners: Central Environmental Authority **(**CEA) & International Water Management Institute (IWMI)



Preparation of the 2006 National Wetland Directory

The Asian Wetland Directory of 1989 identified 41 wetland sites of international importance in Sri Lanka, covering 274,000 ha in total. However, considering the dearth of new information related to wetlands, the need to prepare an updated directory of wetlands in Sri Lanka was initially recognized at the National Symposium on Conservation of Wetlands in Sri Lanka in 2003. The National Policy and Draft Strategy on Conservation of Wetlands in Sri Lanka, prepared by the Ministry of Environment in 2004 further stressed the need to prepare an updated directory of wetlands in the country and IUCN SL was engaged accordingly to carry out the task. The Directory serves as a valuable source of information for policy plannners as well as various sectors, such as Government and education sectors.

FAST FACTS:

Flora & Fauna

- 62 wetland sites belonging to 21 administrative districts along with their current threatened status (High, Moderate, Low) were indicated
- Most common threats to wetlands were identified as siltation and habitat deterioration/ degradation

Ecologically and Socio-Economically Sound Coastal Ecosystem Rehabilitation and Conservation in Sri Lanka

Duration: Jan 2007-Dec 2009

Locations: Puttalam Lagoon, North Western Province

Donor/s: The Federal Ministry for Economic Cooperation and Development (Germany) (BMZ)

The project was based on the Puttalam Lagoon and coastal stretch area, which was identified at the national level as being vulnerable and threatened, both socio-economically and ecologically.

The main objective of the project was to conserve and restore degraded and threatened coastal ecosystems as key assets, which support human wellbeing and security. To do so, the project first identified priority coastal ecosystems that required rehabilitation and conservation. This identification was based on ecological and socio-economic importance, suitability and needs. The project approach focused on improving lagoon ecosystems and its services and in order to do so, livelihood opportunities were created. This was a strategy employed to reduce the dependency on lagoon resources; improve and education & awareness programmes; and prevent pollution. Lagoon management as part of landscape management and 'ecosystem' management were also conducted.

ACTIVITIES CARRIED OUT

Biodiversity Conservation and Ecosystem Restoration

- Improved biodiversity, conservation and restoration of lagoon ecosystems
- Comprehensive biodiversity and socio-economic assessments of the lagoon and the surrounding area
- Preparation of a land use plan for the Puttalam, Lagoon area in collaboration with the Land Use Planning Department by using GIS (Geographic Information System) as a decision making tool and enhanced GIS mapping skills within key stakeholders
- Conducted lagoon ecosystem restoration projects (i.e: converting abandoned shrimp farms into mangrove forests)
- Restored canals and streams by freeing them of pollution, which ensured freshwater in lagoons
- Improved forest cover in the area by greening homegardens and introducing ecological parks to schools
- Improved drinking water facilities and sanitary facilities
- Demarcated the mangrove forest cover and installed display boards
- Introduced solid waste management best practices in coastal and marine border settlement areas of Kalpitiya by initiating solid waste plants at the Kalpitiya Pradeshiya Sabha and composting systems for the dwellers.
- Building communication and awareness about the lagoon system among key stakeholders including schools and general public

Sustainable Fisheries Management

- Declaration of Puttalam Lagoon as a fisheries management area by gazetting and demarcating the lagoon boundary
- Strengthening the lagoon governance system and formation of a lagoon management mechanism.
- Improved awareness and capacity building among key stakeholders
- Preparation of Puttalam Lagoon fisheries management plan

Sustainable Livelihoods Development/ Social Empowerment

- Introduced alternative sustainable livelihood options for fisherwomen such as sewing (with the provision of sewing machines) and poultry farming at homestead level

Distributing plants among local communities
© Naalin Perera

- Enhanced the value chain of fisheries production by improving the quality of dry fish production
- Increased alternative income of fisher families by introducing drip-irrigated homegardens and crab fattening and establishment of a demonstration seaweed culture plot at Tirikkapallama

Cement Industry's (HOLCIM/INSEE) Environmental Conservation Initiative with IUCN

Duration: 2007-Present

Location: Aruwakalu, Puttalam District, North Western Province

Other Partner/s: DWC

Donor/s: Holcim Lanka PLC/ LafargeHolcim/INSEE-Siam City

The proposal for the initiative was first prepared by The World Conservation Union-Sri Lanka ("IUCNSL"), in discussion with Holcim (Lanka) Ltd ("Holcim Lanka"). The proposal was written within the framework of planned intensive global cooperation between the World Conservation Union and the Holcim Group of Companies, in the area of environmentally-friendly production systems and conservation of biodiversity. To this effect, a global MoU was signed in Switzerland in February 2007. Through this cooperative agreement, the Holcim Group intended to further develop its environmental and biodiversity conservation policies, while IUCN strengthened the progress towards its objective of raising environmental awareness and responsibility in the private sector.

Holcim (Lanka) and IUCN SL signed a partnership agreement to achieve the following strategic objectives:

- Review and assess the approach of Holcim Lanka to biodiversity conservation management, establish a baseline, and develop a more comprehensive biodiversity strategy within the framework of the corporate biodiversity policy and strategy for the Holcim Group under the Global Agreement
- Explore, identify and develop joint initiatives of mutual interest and benefits, particularly those supporting sustainable livelihoods and biodiversity conservation
- Promote good practice by sharing learnings with the wider industry and conservation communities

In 2016, the management of the Aruwakalu Quarry Site was handed over to INSEE-Siam City Cement PLC and the new management agreed to continue the annual monitoring at restored sites, along with the annual animal rescue. Some of the other activities carried out include mitigation of Human Elephant Conflict (HEC), and mitigation of environmental issues at the Ruhuna Cement Plant Programme.

Aruwakalu Site
© Sampath Goonatilake

Vegetating the abandoned quarry site
© Sampath Goonatilake

FAST FACTS:

Rehabilitated Area for Each Year of Restoration Activities

Rehabilitation Year	Area of Rehabilitation (m^2)
2008	107,484
2009	111,539
2010	87,710
2011	44,828
2012	64,755
2013	45,432
2014	135,532
2015	64,800
2016	34,840

Faunal Species Richness Data: 2009 to 2017

Taxon	Number of species recorded in each year								
	2009	2010	2011	2012	2013	2014	2015	2016	2017
Land snails	-	-	-	4	4	5	3	10	9
Dragonflies	-	4	8	1	4	5	10	9	7
Butterflies	13	34	43	9	16	33	37	55	33
Amphibians	2	0	0	0	0	0	0	0	0
Reptiles	6	3	7	5	4	6	6	8	10
Birds	33	39	52	39	38	40	47	47	49
Mammals	9	14	16	18	18	14	16	21	19
Total	**63**	**94**	**126**	**76**	**84**	**104**	**119**	**150**	**127**

Flora Monitoring Results: 2009-2017

Year	Number of species recorded in each year								
	2009	2010	2011	2012	2013	2014	2015	2016	2017
1 Number of species	29	63	116	64	59	67	127	100	88
2 Number of families	16	29	30	21	23	28	33	34	34

Chamaeleo zeylanicus, an Endangered Species discovered at the site
© Sampath Goonatilake

Illustrative Summary: Species Rescued by Conservation Status

Rescue and Release programm (year)	Total number of individuals rescued	Total number of species rescued	Number of endemic species	Number of threatened species			Number of NT species	Number of DD species	Percentage of endemic species	Percentage of threatened species
				CR	EN	VU				
2008	139	?	?	0	0	0	?	?	?	?
2009▪	226	> 33	6	0	0	1	?	?	?	?
2010	623	48	10	2	0	0	3	5	20.84%	4.17%
2011	616	39	13	1	0	1	3	6	33.33%	5.13%
2012	1,848	61	20	2	0	1	3	5	32.79%	4.92%
2013	2,377	77	15	2	4	4	0	2	19.48%	12.99%
2014	1949	82	15	2	5	4	1	2	18.29%	13.41%
2015	3218	78	17	1	6	5	0	1	21.79%	15.38%
2016	2065	64	10	0	4	4	0	0	15.63%	12.5%
2017	**2074**	**63**	**12**	**0**	**4**	**4**	**0**	**0**	**19.05%**	**12.7%**

Artificial Reef Structures at Unawatuna

Duration: 2008-2016

Location: Unawatuna, Southern Province

Donors/Partners: Holcim (Lanka) Ltd (now INSEE/Siam City Cement)

IUCN and Holcim (Lanka) deployed 15 artificial reef structures made of concrete at Unawatuna in 2008 to create habitats for marine life. The first baseline survey was conducted by IUCN in association with NARA in 2012 and the second survey was conducted in 2013 with the funding of MFF (Mangroves for the Future). The most recent survey was conducted in February 2016 and focused on ten reef cones. From the year of 2008, when the structures were first deployed, there had been very low coral recruitment up to 2012. Since then, it was identified in 2016, that many corals have recruited and grown relatively well. This is due to the fact that hard corals may take several years to successfully recruit and grow. As such, this appears to be the situation with the reef cones, where until 2012 there was low coral recruitment and since 2013 many new colonies have begun to grow.

Recommendations provided during each of the surveys included promoting the project area as a tourist friendly and dive site, methods to attract fish and invertebrates, how to aid the growth of corals in the cones better, carrying out awareness programmes for the relevant communities, ways to prohibit unsafe fishing practices etc.

FAST FACTS:

The 2016 survey on the 10 reef cones revealed that;

- Many new colonies of corals have begun to grow on the reef cones, especially *Acropora* (29%) and *Montipora* (49%) species
- The total number of coral colonies had increased from 42 (2012), 92 (2013) to 150 (2016)
- Eight coral genera were identified
- 20 species of fish were recorded around the reef cones

Coral growth
© Arjan Rajasuriya

Ecological Assessment of the Sampur Area

Duration: Mar-Dec 2010

Location: Trincomalee District, Eastern Province

The Sampur area of the Trincomalee District carries a significant potential for development as an industrial zone. However, the area features several natural terrestrial and marine habitats that have remained undisturbed, primarily due to the fact that only one small village was located in the vicinity, with the lifestyles and agricultural practices of the residents of this settlement having a minimal impact on the ecological integrity of the area. As such, an assessment of the biodiversity of the area was necessary to ascertain the feasibility of planned development work, with respect to the potential impacts of these activities on the biodiversity of the area.

FAST FACTS:

Flora & Fauna

- A total of 334 floral species belonging to 86 families were recorded. This included four endemics, one CR, five EN, 13 VU, 15 NT, seven IAS and 69 exotic species
- 272 faunal species were recorded among which two were CR, eight were EN, 12 were VU, 13 were NT and three were DD species

Other Facts

Key observations and recommendations to mitigate adverse impacts on the biodiversity and its habitats were put forward

Sampur Lighthouse
© Sampath Goonatilake

Biodiversity Assessments of Selected Plantations of Dilmah

Duration: 2011-2012

Location: Sabaragamuwa Province

Donors/Other Partners: Dilmah Conservation

Adopting sustainable management approaches to conserve natural habitat patches as well as to minimize impacts on natural forest habitats present in the boundaries of large estate plantations is a priority area in the overall biodiversity conservation strategy of Sri Lanka. In support of this goal, Dilmah Conservation launched an initiative to further improve the sustainability of biological resources within and bordering the three estates managed by the Kahawatta Plantations PLC through integration of biodiversity conservation principles into the management system of their estates. The first step of this initiative was to develop a detailed inventory of the biological resources present within and immediately adjacent to the estates. All estates were recommended to conduct campaigns to create more awareness among the community and workers. The reccomendations also included promoting sustainbale tourism as a tool for estates to recover the cost of restoration.

Hunuwela Estate

The Hunuwela Estate is located between Opanayake and Pelmadulla towns and comprises of five divisions with a total extent of 992 ha.

FAST FACTS:

Flora & Fauna

- Key vegetation types identified were riverine forest, secondary forest, grassland and horticultural crop lands
- 282 floral species belonging to 87 families were recorded among which 21 were endemic and 15 were threatened (nationally or globally threatened)
- 214 faunal species were recorded, which included 37 endemics, 13 Nationally Threatened (one CR species, four EN species and eight VU species), 24 NT and one DD species

Threats

- Habitat loss
- Soil erosion
- Destructive firewood collection
- Hunting
- Illegal gem mining
- Watershed degredation

Recommendations

- Suggestions for improving the environmental outlook of Hunuwela Estate
- Development of a landscape level biodiversity management plan for the estate
- Improving community engagement in environmental development

Opata Estate

The Opata Estate (59518 ha in extent) is located between Pelmadulla and Godakawela towns and comprises of seven divisions and are separated from surrounding villages by a public road network. Tea, cinnamon and rubber are the main crops planted in the estate.

FAST FACTS:

Flora & Fauna

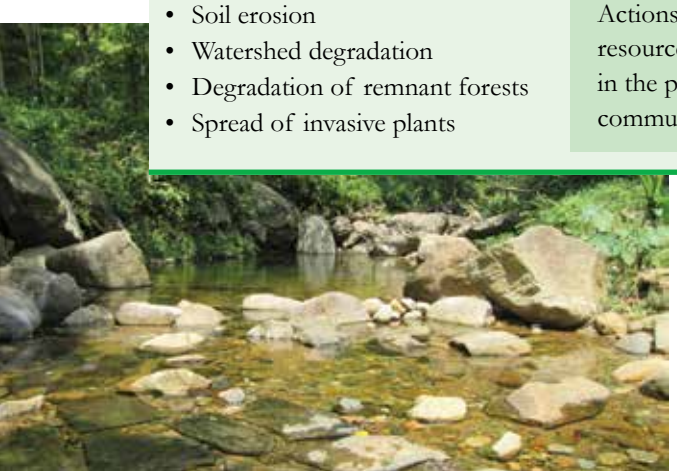
- Key vegetation types identified were grasslands, horticultural crop lands, riverine forest, secondary forest and semi-wild rubber areas
- 334 species belonging to 91 plant families were recorded including 22 endemics and five threatened species
- 205 faunal species were recorded out of which 31 species were endemics, eight were Nationally Threatened (two EN species and six VU species), 22 were Nationally Near Threatened, five were migrants and four were domestic

Threats

- Soil erosion
- Watershed degradation
- Degradation of remnant forests
- Spread of invasive plants

Recommendations

Actions for conserving soil and water resources, restoring habitat patches in the plantation landscape and community engagement



Hunuwela: a major stream within the project site
© Kumudu Herath

Pseudophilautus folicola, an endemic and endangered species
© Sampath Goonatilake

Rilhena Estate

The Rilhena Estate is located between Ratnapura and Pelmadulla towns and comprises of five divisions.

FAST FACTS:

Flora & Fauna

- Key vegetation types identified were tea plantations, tea plantation-semi wild, tea dominated mixed agro forest, rubber plantation, rubber plantation-semi wild, forests-less disturbed, secondary forested wetlands (Deniya), stream side habitat, horticultural crop lands, cinnamon plantation, gothamala crop lands and rocky habitat
- 498 floral species belonging to 112 plant families were recorded among which 44 were Endemic, six were Threatened and eight were invasive plant species
- 215 faunal species were recorded which included 36 endemics, six proposed endemics, 16 Nationally Threatened species (4 EN and 12 VU species) and 27 NT species

Threats

- Habitat loss
- Encroachment of villages onto watershed areas
- Destructive rattan collections
- Hunting
- Illegal gem mining
- Soil erosion

Recommendations

- Establishment of an environment management committee
- Environmental education and awareness
- Greening of routine processes
- Ecotourism
- Species and habitat management
- Soil and water conservation

Endemic and Threatened Gal Demata plant *(Impatiens repens)*
© Sampath Goonatilake

Duration: Jun-Jul 2011

Location: Islandwide

Donors/Partners: USAID (United States Agency for International Development)/ The American People

Sri Lanka Tropical Forest and Biodiversity Assessment

IUCN prepared the Sri Lanka Tropical Forest and Biodiversity Analysis for USAID Sri Lanka in 2011 (published in 2012 January). This analysis was intended to serve as a tool to assist USAID/Sri Lanka in taking tropical forestry and biodiversity concerns into its Country Development Cooperation Strategy (CDCS) covering the period 2011-2013. Such an analysis was necessary to comply with Sections 118 (Tropical Forests) and 119 (Biological Diversity) of the Foreign Assistance Act of 1961 of the United States of America, as amended, as well as country strategy guidelines.

The study covered (i) the state of biodiversity and forest conservation in Sri Lanka, (ii) actions needed to conserve tropical forests and biological diversity, and (iii) the extent to which the actions proposed for support by USAID/ Sri Lanka meet or could meet the needs identified by the Tropical Forest and Biodiversity Analysis.

FAST FACTS:

The report provided the following recommendations, most of which are valid even in today's context. They are:

- Strengthen policy, legal and institutional framework for biodiversity and forest conservation
- Establishment of a data base and monitoring of biodiversity
- Establish an optimum Protected Areas (PA) system, prepare management plans and ensure recovery of important threatened species
- Strengthen the ex-situ conservation of threatened species of flora and restoration of ecologically important habitats
- Establish biodiversity conservation financing mechanisms and a biodiversity valuation system
- Regulate/control over exploitation of biological resources and improve resource management
- Ensure management and control of invasive and alien species
- Enhance the public awareness on the values of biodiversity and forest resources
- Biodiversity valuation and mainstreaming economics of biodiversity conservation

The Blue Magpie (*Urocissa ornata*)
© Sampath Goonatilake

Duration: 2012-2013

Location: Vavuniya District, Northern Province

Other Partner/s: FD

Donor/s: Sewalanka Foundation and Welthungerhilfe

Katu Heen Meeya (*Mus fernandoni*), an endemic and CR species at the Nainamaduwa Forest Reserve
© Sampath Goonatilake

Rapid Biodiversity Assessment of the Nainamadu Forest Reserve

The biodiversity of the 10,000 ha Nainamadu Forest Reserve (NFR) was never assessed formally before the year 2012. Therefore, sufficient information to ascertain the status of the biodiversity and to develop appropriate management strategies for the forest were not available. Hence, it was critical to compile a resource inventory, thereby highlighting the importance of biodiversity and gaining an insight into how the local communities utilize the forest and its resources. Increasing threats to the NFR made the acquiring of such data crucial to the preparation of a suitable management plan for the Forest, in order to ensure its conservation in the long-term. IUCN SL was invited to undertake the study by the Sewalanka Foundation, as part of their collaborative project with Welthungerhilfe, financed by BMZ. At the conclusion of the study, the need to undertake further research in terms of archaeology and biodiversity was identified.

FAST FACTS:

Flora & Fauna

- 322 flowering plant species and 322 faunal species were recorded

Other Facts

- Proper management hindered by key issues at ground level related to ownership of land and the boundaries that defined the limitations of that land

Threats

- Encroachment and habitat destruction
- Illegal logging activities
- Hunting
- Destructive honey collecting practices
- Invasive and nuisance plants
- Lack of social capital for conservation work

Enhancing the Ecological Integrity and Services of the Halgolla Estate

Duration: 2012-2013

Location: Yatiyanthota, Kegalle District, Sabaragamuwa Province

Donor/s: Unilever/Kelani Valley Plantations PLC

Vatica lewisiana is a medium sized endemic and CR species
© Sampath Goonatilake

Gordonia speciosa, an endemic and CR species
© Sampath Goonatilake

Halgolla is a 1,196 ha tea estate managed by the Kelani Valley Plantations PLC (KVPL). The Wewalthalawa Watershed, situated within the Estate premises, is a unique and isolated watershed area and forms the catchment of Olu Oya, which feeds the Kelani River through Wee Oya. The natural and semi-natural areas of the Wewalthalawa Watershed functions as an important repository for Sri Lanka's biodiversity. Many of Sri Lanka's endemic and threatened species, including faunal species such as, the Rhino-horn lizard (*Ceratophora stoddartii*) and Sri Lanka Whistling Thrush (*Myophonus blighi*); and rare floral species such as, *Vatica lewisiana* and *Gordonia speciosa*, have been recorded in the habitat. Some of these endemic and threatened species were recorded for the very first time in this region.

Due to such importance, the need to undertake studies on the ecological integrity and watershed functions of the natural and semi-natural areas of the Wewalthalawa Watershed was identified and IUCN was engaged in the process. The first phase of this project was conducted in 2009 and was funded by the Royal Netherlands Embassy.

FAST FACTS:

Flora & Fauna

- 440 plant species and 24 aquatic species were recorded
- Identification of major threats and development of a watershed management action plan
- Development of a monitoring protocol to evaluate the effectiveness of the action plan and facilitate the improvement of management actions in the future
- Creation of a foundation for the application of integrated watershed management practices
- Initiation of a dialogue between key stakeholders and enhanced awareness
- Propagation of *Gordonia speciosa*, a Nationally Threatened Endemic species

Biodiversity Baseline Survey in the Hantana Mountain Range Environmental Protection Area

Duration: 2013

Location: Kandy District, Central Province

Donors/Partners: CEA

Pseudophilautus rus, an endemic and CR species that live in sub montain forests
© Sampath Goonatilake

Situated approximately four kilometres southwest of Kandy, the biodiversity rich Hanthana Mountain Range extends over the Gangavata, Pahathahevaheta, Uda Palata and Deltota Divisional Secretariat Divisions (DSD) and is a declared Environmental Protected Area (EPA). In order to manage and conserve the Hantana EPA effectively, a management plan was vital. To fulfill this need, it was necessary to consider the biodiversity of the site with an effort to highlight the ecological and socio-economic importance as well as to minimise threats and pressures. Recommendations were made to conserve biodiversity and enhance ecotourism within the EPA.

FAST FACTS:

Flora & Fauna

- The EPA consists of five vegetation types; near-natural vegetation, secondary vegetation, cultivated lands, vegetation in built environments and wetland vegetation
- 397 floral species belonging to 102 families were recorded out of which 28 were endemic while 22 were threatened (nationally or globally)
- There were 23 invasive plant species posing a great threat
- 341 faunal species were recorded, which included 80 endemics, six migratory bird species, four domestic mammal species and five exotic species
- 67 faunal species were found to be threatened

Bandula Barb Conservation

The Bandula Barb (*Pethia bandula*) is a Critically Endangered and Point Endemic species only found in a 1.5 km long stream that flows through Galapitamada. Unlike other Rare and Critically Endangered species, the Bandula Barb lives outside the protected area network of Sri Lanka.

When this species was first discovered in 1991, the population was estimated to be around 2,000. However, within one decade, the population had decreased to 200-300 due to land use change, illegal collection for ornamental fish trade and usage of agrochemicals in paddy fields, which polluted their habitats. Thus a project was initiated to conserve the Bandula Barb with the involvement of the local community to implement identified activities.

Duration: 2013-2014

Location: Galapitamada, Kegalle District, Sabaragamuwa Province

Other Partner/s: DWC and FD

Donor/s: Toyota Environmental Activities Grant Programme

As a result of the project:

- The Bandula Barb population increased from 500 to 1,300
- A second Bandula Barb population was established within a protected area in Warakapola
- Established and strengthened community-based organisations in Hapugoda, Elpitiya and Rabbidigala to develop sustainable mechanisms for conserving the Bandula Barb
- The Bandula Barb Visitor Centre was opened in September 2014 while the Bandula Barb Conservation Centre was opened by the then Chief Minister of Sabaragamuwa Province, Hon. Mahipala Herath in October 2014

The Bandula Barb
© Sampath Goonatilake

Bandula Barb translocation
© Naalin Perera

Conservation of Two Globally and Nationally Endangered (EN) Dragonfly Species

Duration: 2015-2017

Location: Hunuwela Estate, Sabaragamuwa Province

Other Partner/s: Kahawatta Plantations

Donor/s: Dlimah Conservation PLC

Initial surveys of the 992 ha Hunuwela Estate indicated that the natural and semi-natural areas of the Estate functions as an important repository of Sri Lanka's biodiversity with many endemic as well as nationally and globally threatened species. One of the most significant findings of the initial survey were two globally, and nationally, Endangered (EN) dragonfly species, the Rivulet Tiger (*Gomphidia pearsoni*), and Wijaya's Scissortail (*Microgomphus wijaya*). Given that both species are threatened with extinction, conservation actions were needed urgently to preserve these populations and their habitats. A management plan for the natural areas that lie within the Kahawatta Plantation Estate premises (Rilhena, Opata and Hunuwela) was deviced to improve the overall ecological integrity and watershed services of the property.

The Rivulet Tiger
© Tharaka Priyadarshana

FAST FACTS:

- Conducted biodiversity, water quality and hydrological assessments of the Estate
- A detailed proposal on habitat conservation and watershed management was developed and demonstrated at pilot sites
- Raising awareness among school children, community members, and local government officials on the ecological importance and watershed services of the natural areas of Hunuwela Estate and its conservation: brochure and poster developed
- Assessing the potential of using the natural wealth of Hunwela Estate for sustainable tourism- as a financing mechanism for sustaining the conservation actions
- Hunuwela Estate was used as a field laboratory for a group of students at the University of Peradeniya, which gave them a hands-on opportunity to learn the linkages between hydrology and biodiversity conservation towards sustainable ecosystem management

Knowledge Enhancement in Central Highlands World Heritage Serial Property

Duration: 2015-2018

Location: Nuwara Eliya, Ratnapura, and Kegalle Districts, Central and Sabaragamuwa Provinces

Other Partner/s: MMD&E, DWC and FD

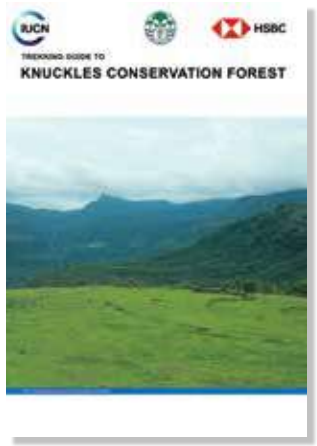
Donor/s: The Hongkong and Shanghai Banking Corporation (HSBC)

The Central Highlands of Sri Lanka, a World Heritage Serial Property of United Nations Educational, Scientific and Cultural Organization (UNESCO), consists of three sites; Knuckles Conservation Forest (KCF), the Horton Plains National Park (HPNP) and the Peak Wilderness Protected Area (PWPA). Together these areas are referred to as the Central Highlands World Heritage Site or in short CHWHS. Considering the ecological importance that CHWHS carries and in order to safeguard and conserve the above areas, the MMD&E took the initiative in developing a visitor management plan together with the DWC and FD. One of the shortcomings identified by this programme was the lack of educational awareness and interpretation material on the CHWHS. As such, IUCN was engaged to enhance and facilitate this initiative.

The main objective of this project was to prepare a series of resource and awareness materials for the CHWHS. These materials will be used by wider stakeholders and will play a key role in the sustainable management of the site at large.

FAST FACTS:

- Teacher and officer training workshops were conducted
- Posters, leaflets and trekking guides were prepared for all three sites



A Biodiversity Status Profile of Koskanuwala Watta

Duration: May 2017

Location: Mahabage, Kegalle District, Sabaragamuwa Province

Koskanuwala Watta is located within the Wet Lowland Bio-Climatic Zone of the country. It borders the Girankette Oya, which is a tributary of the Kelani River. The survey was carried out to document the status of the biodiversity within the area inclusive of major habitat and vegetation types and endemic and threatened fauna and flora. Key environmental issues were assessed and relevant recommendations were made to enhance the overall environmental profile of Koskanuwala Watta.

Hump Nosed Lizard (*Lyriocephalus scutatus*)
© Naalin Perera

FAST FACTS:

Flora & Fauna

- 145 flowering plant species belonging to 54 families were recorded which included 34 endemics and 27 Nationally Threatened species.
- Herbaceous plant species were found to be the most dominant life form
- 200 faunal species belonging to 80 families were recorded out of which 65 species were endemics and 52 were Nationally Threatened

Key Findings

The discovery of an endemic and CR (nationally) aquatic water plant Athi-Udayan (*Cryptocoryne walker*)

FAST FACTS:

Threats

- Spread of nine IAS
- The ongoing mini hydro power construction in areas with high slope gradients that could lead to erosion and landslides
- The native freshwater fauna (especially the Red-tailed goby – *Sicyopterus halei* and the Lipstick goby – *Sicyopus jonklaasi*) could be affected

Recommentations

- Rehabilitation of natural vegetation patches with suitable plant species
- Development of an ecotourism destination (bird watching, dragonfly and butterfly watching), inclusive of a visitor centre, nature trails and education and awareness enhancement material

A Waterfall at Koskanuwala
© Naalin Perera

Conservation of Sea Turtles and Coastal Habitats Around the Anantara Peace Haven Tangalle Resort

Anantara partnered with IUCN Sri Lanka to implement a Marine Turtle Conservation and Enhancement project, with DWC as the Government agency partner. Out of the seven species of marine turtles recorded around the world, five visit Sri Lankan shores for the purpose of nesting. In addition to implementing methods to protect and conserve these globally threatened animals, the project aims to educate local communities, Resort staff and guests on the importance of species conservation. The project is funded by the Anantara "Dollars for Deeds" programme, which engages guests in the spirit of giving back and matches each guest's donation, "dollar for dollar" to raise funds for worthy causes.

Duration: 2017-2020

Location: Tangalle to Yala, Southern Province (coast)

Other **Partner/s:** DWC

Donor/s: P. H. Resorts (Private) Limited

During the project launch © Norman Zweyer

Expected Outputs:

- An established database on turtle nesting in the area
- Turtle nest site management plan
- Trained Resort staff on turtle conservation and habitat restoration
- Awareness material on marine turtles displayed at the Information Corner of the DWC Beat Office in Rekawa
- Nest protection enclosures/cages (movable)
- A landscape plan for the Resort premises to help the transition towards a more natural coastal habitat
- Establishment of nature trails within the property with interpretation boards and guides to enhance visitor experience
- Increased awareness for staff and guests on biodiversity issues

A Speical Note:

Piloted the propogation of the rare Octopus Bush *(Tournefortia argentea),* listed as an Endangered plant species in the National Red List of Sri Lanka. The Resort Naturalist and the Horticulturist brought two saplings from the mother plant in Rekawa to the Resort for propagation as part of a conservation effort. Out of the total number of Octopus bushes recorded in the country (which is estimated to be less than eight), one of them is located in the Rekawa beach, near the Resort

The 5.5 month old Octopus Bush plant at the Resort
© Anuradha Ediriweera

Duration: 2017-2018
Location: Islandwide
Other Partner/s: MMD&E
Donor/s: UNDP

Contributions to the Biodiversity Finance Initiative: BIOFIN

A workshop in progress
© IUCN

The Biodiversity Finance Initiative, or BIOFIN, is a UNDP-managed global collaborative partnership to develop and implement an evidence-based methodology that improves biodiversity outcomes using finance and economics (UNDP, 2016). In Sri Lanka BIOFIN is implemented by UNDP together with the Ministries of Environment, Finance and other government agencies.

IUCN contributed to the initiative by Biodiversity Expenditure Review (BER), Biodiversity Financial Needs Assessment (FNA) and Environmental Economic Valuation Review (EEVR). FNA provided a comprehensive estimate of the financial resources required to achieve national and sub-national biodiversity targets. It compared these financial needs with projected biodiversity expenditures over a short to medium term planning horizon in order to estimate the finance need and the gap for biodiversity conservation in the country. The BER provides the actual expenditure attributable to biodiversity during the period between 2010 to 2015 using published financial reports. Projections were made for future based on the past trends. Valuation studies conducted in Sri Lanka were reviewed under the EEVR, where over 150 such studies were reviewed. IUCN also contributed in the selection of innovative financing mechanisms for Sri Lanka and towards formulating biodiversity financing plan for the country.

As part of the UNDP managed BIOFIN project, IUCN contributed towards preparing the Biodiversity Financing Plan (BFP) for Sri Lanka. In the process of preparing the BFP, 15 financing solutions were been prioritised for biodiversity financing.

IUCN is currently assisting UNDP in:

1. Assessing institutional and legal framework required to benefit from the 15 prioritised financing solutions for conserving biodiversity in Sri Lanka
2. Piloting Payment for Ecosystem Services (PES) with a minihydro power project in Sri Lanka

FAST FACTS:

- The Review of public sector actual expenditure on biodiversity indicates that Sri Lanka had spent LKR 7.15 billion on biodiversity related outcomes in the country in 2015, which is a 125% growth over the expenditure on biodiversity reported in 2010. The study further projected that it was expected to exceed LKR 21 billion by 2022
- The FNA derived was based on the National Biodiversity Strategic Action Plan (NBSAP 2016-2022) of Sri Lanka together with National REDD+ Investment Framework and Action Plan (NRIFAP), National Adaptation Plan for Climate Change in Sri Lanka (NAP CC) and National Action Programme for Combating Land Degradation in Sri Lanka (NAP CLD). The estimated FNA, without current biodiversity expenditure for the period (covering 2018-2024) was LKR 30.71 billion, which comes to 0.26% of the 2016 GDP in current prices

Animal and Plant Rescue in the Proposed Sanitary Landfill Site and Transfer Site in Aruwakalu

Duration: Dec 2017-Apr 2018

Location: Puttalam District, North Western Province

Donors/Partners: Ministry of Megapolis & Western Development

The restored quarry site of INSEE was identified as land allocated for a sanitary landfill site by the Government in 2017 as a solution to the Colombo city's garbage disposal issue.

The ecological study of this site identified plants and animal species, which were of importance in terms of their vulnerability. As such, IUCN was engaged to rescue less-mobile, unique and rare fauna from the proposed sanitary landfill and transfer station and translocate them to safe sites. All rescue animals were released into safe areas in the northern part of the natural forests in Aruwakalu. Accordingly, the main objective was to translocate critical species from the site proposed for the sanitary landfill and transfer station at Aruwakalu before the land was cleared for site preparation.

FAST FACTS:

Phase 1

Fauna

- 1,007 individuals belonging to 95 species were rescued and released
- 806 species were captured from the natural forest habitats and 201 individuals were rescued and released to safe habitats
- A total of 24 critical species were rescued and released from the study area. Out of the species rescued, 22 were classified as endemic including one CR, seven EN, and five VU species

Phase II

Fauna

- 1,725 individuals belonging to 111 species, were rescued and released
- 1,117 individuals were captured from the natural forest habitats and 608 individuals were rescued and released to safe habitats
- A total of 22 critical species were rescued and released from the study area. Out of the species rescued, 19 were classified as endemic to the Island. Among the critical species, there were nine Nationally Threatened, one CR, four EN, and four VU species

Recommendations

- Removal of timber trees in clearing areas should be carried out systematically in consultation with the Timber Corporation. Meanwhile rescue of certain plants should be done prior to the removal of timber trees
- A significant wood biomass in clearing areas were found to be wasted with no contribution to the energy sector. Such wood biomass could be directly used as firewood, saving millions of foreign exchange spent on importation of LP gas
- During clearing operations, fertile top soil (25 cm depth level) should be carefully transported into partly restored areas. Spreading of soil with seed bank of the forest floor will boost the species recruitment of those sites. This has to be done during the wet season for best results
- Some fallen trees, in clearing areas that are left for decomposing in open lands should be transferred to partly restored forest sites to improve the biodiversity carrying capacity of those habitats. The woody debris is ideal habitat for small ground-dwelling animals

A rescued Antelope Rat (*Tatera indica*) being translocated
© Sampath Goonatilake

Termite Hill Gecko *(Hemidactylus lankae)*
© Sampath Goonatilake

Restoration and Management of a Degraded Fern Land within the Kanneliya Forest Reserve

IUCN SL in partnership with the FD initiated a pilot project to reforest a ten hectare block in the Kanneliya Conservation Forest by applying an ecological restoration modelling approach. The project is funded by Biodiversity Sri Lanka (BSL) with the aid of private sector partners (Citizens Development Business Finance PLC, Diesel and Motor Engineering PLC, Dilmah Ceylon Tea Company PLC, Hatton National Bank PLC, Jetwing Hotels, Nations Trust Bank PLC, People's Leasing Finance PLC, Sampath Bank PLC, Siam City Cement (Lanka) Limited & Virtusa (Pvt.) Ltd).

The objective of this project is to implement the restoration plan to demonstrate restoration and management of degraded forest patches in the wet zone. The project also aims to develop a model to test the feasibility of introducing a biodiversity credit accrual system in Sri Lanka. The unique feature of this project is that it brings multiple private sector entities together in a restroation effort.

Duration: 2018-2023

Location: Opatha, Kanneliya, Southern Province

Other Partner/s: FD

Donor/s: Private Sector partnered through Biodiversity Sri Lanka (BSL)

Expected Outputs:

Ten hectares of land planted with well-established wild plants, which would grow into a natural forest and would mimic the species composition of the adjoining natural forest

Kanneliya restoration site, bordering the forest Kumudu Herath © IUCN

© Madhushan Indika De Silva

© Naalin Perera

Effective and Equitable Governance of Nature's Use

"Conservation is a state of harmony between men and land"

- Aldo Leopold

© Madhushan Indika De Silva

Assessment of the Economic Value of Muthurajawela Wetland

Duration: 2001-2002

Location: Muthurajawela Wetland, Gampaha District, Western Province

Other Partner/s: Asia Regional Environmental Economics Programm (AREEP)

Donor/s: Royal Netherlands Embassy

Muthurajawela Marsh covers an area of 3,068 ha and together with the Negombo Lagoon (3,164 ha), it forms an integrated coastal wetland system that has a high biodiversity and ecological significance. The ecosystem is listed as one of the 12 priority wetlands in Sri Lanka, and in 1996 some 1,777 ha in the northern section was declared a Wetland Sanctuary. This study aimed to generate information to understand the economic benefits of wetland conservation, the economic costs of wetland degradation and the loss in Muthurajawela. Although the assessment was focused on the Muthurajawela Wetland, it included some economic linkages and effects that extended beyond its boundaries, such as the effects on the neighbouring Negombo Lagoon. A key part of the economic assessment was to generate information that could be used to identify economic issues that needed to be addressed in support of wetland conservation.

This study provided a strong—and much needed—economic argument for the continued conservation of Muthurajawela as a Wetland Sanctuary. Although many of the ecological, hydrological and biodiversity values associated with conserving the wetland were impossible to quantify, on the basis of available data, even a partial valuation of wetland benefits showed that the presence of the Wetland Sanctuary made sound economic sense: as the wetland has a high economic value, overall and relative to its area.

FAST FACTS

Wetland goods and services that have been considered in this study generated economic benefits worth more than Rs 726 million per year, or almost Rs 240,000 per hectare of wetland. It is also important to note that the 66% of the estimated value was attributable to the flood attenuation service it provided as a major urban wetland

Restoration and Sustainable Management in the Eastern Province of Post-Tsunami Sri Lanka

Duration: 2005-2006

Location: Eastern Province

Other Partner/s: Ministry of Environment (now MMD&E), Ministry of Fisheries and CCD (now CC&CRMD)

Donor/s: GEF/International Fund for Agricultural Development (IFAD)

The project concept for 'Participatory Coastal Zone Restoration and Sustainable Management in the Eastern Province of Sri Lanka' was prepared by IUCN in consultation with related government institutions and submitted to the IFAD through the Ministry of Environment to obtain funding through GEF. As a result, the Government of Sri Lanka (GoSL) received a project preparatory grant initially and subsequently the full project funding outside the STAR allocation for the preparation of a full scale proposal. IUCN was the Project Designing Agency that designed the full-scale GEF proposal for funding while the Ministry of Fisheries acted as the Executing Agency and the Coast Conservation Department (CCD) acted as the Implementing Agency.

The long-term goal of the project was to rehabilitate and restore tsunami-affected coastal ecosystems in Sri Lanka to provide full ecosystem services. The main objective of the project was to reduce the vulnerability of coastal areas in the East Coast of Sri Lanka by increasing the resilience of restored coastal ecosystems affected by the Tsunami. Considering the lengthy process of approval in the GEF funding mechanism, IUCN re-assessed the IFAD/GEF project before field implementation and made necessary suggestions to the CCD.

Eastern Coast
© Naalin Perera

Periya Lagoon
© Naalin Perera

FAST FACTS

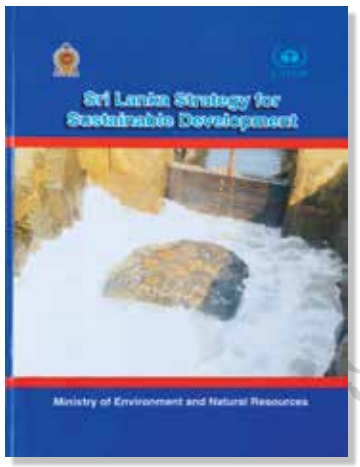
- When almost every agency concentrated on providing relief and emergency response to the 2004 Tsunami, IUCN saw the need to restore the severely damaged coastal ecosystems of the East in order to rebuild livelihoods and resilience
- IUCN in consultation with the GoSL, obtained the project preparatory grant to develop this seven year project for which Sri Lanka received USD 7 million from GEF through IFAD outside, of the STAR allocation
- The main significance of this project was that it was the very first GEF project of IFAD as a newly accredited GEF agency in 2005

Preparation of the National Sustainable Development Strategy (NSDS)

Location: Islandwide

Duration: Sep 2005-May 2007

Donor/Client: Ministry of Environment and Natural Resources (now MMD&E)



The relevance of developing a National Sustainable Development Strategy stems back to the year 1972 when the UN Conference on Human Environment was held in Stockholm along with other successive international conventions convened to address issues related to conservation and development. At the World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002, countries of the world including Sri Lanka committed to develope road maps to achieve sustainable development. The preparation of the National Sustainable Development Strategy (NSDS) for Sri Lanka was awarded to IUCN by the Ministry of Environment and Natural Resources. The ten key sectors identified during the preparation of the NSDS pertaining to sustainable development were financial services, infrastructure, utilities, agriculture, industries, rural economy, social welfare, governance, human resource development and culture and environment.

FAST FACTS:

The prepared strategy laid the foundation for the Haritha Lanka Programme—the Strategy for sustainable development in Sri Lanka covering 2008 to 2016 and the National Council for Sustainable Development for Sri Lanka

Raising Environmental Consciousness in Society (RECS)

Duration: 2006-2008

Location: Islandwide

Partner/s: Ceylon Chamber of Commerce, Federation of Chambers of Commerce Industry

Donor/s: The Royal Netherlands Embassy in Sri Lanka

Raising Environmental Consciousness in Society (RECS) was a three year partnership project implemented by IUCN Sri Lanka Country Office together with several key stakeholders. The overall objective of the RECS Project was to ensure that key stakeholders in resource management (the private sector, local communities and civil society members) demonstrated the capacity to achieve national sustainable development and conservation objectives.

Under the RECS project, a small grants scheme by the name of Community Conservation Support Fund (CCSF) was designed to support innovative community based sustainable natural resource management initiatives. The CCSF acted as a window for local level community based organizations, NGOs, provincial and local governments and the private sector to access funding for the development and implementation of small scale pilot initiatives that were innovative and replicable.

As part of the project, IUCN concentrated on three main components. Namely, 1) the environment agenda of the private sector; 2) the environmental consciousness of local communities; and 3) promoting broad based public awareness campaigns.

A home garden
© IUCN

Work carried out under the above mentioned components inlcude:

- Corporate Social Responsibility (CSR) activities to strengthen and improve environmental performance by the private sector (13 activities)
- Improved timber exports through FSC certification where forest and timber certification standards for all sector components were established and introduced (17 activities)
- Environmental certification for industrial clusters where activities were carried out to investigate and potentially establish environmental certification for groups of SMCs (eight activities)
- Community Conservation Support Fund (CCSF) to institutionalize a system of supportive financial resources through small-scale environmental projects to initiate conservation or sustainable use of natural resources (24 projects)
- Capacity enhancement in CBOs for initiating environmental action to enhance the capability of grantees in designing implementing, and monitoring projects (four activities)
- Extension of information to use the media as a vehicle to promote environmental education (five activities)
- Facilitation of policy development to create a forum of government, NGOs and public for dialogue on natural resources management (four activities)
- Participation in regional/global policy discussions to facilitate participation in international policy discussions (three activities)

A few noteworthy initiatives of the project:

- Establishment of ten Forest Parks in Schools the Polonnaruwa District
- Elimination of *Cactus* and *Prosopis juliflora* from the Bundala National Park
- Community based Environment, Wildlife and Nature Conservation through School Children
- Composting of Municipal Solid Waste in Weligama Urban Council Area
- Mary Mount Mini-Catchment Development through Integrated Watershed Management Approach in the Mahaweli Victoria Catchment
- Building the Capacity of Sri Lanka's Judiciary to Address Environmental Issues through the Courts
- Restoration of Natural Habitats in Village Tank Ecosystems in the Dry Zone of Anuradhapura
- Community based awareness building and promotion of sustainable Solid Waste Management practices by setting up a framework and network for collection of polythene & other recyclable waste at the community level
- Kuruwita Pradeshiya Shaba and Kuruwita Prison Associated Waste Recycling Project
- Recycling polythene and plastic solid waste in order to reduce environmental pollution while opening means for income generation for low income families

Improving Natural Resource Governance for Rural Poor in Sri Lanka

Duration: 2009-2011

Location: Puttalam Lagoon and Periyakalapuwa Lagoon, Nilgala Forest Reserve and Peak Wilderness

Partner/s:

National Level: Centre for Environmental Justice (CEJ), Public Interest Law Foundation (PILF)

Local Level: Sabaragamuwa Janatha Padanama (SJP), the Nilagala Mithuro Sanvidhanaya (NMS)

Donor/s: Socio Environment Education Development Association (SEEDA)

The project was implemented through the IUCN Headquarters as part of a global programme encompassing several countries in Africa (10), Asia including Sri Lanka (4) and South America (1). The overall objective of the project was to enable better environmental governance including fair and equitable access to natural resources, new benefit-sharing arrangements and more participative and transparent decisions making processes.

In Sri Lanka, the project aimed to strengthen natural resource rights and promote changes to reduce procedural inequities addressing questions of fair treatment in uniformly applying governing rules, regulations and evaluation criteria focusing mainly on issues faced by poor communities dependent on natural resources.

It also included a Project Advisory Panel (PAP), which comprised of senior officers from the CEA, DWC, FD, CCD now (CC&CRMD) and the Department of Fisheries (DFI). The PAP provided guidance in administering the project related to their policies, jurisdictions and relevant laws.

Creating awareness among communities
© Naalin Perera

Few of the project achievements:

- Improved knowledge and understanding on natural resource governance and issues among communities, officials and partners. Communities were cognizant about illegal activities, and brought such activities to the notice of or engaged in self-regulation
- Two areas were declared as Fisheries Management Areas. Furthermore, fisheries management regulations for Periyakalapu and community forest management guidelines for Nilgala were drafted
- Provided an improved mechanism for community representation for discussions on governance issues by strengthening MSPs in two sites (Puttalam and Periyakalapu) and creating an MSP in the third site (Nilgala)
- At Peak Wilderness a CBO forum was established
- A community revolving fund was established in Nilgala and Periyakalapu
- Environmental Mediation Boards were established in Nilgala and Periyakalapu to resolve minor forest and lagoon-related disputes
- A training manual on governance was developed to build capacity related to governance in government officers and a programme of training of trainers was also conducted
- A local level Natural Resource Training Module was prepared and translated by CEJ into Sinhala and Tamil
- Discussions on governance issues were commenced at policy level
- Key outputs, such as site level assessments; case studies; a review of forest laws; institutional reviews for coastal resource management; a management framework for the Central Highlands World Heritage Site (in which Peak Wilderness was included) were developed

Duration: Nov 2010-Jan 2011

Location: Puttalam and Mannar districts

Donor/s: BOBLME project by FAO

Biodiversity and Socio-Economic Information of Selected Areas of the Sri Lankan Side of the Gulf of Mannar

The lack of published information regarding the Gulf of Mannar (GoM) poised a critical challenge when UNESCO's Man and the Biosphere Committee of Sri Lanka was working towards making a proposal to designate the area as a Biosphere Reserve. In order to assist in the process, a significant amount of baseline data on biodiversity and related aspects needed to be compiled by IUCN together with other agencies including the Ruhuna University of Sri Lanka. Accordingly, a rapid socio-economic study was carried out along with a survey of important archaeological sites to complement the biodiversity information on the GoM. The findings of the survey were compiled into publications in Sinhala, Tamil and English as secondary teacher resource material in partnership with the National Institute of Education, which included the dissemination of the findings (both biodiversity and socio-economic findings) among local stakeholders and at national level. The area covered in the rapid survey included four coastal DSDs in the Mannar District bordering the GoM, namely Musali, Nanaddan, Mannar and Mantai West, and two coastal DSDs of Puttalam District—Kalpitiya and Vanathavillu.

FAST FACTS:

Flora & Fauna

- 583 plant species (in 119 families) were recorded out of which eight species were Endemic and 11 species were Nationally Threatened
- 496 inland faunal species were recorded within the inland coastal habitats of GoM, including 31 Endemics, 66 migratory birds, two introduced freshwater fishes and eight domesticated mammals. Among them, 46 species were recognized as Nationally Threatened

Other Facts

Publications (in all three languages) carrying the fndings of this project remain the best resource material available for Mannar

Socio-economic facts

- Agriculture and fishery were the most significant livelihoods in the District of Mannar
- Land-based pollution was the main source of pressure on the GoM resources and the waste generated amounted to about 17 MT per day
- Proper solid waste management mechanisms were not available in any of the local authorities in GoM

Adam's Bridge, fourth islet
© Naalin Perera

Sustainable Development of Delft Island: An Ecological, Socio-Economic and Archaeological Assessment

Duration: October 2011

Location: Delft Island, Jaffna Peninsula, Northern Province

Partner/s: Sri Lanka Tourism Development Authority (SLTDA)

Located in the Palk Strait in the northern region of Sri Lanka, Delft (Neduntheevu or Neduntivu) is the second largest island within the territorial waters of the country. It is inhabited by a small population of Tamil people.

The primary aim of the project was to carry out a preliminary study of the island to assess its ecological, archaeological, and socio-economic status to ensure that proposed development activities occur with a minimal impact and in a manner that is sustainable and promotes tourism in the future. The study identified current threats as well as future threats, along with suitable areas for development and conservation activities. It also identified physical, ecological, archaeological and socio-economic factors and developed a map illustrating the island's land-use patterns as well as areas that could potentially be earmarked for future development and conservation activities. Furthermore, according to the findings of the study, recommendations were provided for the sustainable development of Delft Island with a special emphasis on the development of tourism.

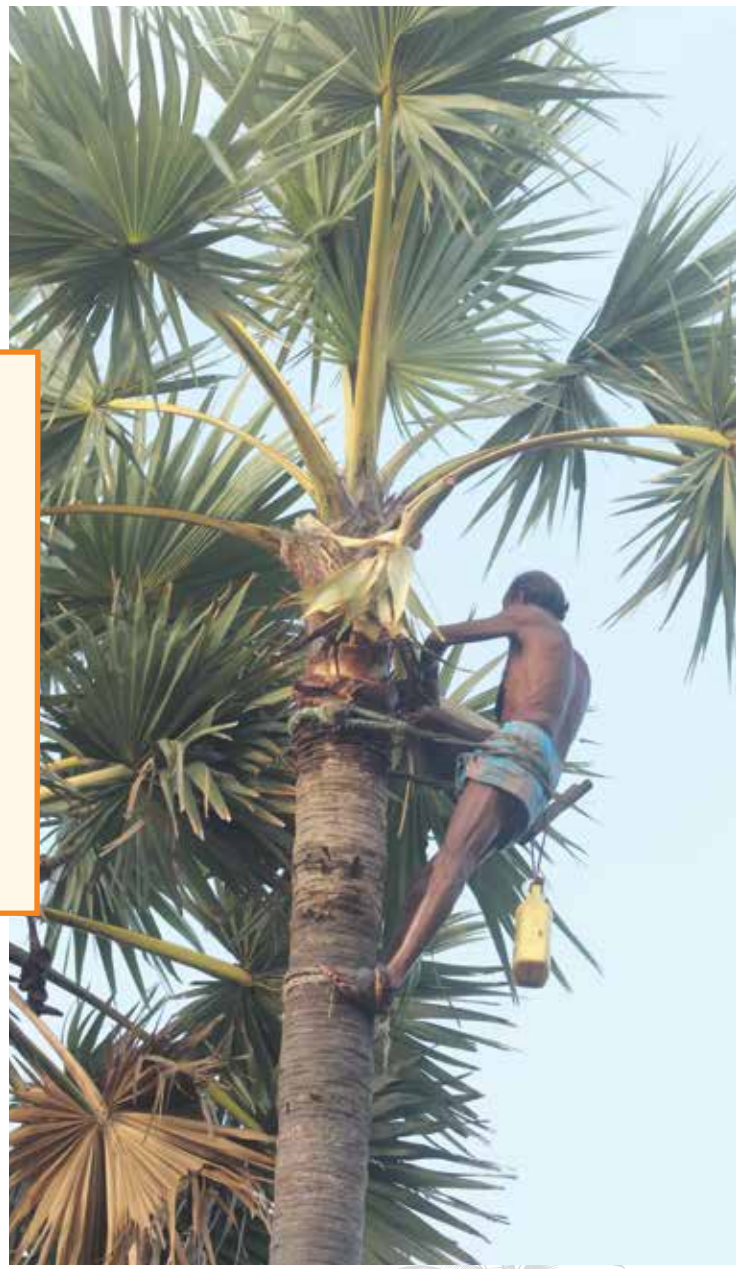
FAST FACTS:

Flora & Fauna

- A total of 209 species of flowering plants representing diverse life forms including epiphytes (one species), shrubs (29 species), climbers (42 species), trees (67 species) and herbs (70 species) were recorded
- Among the identified floral species were one Critically Endangered Possibly Extinct (CR-PE) species, three EN species, and five VU species
- A total of 146 faunal species including ten dragonfly species (of which one was an endemic species), 37 migratory bird species, one EN species and seven VU species were recorded
- The pony population on the island was found to be threatened due to overgrazing of pasture lands. Furthermore, calves of the ponies were marked using improper branding methods, which resulted in infections and subsequent death
- Several nuisance plant species that have interfered with the ecology and economy of the area were observed including invasive alien plants, weeds and poisonous plants
- A number of archaeologically important monuments belonging to Anuradhapura and the colonial period were discovered
- Recommendations were provided to ensure the sustainable development of the Delft Island, including tourism development

Delft ponies
© Sampath Goonatilake

Dead coral beach at Delft Island
© Sampath Goonatilake



Palmayra tapper at Delft Island
© Naalin Perera

Providing Communication Support to UN-REDD

Duration: 2013-2017

Other Partner/s: MMD&E

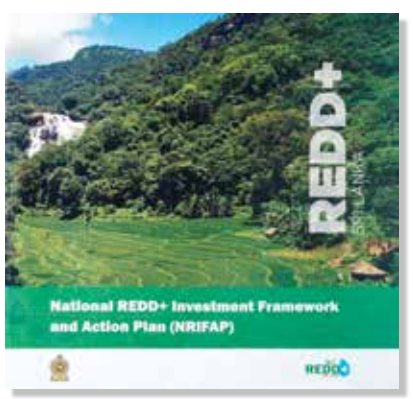
Donor/s: FAO, UNDP & UNEP

The United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation (UN-REDD Programme) was conducted in collaboration with UNEP, UNDP and the FAO and was launched in 2008 to support large-scale, national-level REDD-readiness activities. These readiness activities helped to develop capacity and infrastructure that were needed for countries in order to participate in REDD. Sri Lanka became a UN-REDD programme partner in 2009. On behalf of UNEP, IUCN provided communication support to the programme in Sri Lanka to implement the REDD readiness phase. Some of the delivered results included compiling communications material and required studies on green economy and REDD+ in Sri Lanka and the recruitment of a Communications Officer for the UN-REDD National Programme. In addition to this, IUCN was also responsible for the delivery and quality assurance of expected communications activities and products including, but not limited to, workshops/events, video production, brochures, newsletters, articles and maintenance of social media accounts and the website.

FAST FACTS:

Key achievements

- The successful implementation and delivery of communication
- The preparation of the final documentation, NRIFAP – The National REDD+ Investment Framework and Action Plan (NRIFAP)



Management Plan for the Maragala Mountain Range Enivironmental Protected Area

Duration: 2014

Location: Maragala EPA, Monaragala District, Uva Province

Donor: CEA

The Maragala Mountain Range supports a unique combination of intermediate zone forest, savannah and wet evergreen forests. It is known locally as 'Maragalakanda' and is the highest summit of Moneragala. The Range was declared an EPA in the year 2008.

Considering the many valuable resources of the area, as well as the threats to the site and its biodiversity, it was evident that suitable management plans should be developed. In order to develop suitable management recommendations for the site, a rapid biodiversity survey was necessary to gain information on the threats—particularly anthropogenic threats—to the site, as well as the socio-economic status of local communities that influence the maintenance of the site. Accordingly, recommendations and identified actions were provided.

Lankan Golden Gecko *(Calodactylodes illingworthorum)*, an endemic and Endangered species
© Sampath Goonatilake

FAST FACTS:

Flora & Fauna

- The Maragala Mountain Range featured a range of diverse vegetation types, including eight forests, and four non-forested vegetated areas
- 427 floral species belonging to 108 families were recorded out of which 49 were endemic species and 66 were threatened species
- 353 faunal species were identified including 69 endemic species (19.5%) and 42 Nationally Threatened species (11.9%)

FAST FACTS:

Threats

- IAS • Soil Erosion • Forest Fires • Landslides
- Solid Waste • Pollution • Lack of Awareness
- Unsuitable Forestry Practices • Overexploitation of Resources

Other Facts

Underutilization of potential opportunities for research and loss of traditional knowledge of ayurvedic practitioners

Maragala Mountain Range
© Sampath Goonatilake

Wildlife Management Plan (WMP) for the Proposed Yan Oya Reservoir Project

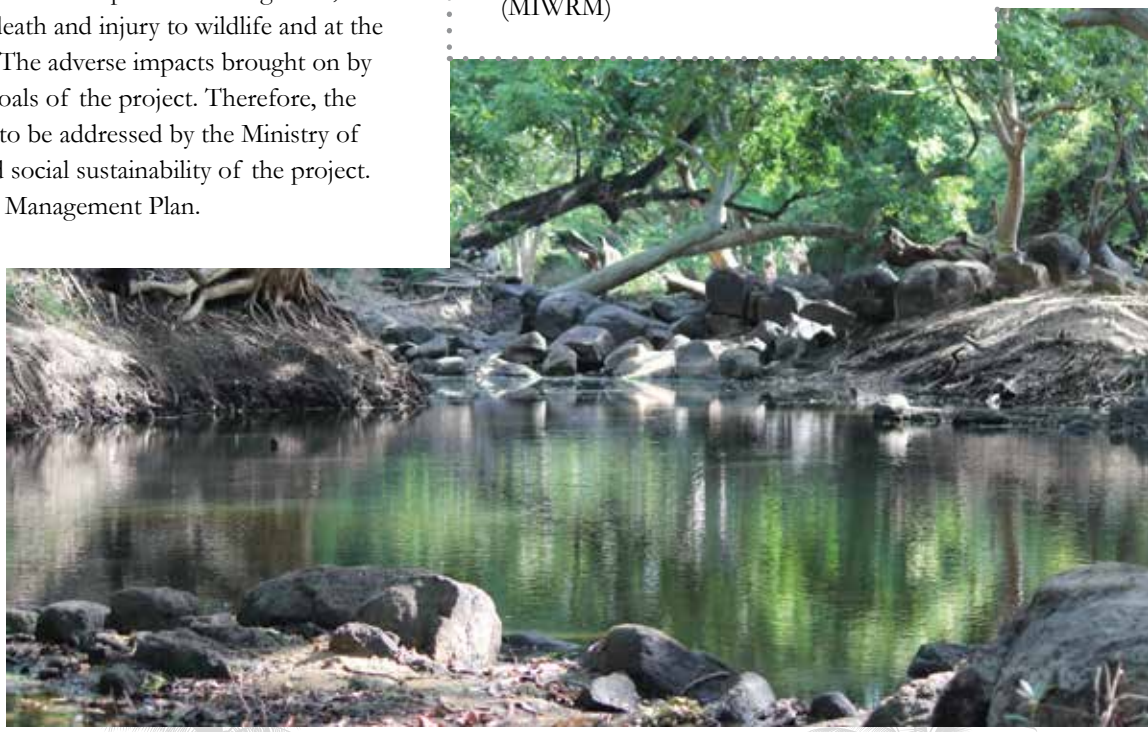
Duration: 2014-2015
Location: North Central Province
Partner/s: CEA, DWC & FD
Donor/s: Ministry of Irrigation and Water Resource Management of Sri Lanka (MIWRM)

The Yan Oya Project was set to significantly increase the water availability in the North-Eastern region and immensely benefit farmers in the region. However, it could also result in many negative environmental impacts which included the decrease in habitat for terrestrial wildlife; disruption of movement patterns of wide ranging species such as elephants and ungulates; and increased human-wildlife conflict. These negative impacts would subsequently result in death and injury to wildlife and at the same time result in the loss of crops, property and lives of the resettled farmers as well. The adverse impacts brought on by the creation of the reservoir, could prevent the achievement of desired developmental goals of the project. Therefore, the project approving agency, the CEA, placed a number of specific conditions that needed to be addressed by the Ministry of Irrigation and Water Resource Management (MIWRM), to ensure the environmental and social sustainability of the project. IUCN was engaged to support the MIWRM in preparing and implementing the Wildlife Management Plan.

FAST FACTS:

Following thematic areas were addressed by the management plan:

- Additional areas were identified and declared as protected areas to provide connectivity between remaining forest areas for migration of wild animals
- Habitat enrichment programmes were identified implemented to enhance the carrying capacity of existing natural areas to compensate for the loss of habitat
- An animal rescue programme was implemented to translocate or transplant identified animals and plant species based on their conservation significance from the affected areas of the project to safe areas
- Sensitive ecosystems within the flood plain of the Yan Oya were identified to develop a mechanism to protect such habitats and thereby mitigate Human Elephant Conflict (HEC)



Yan Oya
© Sampath Goonatilake

Preparation of Sri Lanka's National Biodiversity Strategic Action Plan (NBSAP) for 2016-2022

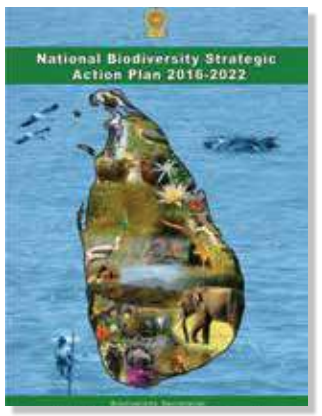
Duration: Jul 2015-Apr 2016

Location: Islandwide

Donor/s: GEF/UNDP/MMD&E/ Biodiversity Secretariat

Sri Lanka, along with the Western Ghats, is one of 34 'biodiversity hotspots' in the world, with a large proportion of endemic species and a high dependence on its biodiversity for tourism and other social and economic activities. Sri Lanka ratified the UN Convention on Biological Diversity (CBD) in 1994 and as such Article 6 of the CBD requires contracting parties to develop a National Biodiversity Strategy and Action Plan (NBSAP), or an equivalent instrument.

In response to this obligation to the CBD, Sri Lanka developed the Strategy for the Conservation and Sustainable Use of Biological Diversity in 1994, and the Biodiversity Conservation Action Plan (BCAP) under the title "Biodiversity Conservation in Sri Lanka: A Framework for Action in 1998". Although an addendum was made to the BCAP in 2007 to address several key issues, Sri Lanka's last NBSAP, which was published in 1999 needed to be updated as it does not fully reflect the post-conflict rapid infrastructure developments, current threats and new global developments. IUCN was engaged to develop the draft NBSAP which was revised and finalized upon receiving stakeholder inputs.



Integrated Strategic Environment Assessment for the Northern Province of Sri Lanka: Lessons Learned

Duration: Jun 2016-Nov 2017

Location: Northern Sri Lanka

Other Partner/s: Disaster Management Center (DMC) & CEA

Donor/s: UNEP

ISEA-North
© IUCN Sri Lanka

In 2009, UNEP and UNDP supported Sri Lanka to carry out the 'Integrated Strategic Environment Assessment for the Northern Province (ISEA-North)' with the objective of ensuring that resettlement and new development activities in the Northern Region were sustainable and caused minimum damage to natural resources. The ISEA-North process brought a large number of agencies into a single network where information was shared and discussed and land use decisions were made in a consultative manner. As a result, consultative process and multi-agency cooperation aspects of the ISEA-North process have been highlighted internationally, especially by UNEP and UNDP.

After six years, UNEP and IUCN Sri Lanka collaborated in an effort to document the ISEA-North process and experience in detail, so that the lessons learned could be used locally and globally as a post-disaster or post-conflict 'building back better' approach, with sustainability and resilience mainstreamed in planning. The project sought to share best practices for applying ISEAs in a post-crisis context as well as to facilitate and support implementation of ISEA in two other countries: Côte' d'Ivoire and Nepal.

FAST FACTS:

- Lessons learned report of ISEA-North implementation
- Report on the study tour by Côte' d'Ivoire and Nepal in Sri Lanka

The Wildlife Management Plan, including Human Elephant Conflict Management and Mitigation, for the Upper Elahera Canal Project

Duration: Aug 2016-Oct 2017

Location: Anuradhapura, Polonnaruwa and Matale Districts

Partners/ Donors: MMD&E/ Mahaweli Water Security Investment Project

The Upper Elahera Canal Project (UECP) involved a trans-basin diversion of water from the Mahaweli River to the North Central and Northern provinces. Whilst the proposed UECP would enhance the water availability for agriculture, thereby increasing agricultural production, as well as improving the socio-economic status of communities, the project was expected to bring in short and long-term environmental impacts, especially to the wildlife that inhabits the project area. Based on the findings of the Environmental Impact Assessment (EIA) study, conducted for the UEC project, three major impacts on wildlife were identified. They were the loss of habitat for flora and fauna; habitat fragmentation and loss of critical species; and the escalation of HEC.

The UECP area is spread over 4,285 km² and of this, 2,470 km² or 54% of the project area is in the Anuradhapura District. From the populations of Anuradhapura, Polonnaruwa and Matale, 12.3%, 13 % and 6.6%, respectively, are located in the project area.

The objectives of this plan were to address the issues pertaining to the loss of wildlife habitat due to the project; mitigate the direct negative impacts on wildlife during both construction and operation phase; and provide a set of site specific reasonable and acceptable solutions to the HEC that will arise in the area.

Plant rescue at UECP
© Sampath Goonatilake

FAST FACTS:

Flora & Fauna

- 359 species of vascular plants were recorded including 268 native species, of which 19 were endemic and 69 were exotic
- 182 floral species were of medicinal value, 5 were EN (nationally), 22 were VU (nationally) and 26 were NT species
- 97 invertebrate species (from selected invertebrate groups) and 182 vertebrates species were recorded among which 279 were native, 10 were migrant, three were domestic, 32 were endemics, one was CR, 11 were EN, seven were VU, 23 were NT and 62 were critical species

Other Facts

- Elephants were present currently in the neighbourhoods of two thirds where people resided in the UECP area, and most of them already viewed elephants as a major problem
- The pattern of human-elephant conflict in the UECP area reflected the general patterns observed elsewhere in Sri Lanka, with adult males being responsible for most crop damage incidents and for all property damage and human death incidents
- HEC occurred almost over the entire north central landscape and the top priority issues for the people were water unavailability and issues with animals
- In order to mitigate HEC, a list of recommendations were provided

A family of elephants
© Sampath Goonatilake

The Wildlife Management Plan, including Human-Elephant Conflict Management and Mitigation, for the North Western Province Canal Project

Duration: Aug 2016-Oct 2017

Location: Kurunegala, Matale and Anuradhapura Districts

Partners/Donors: MMD&E/Mahaweli Water Security Investment Project

An elephant foraging for food
© Madhushan Indika De Silva

The North Western Province Canal Project (NWPCP) involves a trans-basin diversion of water from the Mahaweli River to the Hakwatuna Oya and Upper Mi Oya basins. While the project enhanced the agricultural sector and thereby the livelihoods of people, it was slated to bring in various environmental issues, especially those related to wildlife. At a district level, HEC was highest in Kurunegala while the highest house and property damage was in Ampara; and the highest number of elephant deaths were recorded from Anuradhapura. At the DSD level in Kurunegala, the highest number of human deaths, elephant deaths, as well as house and property damage were recorded from Galgamuwa. Recommendations were provided in order to mitigate Human Elephant Conflict in the NWPCP area.

Other Facts

- People and elephants co-existed in the same landscape over much of the northwest where the NWPCP area was part of contiguous elephant habitat in the North-West
- 12 elephants were tracked in the North-West by the Centre for Conservation and Research, in collaboration with the DWC
- There were two protected areas within the NWPCP area, Galgiriyakanda Forest Reserve and Kahalla-Pallekele Sanctuary
- There were 71 farmer associations, which used irrigation water from 195 tanks for cultivation

FAST FACTS:

Flora & Fauna

- 433 species of vascular plants were recorded including 310 native species (of which 21 were endemics), 90 exotic species, 317 species of medicinal value, 21 VU species (nationally) and 24 NT species
- 135 invertebrate species (from selected invertebrate groups) and 279 vertebrate species were recorded including 381 natives, 16 migrants, 17 exotic species, 63 endemics, two CR, 16 EN, 17 VU, 34 NT and 98 critical species

Development of an Ecotourism Plan for Pottuvil-Panama Region

Duration: 2016-2018

Location: Northern Sri Lanka

Other Partner/s: CC&CRMD

Donor/s: GEF/CC&CRMD & International Fund for Agricultural Development (IFAD)

The aim of the project 'Participatory Coastal Zone Restoration and Sustainable Management in the Eastern Province of Post-Tsunami Sri Lanka' was to restore and sustainably manage tsunami affected coastal ecosystems in the Eastern Province and to promote community adaptation to climate change. As part of the project, IUCN provided the necessary inputs for the development of an ecotourism plan for Pottuvil (Kottukal) Lagoon in the Ampara District with the objective of providing alternate livelihoods for the community that depends on coastal resources and thereby reducing their influence on the coastal resource. The project covered the coastal area from Sangamankanda Point to Panama in the Ampara District of the Eastern Province, with a special emphasis on Pottuvil Lagoon.

Pottuvil Lagoon
© Kumudini Ekaratne

FAST FACTS:

- Best practices for effective restoration and sustainable management of key coastal ecosystems with integration of adaptation to climate change vulnerabilities developed and demonstrated
- Effective ecosystem restoration and conservation management were mainstreamed into post-disaster reconstruction planning and implementation by relevant authorities and donors
- Coastal communities and local stakeholders were empowered to manage local natural resources to enhance sustainable livelihoods and adaptation to climate change vulnerabilities
- Restoration and climate change adaptation activities
- Learning, evaluation and adaptive management increased in both tsunami restoration and climate change adaptation activities

Development of Policy, Strategies and National Action Plan for Marine Environment Protection in Sri Lanka

Duration: Aug 2017-Apr 2018

Location: Territorial Waters of Sri Lanka, Fore-Shore and the Coastal Zone

Donor/s: MEPA

Marine Environment Protection Authority (MEPA) is the apex body established by the Government of Sri Lanka with the mandate to prevent, control, and manage the pollution of the country's marine environment. The need to establish a national action plan was conceived by the organization due to the increasing ocean traffic and ocean related pollution, which includes threats brought on by plastics, oil spills, invasive species and ballast water issues compounded by land-based pollution as well.

Considering the extensive range of expertise in relation to multi-stakeholder engagement and planning combined with the coastal and marine knowledge-base, MEPA selected IUCN to provide technical assistance to prepare the new MEPA approach covering policy, strategies and the action plan until the year 2030. It covered the medium to long-term time horizons in keeping with International Conventions and Sustainable Development Goals (SDGs).

FAST FACTS:

- A detailed survey of existing problems and issues of coastal and marine environment pollution and protection was carried out
- Assessed the root causes and remedies for the growing challenge of pollution in the urbanized coastal environment
- Assessed the problems of marine pollution connected with ballast water discharges, IAS and hydrocarbon extraction and proposed mechanisms to provide rapid responses to protect the sensitive areas
- Assessed the mechanisms for integration of the preceding objectives of the study with the national commitment to implement SDG 14 'Life Below water'
- Assessed research and educational needs at all levels of society to facilitate achievement of the strategic objective of 'prevention, control and management of coastal and marine pollution'

Ceylon Petroleum Storage Terminal Limited
Oil Spill at Heen Ela, Dematagoda, Colombo
© Terney Pradeep Kumara

Integrating Biodiversity Conservation and Sustainable Use into Land Use Planning in Environmentally Sensitive Areas: Training Manual

Duration: 2017-2018

Other Partner/s: MMD&E, LUPPD, EFL, FD & DWC

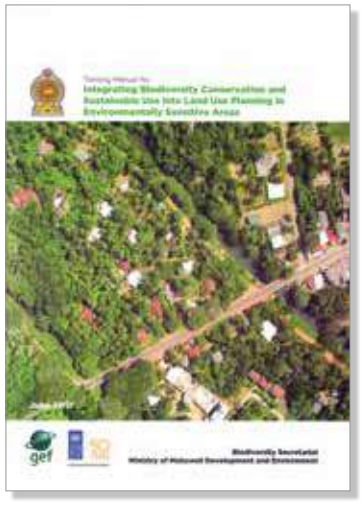
Donor/s: UNDP

Landscape-scale conservation is now the widely accepted paradigm for biodiversity conservation and is an exercise in land-use planning. It requires an understanding of biodiversity priorities and ecological processes, and how to evaluate and prioritize them. However, the most traditional land-use planning teams from national to sub-national levels were not capacitated to conduct these analyses. Planners were generally not fully aware about the importance of integrating biodiversity conservation into land-use planning processes in a systematic manner.

Hence, IUCN together with Environmental Foundation Limited (EFL) put together this Training Manual for Integrating Biodiversity Conservation and Sustainable Use into Land Use Planning in Environmentally Sensitive Areas for the Environmentally Sensitive Areas (ESA) project.

FAST FACTS:

- Two-three day capacity building programmes were conducted for the ESA planning teams identified from the project area where hands on training were given on the use of data and data analysis tools such as MaxEnt
- A number of awareness raising workshops were conducted on the Manual at district and national level and the most benefitted agency out of all trained was the Land Use Policy Planning Department (LUPPD)



The manual was published by the MMD&E in June 2017 under the GEF/UNDP Project "Enhancing Biodiversity Conservation and Sustenance of Ecosystems Services in Environmentally Sensitive Areas". The manual is meant to be a guide for land-use planners, especially at sub-national administrative units to integrate biodiversity priorities into land-use plans they prepare.

Youth Led Ecosystem Based Disaster Risk Reduction (Youth Eco-DRR)

Duration: Jul-Dec 2018

Location: Puttalam, Mullaitivu, Nuwara Eliya and Batticoloa districts

Donors/Partners: ChildFund

A workshop in process
© ChildFund

Eco-DRR is an important component in Disaster Risk Reduction (DRR) and it plays a key role in the Sendai Framework for DRR. Eco-DRR uses a multi-sector and multi-stakeholder approach and in Sri Lanka, although the subject has not taken root adequately by the name, most of the elements are being applied by different sectors.

It is important to develop the capacity of the future generation by providing/empowering them with knowledge and opportunities to practice Eco-DRR principles, thereby enhancing their knowledge and understanding of the inter-linkages between environment and climate and the development processes. Therefore, the goal of the project was to enhance the resilience of the target community, particularly the youth and children.

To promote this concept, ChildFund has selected a number of locations with the help of IUCN Sri Lanka. These locations are expected to differ in their social, economic and environmental characteristics as well as disaster potential.

Outputs:

- Strengthened capacity among youth groups and communities in emergency response
- Youth led eco-system based DRR action planning with the communities
- Service providers related to Eco-DRR action plan linked and engaged

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Deploying Nature-Based Solutions to Climate, Food and Development

"The proper use of science is not to conquer nature but to live in it."

- Barry Commoner


© Naalin Perera

Mangroves for the Future

Mangroves for the Future (MFF), present in Sri Lanka since 2006, is a unique partner-led initiative to promote investment in coastal ecosystem conservation for sustainable development. Co-chaired by IUCN and UNDP, MFF provides a platform for many different agencies, sectors and countries who seek to address challenges related to the coastal ecosystem and livelihood, to collaborate together.

The goal of MFF is to promote an integrated ocean-wide approach to coastal management and to develop the resilience of ecosystem-dependent coastal communities.

MFF was built on a history of coastal management interventions that originated both, before and after the 2004 Indian Ocean tsunami. The project initially focused on countries that were worst affected by the tsunami, namely India, Indonesia, Maldives, Seychelles, Sri Lanka and Thailand. Since then, it has expanded to include Bangladesh, Cambodia, Myanmar, Pakistan and Vietnam. Though Mangroves are the focal point of the MFF initiative, it is inclusive of all types of coastal ecosystems such as coral reefs, estuaries, lagoons, sandy beaches, seagrass and wetlands.

Duration: 2006-2018

Location: Coastal Regions of Sri Lanka

Other Partner/s: MMD&E, CC&CRMD, MFARD, NARA, MEPA, SLTDA, Sevalanka and Green Movement of Sri Lanka

Donor/s: Swedish International Development Cooperation Agency (SIDA), Danish International Development Agency (DANIDA), Norwegian Agency for Development Cooperation(NORAD), Wetlands International

Some of the activities carried out under Phase I, II, and III

- Preparation of the National Strategy and Action Plan: Ecosystem based Integrated Coastal Management in Sri Lanka
- Resilience Assessment Protocol (RAP) was developed to guide the MFF implementation capitalized on the Integrated Strategic Environment Assessment for the Northern Province (ISEA-North) published in 2014 to enhance the sustainability and resilience in post-war development in the North
- Participatory conservation of the Casuarina Forest in Manalkadu Sand Dune
- Sustainable livelihood alternatives for the fishermen communities of Delft
- Implementation of 86 Small Grants Programmes under Phase I, II, and III
- Living Resources of the Gulf of Mannar: Assessment of key species and habitats for enhancing awareness and for conservation policy formulation
- Mapping and enhancing natural resource governance in Small Island Resource Communities
- Promoting community participation in integrated coastal management in the North Western Province
- Increasing the resilience of coastal and riverine communities to climate change and other threats, by conserving the ecosystems of the Maha Oya and associated coastal wetlands
- Introduction of a community-based management model for Vankalai Wetland Ecosystem in Mannar
- Baseline studies in Kokkilai Lagoon in partnership with NARA and Department of Fisheries & Aquatic Resources (DFAR)
- Mapping of sensitive coastal and marine ecosystems in Palk Bay and the Gulf of Mannar partnering with NARA
- Introduction of an M.Sc. in Integrated Coastal Management (ICM) to five universities
- Capacity building of key partner agencies on Integrated Coastal Zone Management
- Publication of Conservation and Sustainable Use of Biodiversity in the Northern Islands and Lagoons of Sri Lanka
- A sustainable nature based tourism development plan for the coastal islands in the Sub Region of Palk Bay of New North Resort Region
- The compendium of Coastal Lagoons in Sri Lanka
- Preparation of Profiles of Estuaries of Sri Lanka
- Mangrove carbon stock assessment
- Review of the Special Area Management (SMA) concept in Hikkaduwa, lessons learning and experience sharing and the Gnder Assessment Report
- Converting a fuel operated Out Boat Motor (OBM) Engine to an engine driven by an electric motor with battery bank

Villagers ferrying firewood
© Naalin Perera

Small Grants Programme

Phase	Period	Grant Value (LKR)	No. of grants
Phase 1	Jan-Dec 2009	500,000	41
Phase II, Cycle 1	Dec 2010-Apr 2012	500,000	22
Phase II, Cycle 2	Jan 2012-May 2013	750,000	10
Phase II, Cycle 3	Jan 2013-Dec 2014	1,000,000	04
Phase II, Cycle 4	Jan 2014-May 2015	2,000,000	05
Phase III	Jan 2016-Apr 2017	2,000,000	04
Total			**86**

Fisherman casting a net
© Naalin Perera

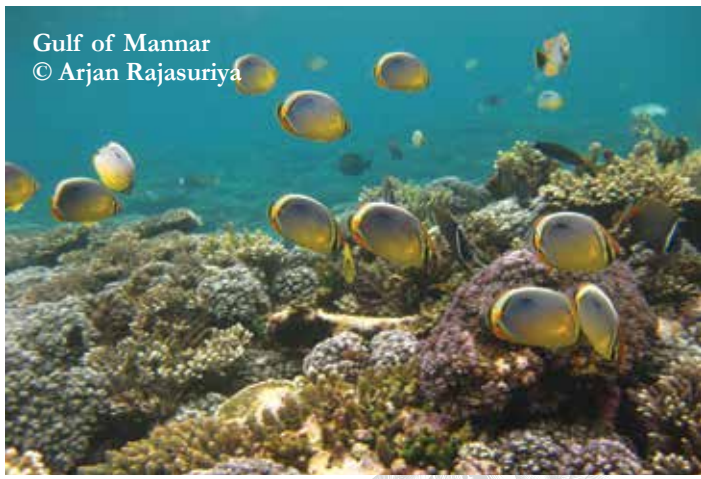
OTHER FACTS

- IUCNSL and the MFF Secretariat organized a regional workshop on Economics of Mangroves and Coastal Ecosystems. The workshop was held in Colombo from 24-25th February 2015
- MFF Mission in Sri Lanka: An MFF Mission in collaboration with SIDA, Asia Regional Office (ARO) and the MFF was held in Sri Lanka from 10-13th March 2015. Mr Göran Haag of SIDA, Dr T P Singh of IUCN ARO (Asia Regional Office) and Dr Steen Christensen of the MFF participated in the event. A special meeting of the National Coordinating Body (NCB) with the participation of 12 members were held followed by a grantees/ stakeholder consultative meeting in Jaffna, organized and hosted by the Northern Province Ministry of Environment. Five MFF grantees briefed the mission and the other participating members regarding the ongoing projects and their progress. Furthermore, the mission visited the SGF ongoing project site in Jaffna, a Medium Grant project in mannar, SGF (completed) project in Mannar (sea cucumber farming) and SGF (completed) project in Kalpitiya (Aloe Vera cultivation)

Medium, Large and Regional Grants

Name of Grant	Type of Grant			Grant Amount (USD)
	Medium	Large	Regional	
Living resources of the Gulf of Mannar: Assessment of key species and habitats for enhancing awareness and for conservation policy formulation (2012 to 2014)			X	200,000
Mapping and enhancing natural resource governance in Small Island Resource Communities (2013 to 2014)			X	199,994
Promoting community participation in integrated coastal management in the North Western Province of Sri Lanka (2010 to 2011)		X		259,354
Increasing the resilience of coastal and riverine communities to climate change and other threats, by conserving the ecosystems of the Maya Oya and associated coastal wetlands in Sri Lanka (2009 to 2011)		X		151,895
Introduction of a community-based management model for Vankalai Wetland Ecosystem, Mannar, Sri Lanka (2014 to 2016)	X			72,600

Ja-Kotu (fish trap)
© Naalin Perera



Gulf of Mannar
© Arjan Rajasuriya

Biodiversity Assessment of the Lower Walawe Irrigation Extension Area

Duration: Mar 2001-Dec 2003

Location: Southern/Sabaragamuwa Provinces

Donor: IWMI/MASL

The Udawalawe Irrigation Project of the Mahaweli Authority hoped to develop an area of 5,152 ha for irrigation and human settlement during 2001-2005. The area falls within three administrative boundaries—Moneragala, Embilipitiya and Hambantota—located in the Dry and Arid Zones of Sri Lanka. In 2001, the area was uninhabited and consisted mainly of dry secondary scrub forests with several scattered small fresh water bodies. At the southern tip lay the Karagan Lewaya, an important brackish water lagoon. This project intended to assess the role that irrigation might play in the future, and how water resources are to be allocated in order to provide sustainable livelihoods whilst protecting the natural ecosystems.

FAST FACTS:

Invaluable baseline information were gathered aiding the evaluation of changes that would occur in natural ecosystems during the process of development, and during the implementation phase thereafter

Biodiversity Assessment of the Upper Kotmale Hydropower Project Area

Duration: Aug 2004-Dec 2007

Location: Kothmale, Nuwara Eliya District, Central Province

Donor/Partner: Ceylon Electricity Board (CEB)

The Upper Kotmale Hydropower Project (UKHP) is located in the south central mountainous region of Sri Lanka. The entire project area covers approximately 540km² in extent and is bound on the west by the existing Kotmale Dam, which feeds the largest hydroelectric power station in the country.

This biodiversity assessment was carried out in two phases, with a particular emphasis on critical habitats, such as the areas affected by inundation, waterfalls and spray zones, direct impact zones along streams below diversion points and relocation sites.

The main objectives of this study were to assess the impact on biodiversity due to changes in the water regimes by the project, identification of methods to mitigate negative impacts on biodiversity and to establish a long-term monitoring programme of biodiversity. About three representative sites along the Kotmale Oya were selected to document baseline flow, and to conduct an environmental flow analysis.

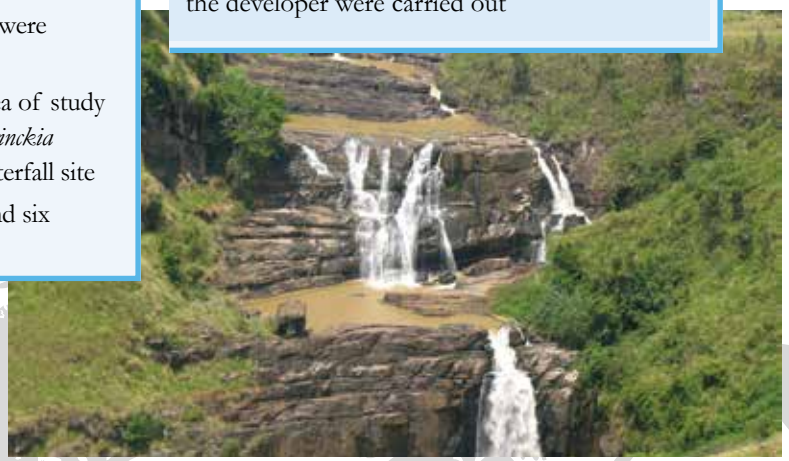
FAST FACTS:

Flora & Fauna

- 214 plant species belonging to 96 families were recorded out of which 11 species were endemic, four species were Threatened and 17 species belonged to the category of cultivated plants
- 75 species of invertebrates belonging to three major groups, namely freshwater crabs, land snails and butterflies were identified. Among them nine species were endemic and 10 were NT
- 125 species of vertebrates were recorded in the habitats bordering the Kotmale Oya out of which 22 were endemic while 20 were Nationally Threatened
- Seven endemic species and seven Nationally Threatened species were identified among the amphibians while five endemic and five Nationally Threatened species were recorded among the reptiles
- All four species of freshwater crabs from the area of study were endemic to the country. Among them *Perbrinckia scitula* has been recorded only from St. Clairs Waterfall site
- Among the birds, seven species were endemic and six species were Nationally Threatened

OTHER FACTS

Main contribution of IUCN's engagement was the identification of critical species that needs attention in project construction and operation, such as the identification of a critically endangered and relic land snail, *Ravana politissima,* from the project impact zone. Recommendations for systematic translocation of this species and subsequent translocation by the developer were carried out



A waterfall in the Upper Kotmale
© Sampath Goonatilake

Green Coast for Nature and People after the Tsunami: Sri Lanka Assessment Component

Duration: 2005-2006

Location: South-Western, Southern, South-Eastern and Eastern Sri Lanka

Other Partner/s: Both ENDS, World Wide Fund for Nature and Natural Resources, Wetlands International and IUCN Netherlands Committee

Donor/s: SHO (Netherlands Public Charity Funds)

The tsunami that struck Sri Lanka in 2004 had varying degrees of impacts to the coastline of the Island. It resulted in more than 35,000 human deaths, and destroyed more than 100,000 houses, including large-scale damage to coastal infrastructure. Of the 25 districts in Sri Lanka, 12 districts were severely affected and the disaster displaced 850,201 people. The worst hit was Eastern Sri Lanka.

Four organizations, namely Both ENDS, World Wide Fund for Nature and Natural Resources, Wetlands International and IUCN Netherlands Committee joined hands in the recovery of coastal ecosystems to support local livelihoods. The project focused on three tsunami-affected countries in Asia (India, Indonesia and Sri-Lanka) and its main target was to reconstruct ecosystem based livelihoods. Major objectives of the project were to undertake assessments of ecological damage and develop interventions for restoration of the damaged ecosystems; policy support to guide reconstruction; implement agencies towards sustainable recovery of coastal systems and associated livelihoods and provide small grants for local communities in ecosystem restoration and livelihood enhancement activities/projects.

Six priority coastal stretches were selected for assessments from South-Western, Southern, South-Eastern and Eastern provinces of Sri Lanka. The selection was based on three main criteria; representativeness of coastal ecosystems/ habitats, coastal livelihoods and impacts of the tsunami in the coastal zone.

The assessment report for Sri Lanka provided relevant environmental and socio-economic information for prioritised coastal stretches in the Island, in order to facilitate the development of the project proposal on recovery of coastal ecosystems to support local livelihoods.

Removing an invasive plant (*Prosopis juliflora*) from the Bundala National Park
© Kumudini Ekaratne

FAST FACTS:

Flora & Fauna

- Impacts to the natural environment and livelihoods along the coastal stretches of Hikkaduwa to Unawatuna (Galle District), Rekawa to Godawaya (Hambanthota District), Pallemalala to Kirinda (Hambantota District), Arugam Bay to Thirukkovil (Ampara District), Akkaraipattu to Kalmunai (Ampara District), and Kalmunai to Batticaloa (Batticaloa District) were assessed
- Species composition and abundance of mangrove species as well as natural ecosystems along the above coastal areas were identified
- During the Post-Tsunami Reconstruction Phase, environmental issues related to reconstruction activities, issues related to livelihood restoration, natural recovery of affected ecosystems, ecosystem rehabilitation initiatives and participation of local communities in rehabilitation efforts were identified

Recommentations

- Preparation of Village Environmental Management Plans (VEMPS)
- Conduct Strategic Environmental Assessments (SEAs)
- Promote coastal habitat/ecosystem restoration
- Management of IAS
- Community-based turtle conservation activities
- Homegarden development activities in new resettlement schemes
- Management of coastal and marine fishery
- Regular monitoring of coastal ecosystems and livelihoods

Biodiversity Assessment of the Moragahakanda Agricultural Development Project

Duration: Jul 2006-Mar 2007
Location: Matale District, Central Province.
Other Partner/s: DWC
Donor/s: MASL

The Moragahakanda Agricultural Development Project (MADP) constituted the final stage of the Master Plan to fully harness the water resources of the Mahaweli Ganga, Sri Lanka's largest river basin. The main goal of the MADP was to provide increased water supplies to drought-prone irrigation schemes in the North Central and Eastern provinces of Sri Lanka. Moragahakanda project involved the construction of a dam, about 65 m high, and two saddle dams with a total crest length of around 1,200 m on the Amban Ganga tributary, creating a reservoir with a storage capacity of some 570 million cubic metres. In addition to irrigation, provisions were made for water supplies to major towns in the region, and a 20 MW hydropower station as well.

FAST FACTS:

Flora & Fauna

- 406 flowering plant species belonging to 93 families were recorded among which 29 were endemic, 14 were Nationally Threatened and 247 were medicinal plant species
- 272 vertebrate species belonging to 84 families were recorded, which included 47 endemic and 42 Nationally Threatened species

Threats

- Habitat degradation
- Deterioration
- Modification
- Exploitation of flora and fauna
- Spread of ISA

Recommendations

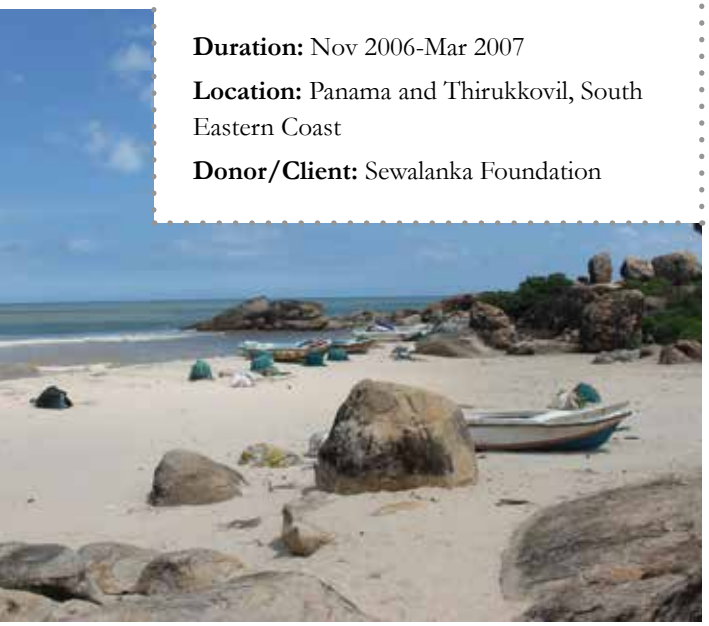
- In the hope of mitigating major threats to the biodiversity:
  - declaring the catchment of MADP and the wider landscape linking Knuckles and Minneriya-Giritale Nature Reserve as a National Park
  - introduction of appropriate local area development policies for likely industries
- Erecting an electric fence on the perimeter of the western and eastern boundary of the proposed park in order to decrease potential human elephant conflicts
- Rescue and relocate threatened fauna and flora from inundated areas as well as construction areas

Moragahakanda
© Sampath Goonatilake

Biodiversity and Socio-Economic Surveys of Panama and Thirukkovil Villages

Duration: Nov 2006-Mar 2007
Location: Panama and Thirukkovil, South Eastern Coast
Donor/Client: Sewalanka Foundation

Immediately after the 2004 tsunami, the Sewalanka Foundation carried out extensive work targeting the coastal community in the Ampara District and under the project, IUCN was engaged to carry out biodiversity and socio-economic surveys in the areas of Panama and Thirukkovil (which included Komari, Mulliadi, Tandiadi, and Omari lagoons). The studies in the areas collected, synthesized and analyzed relevant socio-economic data to ensure that the project is better designed and effectively implemented to deliver the maximum impact. The biodiversity surveys that were carried out generated data that enabled the assessment of environmental and socio-economic impacts of mangrove restoration activities as well as to assess the effects of mangrove restoration activities.



Panama
© Sampath Goonatilake

FAST FACTS:

Panama

- The total damage of mangroves had occurred within the first 200-300 m from the lagoon mouth
- Partial damage of the mangroves were observed about 300-500 m from the lagoon mouth. Approximately, 40% of the mangroves in Panama Lagoon suffered heavy damage from the tsunami
- The main livelihoods of the communities in the area included paddy cultivation and fishing
- The natural habitats, sand dunes and beach habitats were in a superior condition whilst tropical thorn forest, tropical dry mixed evergreen forests were fairly degraded due to human activities
- 163 plant species, including 19 mangrove species, belonging to 67 families were recorded in the habitats
- 216 species of vertebrates belonging to 132 families were recorded, of which 10 species were endemic while 19 were listed as Nationally Threatened
- Birds were found to be the most abundant group when considering the composition of taxa and proportional representation
- 55 butterfly species, only invertebrates sampled, belonging to five families were recorded. There were nine Nationally Threatened species and only one endemic species

Thirukkovil

- Mangroves on both sides of the lagoon near the river mouth were destroyed. Partial damage of the mangroves was observed about 300-500 m from the lagoon mouth
- Approximately, two percent of the mangroves in the Thirukkovil Lagoon suffered damage from the tsunami. It was also evident that mangrove degradation had been taking place due to human interventions
- 148 plant species, including nine mangrove species, belonging to 60 families were recorded
- 149 species of vertebrates belonging to 75 families were recorded, of which seven species were found to be endemic while 15 were listed as Nationally Threatened
- 52 butterfly species belonging to five families were recorded

Mangroves at Panama Lagoon
© Sampath Goonatilake

Duration: May 2007-Jun 2009

Location: Ampara District, Eastern Province

Donor/Partner: Canadian International Development Agency (CIDA)

Post-Tsunami Ecosystem Restoration Project in the Ampara District

The project area consisted of the coastal belt of Ampara District and included five DS divisions (Kalmunai, Akkaraipattu, Alayadivembu, Thirukkovil and Pottuvil including some work done in Lahugala), under which there were five Pradeshiya Sabhas (Kalmunai, Akkaraipattu, Alayadivembu, Thirukkovil and Pottuvil). The main interventions of the project were confined to the Periyakalapu Lagoon and surrounding areas located in the Thirukkovil and Alayadivembu Divisional Secretariat (DS) divisions.

The goal of the project was to contribute to the Government's overall post-tsunami rehabilitation programme and to assist in the restoration of affected ecosystems and livelihoods in the Eastern Coast impacted by the tsunami.

FAST FACTS:

- Baseline studies were carried out on ecosystems and the socio-economic aspect of the study area
- Preparation of a fisheries management plan for the Periyakalapu Lagoon
- Improved alternative livelihoods and entrepreneurial skills of NGO's and community based organisations
- Restoration of coastal ecosystems and lagoons as a result of erosion control through restoration of coastal vegetation
- Improved local livelihoods derived from community-based approaches for ecosystem restoration and natural resource management
- Improved technical knowledge, capacity and awareness to manage and conserve coastal ecosystems, lagoons and canal systems within the community
- Supporting the ongoing process of the rehabilitation of lagoons

Restoration of the Warawewa Tank

Duration: 2010-2012

Location: Wilpotha, Puttalam District, North Western Province

Other Partner/s: Wilpotha Women's Savings Effort (WWSE) & Samagi Govi Sanvidanaya

Donor/s: HSBC

Restored Tank in 2012
© IUCN Sri Lanka

Village small tank systems supply the basic water needs of the communities and recharges ground water, which provides the necessary soil moisture for cultivation and the maintenance of the native flora. The project to restore the Warawewa Tank, was implemented by the Wilpotha Women's Savings Effort (WWSE) and the Samagi Govi Sanvidanaya (the Farmer Society of the area) with funding by HSBC. The objectives of the project were to rehabilitate and restore the Warawewa Small Tank to increase its water-holding capacity along with the improvement of its watershed conditions and to improve the livelihoods of communities dependent on the tank. Through the project, the 150 m long canal system was extended by a 400 m cemented irrigation canal as it took 1½ hours for water from the spill to reach the paddy fields (a distance of 1,200 feet). The canal lining helped to improve the efficiency of water conveyance, which reduced the loss of water between the tank and the paddy fields.

FAST FACTS:

- Tank capacity was increased from 185-acre feet to 247-acre feet
- The area where paddy was cultivated was increased from 46 to 62 acres
- After the completion of the canal, it takes only 20 minutes for water to reach the paddy field
- 30 homegardens were established
- 20 women were trained in handicraft production

Implementation of the Biodiversity Action Plans for the Moraghakanda and Kalu Ganga Reservoir Projects

Duration: 2012-2014

Location: Moragahakanda, Central Province

Other Partner/s: FD, DWC, National Botanical Gardens, National Herbarium, Department of National Museums, National Zoological Gardens, and the Plant Genetic Research Centre (PGRC)

Donor/s: MASL

The Moragahakanda Agriculture Project was designed to harvest water from the Aban Ganga and Kalu Ganga with the construction of two reservoirs. It resulted in the establishment of two new settlements and the development of a road network and other necessary facilities. However, these developments caused a loss of habitat for the terrestrial wildlife including the disruption of the movement patterns of wide-ranging species. As a result, project activities were expected to increase human-wildlife conflicts leading to the death and injury of humans and wildlife as well as the loss of crops and property. In addition, significant potential loss of threatened and endemic species, unique habitats and disturbance to migratory paths were also expected. Upon the request of MASL, IUCN designed and implemented a biodiversity action plan to assess and address the impacts of the project on the biodiversity of the area.

FAST FACTS:

Flora & Fauna

- 916 plants belonging to 58 species and 2,414 individual faunal species were translocated from both Moragahakanda and Kalu Ganga project areas
- Among those transplanted, 84% survived (one year after the replanting)
- 2,368 individuals belonging to 12 fish species and 45 individuals belonging to 14 terrestrial faunal species were rescued from both Moragahakanda and Kalu Ganga project areas and were translocated in to safe habitats
- A total of 155 faunal specimens belonging to 49 species were deposited at the Department of National Museums
- A total of 57 individual specimens belonging to 21 faunal species were deposited at the DWC Museum in the Giritale Wildlife Training Centre

FAST FACTS:

- Plant Genetic Resource Centre (PGRC) collected a total of 313 specimens belonging to 51 wild and crop relative species for the PGRC collection at Gannoruwa
- A total of 348 herbarium specimens belonging to 296 plant species were deposited at the National Herbarium
- 612 seedlings, 20 seeds and 20 plants were taken to the Royal Botanic Gardens at Peradeniya and 1,075 seedlings belonging to 51 plant species were taken to the Hambantota Botanic Gardens
- National Zoological Garden brought 128 individuals belonging to nine fish species for a future breeding programme
- A detailed biodiversity report and recommendations were provided for the *Kiriamma Ulpotha*, a freshwater swamp forest in Pallegama
- A total of 80 faunal and 202 floral species were identified as Ethno-biologically important from the two project sites

Rescued fish species just before being released to the new habitat
© Sampath Goonatilake

A fish rescue operation at Kalu Ganga, Pallegama
© Sampath Goonatilake

Martenstyni's Barb (*Systomus martenstyni)*, an Endemic and CR species
© Sampath Goonatilake

Blotched Filamented Barb (*Dawkinsia srilankensis*), an Endemic and CR species
© Sampath Goonatilake

Moragolla Hydropower Project: Additional Studies in the Natural Environment

Duration: Aug-Oct 2013

Location: Moragolla, Kandy District, Central Province

Donor/s: Nippon Koei Co.Ltd

The CEB is currently developing a 30.8 MW hydropower plant in the Moragolla area with the funding of Asia Development Bank (ADB). This project will include the construction of a 35 m high concrete gravity dam across the Mahaweli River at Weli Ganga.

A Feasibility Study (FS) and an EIA was carried out in 2009 by the Central Engineering Consultancy Bureau (CECB) while Nippon Koei Co. Ltd. (NK) was made responsible for reviewing these documents, and upgrading the EIA to ensure that it is compliant with the Safeguard Policy of the ADB. While additional surveys and studies necessary for the upgrading process have been undertaken, further studies were required to ensure that suitable mitigation measures were planned in order to offset the environmental impacts of the Moragolla Hydropower Project. IUCN was engaged in this capacity to carry out the necessary studies.

FAST FACTS:

- Habitat creation and management to enhance terrestrial biodiversity
- Afforestation and watershed management plan where selected areas were afforested with the recommended tree species
- Preparation of a mitigation and monitoring plan to address impacts on fish and aquatic fauna of the project area
- Problems related to the land use patterns of the watershed, and environmental and watershed-related issues were identified
- Proposition to create suitable habitats within the reservation of the proposed reservoir was carried out

Duration: 2013-2015

Location: Kapiriggama, Anuradhapura District, North Central Province

Other Partner/s: Department of Agrarian Development, Rambewa DS, Rajarata University of Sri Lanka, Green Movement of Sri Lanka, FD, IWMI, Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI), University of Peradeniya and Farmer Organizations

Donor/s: HSBC Water Programme

Ecological Restoration of the Kapiriggama Cascade Tank System

Cascade tank systems can be taken as a prime example of how ancient civilizations in Sri Lanka utilized 'climate adaptation measures' effectively. These tank cascades were created to capture the northeast monsoon rains in dry zones, prevent local floods and increase ground water recharge. Evidence-based data illustrate that small tank cascade systems or '*Ellangawa*' are a time tested and successful traditional system of collecting and utilizing rain water for multiple uses including agriculture.

In these systems the water can be recycled more than four times. Many such systems have now been abandoned and the ecological restoration of these systems can help to meet modern day climate challenges, such as flash floods and prolonged droughts. The Kapiriggama cascade system of tanks in the Rambewa Divisional Secretary Division in Anuradhapura is one such system selected for restoration.

The objective of this project was to develop a practicable model for restoration and management of a village tank cascade system as a single socio-ecological unit.

The project focused on both ecological and structural restoration and an institutional mechanism in managing the system. The project approach was inclusive of technically validated restoration of tank related infrastructure, partial desiltation of tanks, enhancement of tree cover in tank related environment, empowering the community, sharing knowledge and experience, and initiating policy interventions on tank rehabilitation in Sri Lanka. The project aimed to enhance tank water availability and accessibility throughout the year and thereby improving tank related ecosystem services. The multi-stakeholder engagement in project implementation, public-private partnership, community led restoration, and policy influence are the noteworthy strategies followed in this project.

The project was recognised at local and international platforms for assessing social responsibility of the corporate sector. Therefore, the project model can be used in engaging private sector in conservation and social well-being.

The community engaged in rehabilitating the Puliyankulama Tank bund at Kapiriggama
© Naalin Perera

Village tank-paddy field-settlements
© IUCN Sri Lanka

HSBC volunteers and villagers engaged in a shramadana activity
© HSBC

FAST FACTS:

- 18 tanks were restored and handed over to the community where 600 families benefitted from this project
- Enhanced surface water storage capacity, efficient water conveyance, rainwater harvesting, groundwater recharge, and proper drainage
- The project enabled the collection and documentation of traditional knowledge associated with cascade tank system. Furthermore, the community was empowered to maintain the tank cascade system and thereby to become more self-sufficient as well
- The project comprised of many additional benefits such as agriculture and homegarden improvement, traditional rice farming, crop diversification, fisheries and livestock development and livelihood opportunities
- Information collection and analysis were enhanced along with improving databases, advancement of learning, sharing and management in tank cascade systems
- Inputs for policy formulation, planning and implementation were provided to guide similar future initiatives
- Engaging private sector in conservation and social well-being

Duration: 2014-2015

Location: Puttalam District, North Western Province

Donor/s: Lanka Transformers Limited (LTL)

Assessing the Status of the Biodiversity of the Rainwater Harvesting Systems of Heladhanavi Power Plant and its Surroundings

A need to assess the status of the biodiversity surrounding the rainwater harvesting systems of the abandoned Heladhanavi Power Plant (HPP) premises was distinctly felt and was subsequently carried out in late 2014. This power plant generated electricity from heavy fuel oil and was located in a 40 ha plot of land that contained different habitats such as scrublands, grasslands, rainwater harvesting tanks and coconut plantations, which supported a diverse array of fauna and flora.

The LTL required a biodiversity assessment in their HPP premises in order to understand if there could be any potential use of the land as the power plant operation was infeasible. Accordingly, justifications were provided for the potential use of the old power plant property for nature-based activities.

Pigmy Shrew (*Suncus etruscus*)
© Sampath Goonatilake

FAST FACTS:

- The world's smallest pigmy shrew and the largest mammal species were present
- Recommendations provided on how to enhance the biodiversity in the HPP property and mitigate wildlife-human conflicts
- The power plant was dismantled as planned, allowing relevant parties to pursue an ecotourism project on the premises

Heladanavi Power House
© Asela Chandana

Watershed Conservation and Restoration in Knuckles: Mini-Watershed of Puwakpitiya Oya

Duration: 2015-2018

Location: Puwakpitiya, Knuckles Mountain Range, Matale, Central Province Range, Matale

Other Partner/s: FD, Department of Export Agriculture and the Divisional Secretariat of Laggala-Pallegama

Donor/s: HSBC PLC/BSL

The Knuckles Conservation Forest in Sri Lanka was declared a Conservation Forest in 2000. It is also one of the three sections of the Central Highlands World Heritage Site. Due to its diverse natural vegetation, which includes lowland semi-evergreen forests and montane forests, the Knuckles area records a very high and unique level of biodiversity. Aside from holding a rich biodiversity, the Knuckles Forest delivers a number of important ecosystem services—it constitutes 30% of the watershed forest of the Mahaweli river catchment. Despite its importance, vital areas of the Knuckles Region have become degraded due to human activities, such as encroachment, illegal logging, land clearing, tea planting and cardamom cultivation. The area is also prone to natural disasters including climate-induced events.

The project aimed to conserve biodiversity, maintain watershed services and increase resilience to climate change for the benefit of local communities, agriculture and the local economy of both the Puwakpitiya mini-watershed and of the wider watershed area. Conservation and management of the watershed was expected to bring an increase in biodiversity and ecosystem services such as watershed services, micro-climate regulation and carbon sequestration among many others, enhancing the potential for socio-economic and environmental benefits.

A villager carrying firewood crossing Puwakpitiya Oya
© Naalin Perera

FAST FACTS:

- Facilities of Illukkumbura Forest Department Visitor's Centre improved
- 22 farmer families were selected and provided with planting material including plants as a step towards introducing pepper cultivation, which was identified as a major community-based eco-agricultural practice suitable for the area
- 40 farmer families were identified to distribute economically and ecologically important crops such ass coconut, mango, orange and lime
- Bee keeping was introduced as an agro-product development
- A two-acre degraded forest land in the immediate upper catchment of Puwakpitiya Oya was restored with the participation of villagers to convey the importance of upper watershed management
- Selected families were provided with proper sanitation and water management facilities
- Awareness programmes were conducted for target communities, officials and children along with the development and donation of necessary knowledge products

Knuckles Range
© Naalin Perera

Management and Conservation of the Kelani River Basin

Duration: 2015-2017

Location: Kelani River Basin

Other Partner/s: CEA, UNDP

Donor/s: UNICEF/CEA, Brandix

The Kelani River is home to 25% of Sri Lankans and provides drinking water for a rapidly expanding population of over three million. At the same time, the river ecosystem supports over 10,000 businesses, 37 local authority areas, agriculture plantations, and is a source of sand and gold. Unfortunately, the Kelani is the most polluted river basin in the country, threatening the well-being of all mentioned above.

To balance development and the safety of clean drinking water, IUCN and about 60 Govt., Non-Govt. and Private Sector partners conceptualized the Kelani River Basin Multi-Stakeholder Partnership (KRMP) approach. The first phase of this project was carried out with the support of CEA while in the second phase, Brandix Lanka Ltd., one of the largest apparel exporters in Sri Lanka, partnered with IUCN to operationalise the Private-Public-Community Partnership aspect of the KRMP approach. This provided the background to prepare the required information for stakeholder-led watershed planning and implementation . The process also included sharing experiences as part of the larger initiative of the KRMP approach.

The approach included sharing experiences on real time water quality monitoring in selected locations of the Kelani River Basin with Brandix. IUCN played a project facilitation and management role to monitor water quality in minor watershed level and to develop partnerships to collaborate with the Government, Private Sector and Communities interested in the Kelani River conservation approach.

FAST FACTS:

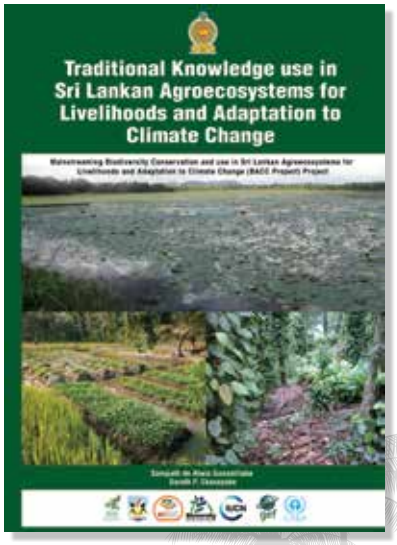
- Medium to long-term multi-sector, multi-stakeholder strategy and action plan for the management and conservation of the Kelani River Basin
- A monitoring and evaluation mechanism for the above plan
- A communication strategy and a school centred awareness and education programme
- Minor watershed water quality report cards for 71 minor watersheds in the Kelani River Basin
- Online water quality monitoring stations
- Training material on best practices for source water protection and minor-watershed planning for water safety and the report
- Public-Private-Community partnerships and practices to minimise pollution

Kelani river at Kithulgala
© Madhushan Indika De Silva

- Out of 1000, volunteers from high polluting areas, a training was given to 45 selected volunteers on best management practices

Mainstreaming Biodiversity Conservation and Use in Sri Lankan Agro-Ecosystems for Livelihoods and Adaptation to Climate Change

IUCN was engaged to produce and disseminate education and awareness material under the Mainstreaming Biodiversity Conservation and Use in Sri Lankan Agro-Ecosystems for Livelihoods and Adaptation to Climate Change (BACC) Project. The assignment was based on working towards the conservation and use of agro-biodiversity in Sri Lanka for meeting challenges of climate change and improving rural livelihoods. The objective was to compile and visually document traditional knowledge and practices relevant to the maintenance of agro-biodiversity, adaptations to climate change and dissemination of information through relevant channels. Lectures on traditional climate prediction methods, using plants and animals and traditional adaptations to climate change, were conducted by IUCN as part of the assignment.



Duration: 2016-2018

Location: Galgamuwa, Ududumbara, Bandaragama

Other Partner/s: PGRC (Department of Agriculture)

Donor/s: GEF/UNEP/MMD&E

FAST FACTS:

- Awareness programmes targeted to build school awareness and farmer and manager awareness were conducted
- An eco-biological survey covering physical, ecological, biological, and the human aspect of three agro-biodiversity systems was covered
- Sinhala and English booklets and brochures were designed and printed for dissemination work
- A bilingual poster was designed and submitted

Providing Safe Drinking Water for Chronic Kidney Disease Affected Communities in Rambewa DSD

Duration: 2017-2020

Location: Rambewa DS Division, Anuradhapura District

Other Partner/s: RDPRU, NWSDB & Rambewa DSD

Donor/s: HSBC

Chronic Kidney Disease (CKD) was first recognized in Sri Lanka in the 1990s and is prevalent in certain parts of the North Central Province of the country. Even though the exact cause of the disease is yet to be identified, it is widely believed that CKD is environmentally induced, strongly influenced by the quality and quantity of drinking water of the communities. During the Kapiriggama Cascade Tank System project, it was revealed that local communities of Rambewa DSD were either suffering from or at a high risk of developing the disease.

This project is designed to develop and implement an area specific action plan, including possible short-term and long-term interventions, in the selected CKD areas of Rambewa DSD. As such, the possibility of joining hands with the Renal Disease Prevention and Research Unit (RDPRU) of the Ministry of Health, National Water Supply and Drainage Board (NWSDB), Rambewa DSD, and other relevant stakeholders to enhance, reinforce and prioritize their CKD related work in selected areas in the Rambewa DSD area with financial resources from the HSBC will also be explored.

Expected Outcomes:

- At least 500 water sources will be tested for the suitability of drinking
- At least 1,500 people will be screened for CKD and if required directed for medical treatment
- Communities will be provided with safe drinking water by RO (Reverse Osmosis) plants and other means
- Raising awareness of the community on aspects related to managing the disease
- Sharing experience and knowledge

Women and Child Centered Climate Risk Assessment in Sri Lanka

Duration: Feb 2018-Feb 2019

Location: Puttalam, Ratnapura, Badulla, Colombo and Mullaitivu Districts

Donors/Partners: UNICEF

In Sri Lanka, the potential climate change related impacts and consequences are highlighted as rising temperatures, prolonged droughts, variable erratic rainfall, flash floods, landslides and rising sea levels. These influences may critically affect most economic sectors and uncertainties created by climate challenges will add negatively to the sustainable development and resilience of Sri Lanka. Addressing climate centered challenges require better understanding on how climate risks affect different segments of the population such as children and women, among others, as their needs and specific vulnerabilities to climate change will be different.

The objectives of the Women and Child Centereed Climate Risk Assessment (WCCCRA) are to identify the potential impacts of climate change on women and children, limiting the scope to health and nutrition, education, and protection as well as providing a better understanding of climate induced vulnerabilities related to disaster risks faced by women and children. Key disasters influenced by climate to be considered during the project are droughts, floods and landslides.

Expected Outcomes:

- Spatial analysis of climate vulnerabilities on women and children at district level based on secondary data to understand the vulnerabilities of women and children
- A field level (household and key informant) primary data collection and analysis related to women and children's vulnerability to climate induced disasters

Managing Together: Mainstreaming Community-Centered, Ecosystem-Based approaches into Forestry, Agriculture and Tourism Sectors in Sri Lanka

IUCN is designing the full project proposal for 'Managing Together' under the funds earmarked (USD 3.3 million) from the Global Environment Facility (GEF)'s Programme Cycle 6. The project aims to integrate biodiversity-sensitive best practices into the land-use sectors of forestry and agriculture as well as the tourism sector, being a key economic driver, while involving communities to participate and share socio-economic benefits. It is expected that all stakeholder groups (Government, Private Sector, NGO and Communities) will improve the understanding of the linkages between environment conservation, resilience and sustainability through the project and help conserve the natural resources that they derive benefits from.

These actions by the project, therefore, will add to the global conservation efforts as expected by the GEF. The project is expected to minimise risks and threats to the livelihoods of communities engaged in agriculture, fisheries and other uses of Natural Resources.

Furthermore, ecosystem-based conservation interventions will improve the livelihood resilience of communities, while the establishment of eco-tourism interventions in selected project sites are expected to enhance the local economies. GEF Agency for Project is UNDP and the MMD&E is the GEF Focal Agency in Sri Lanka for the project.

Duration: 2018 onward

Location:

Area 1: Maminiya Oya, Upper Kanadara Oya, Lower WeliOya and Upper WeliOya sub water sheds

Area 2: Madu-Wilpattu North Protected Area Complex

Area 3: Giant's tank and the downstream village tank system

Area 4: Marine influence zone of Malwathu Oya (including coral reefs of Vankalai, Pearl Banks of Mannar, Arippu, Silavatturai and Cheval Bank as well as the sea grass beds in shallow seas of the area)

Other Partner/s: MMD&E & UNDP

Donor/s: GEF/UNDP

FAST FACTS:

Project will be implemented in three areas of the Malwathu Oya rivers basin covering Anuradhapura and Mannar districts in an integrated manner moving away from traditional administrative boundaries to ecological boundaries taking those areas as planning and management units. Project will facilitate the enabling conditions at national, provincial, district and divisional level in 'managing together' project

A meeting underway at Arippuwa
© Sampath Goonatilake

IUCN Publications

IUCN SL has published a range of publications under thematic areas representing the various projects and activities that the organization has conducted throughout the years. These publications carry a great value for students, researchers, academia as well as the general public who have a thirst to learn about the environment, our ecosystem services and how we can safeguard our mother nature.

1988 Sri Lanka National Conservation Strategy

1991 Towards Legal Protection of Tropical Forests

1993 Biological Conservation in Sri Lanka: A National Status Report

1994 Partnership in Conservation: IUCN Sri Lanka's Programme, 1988-1994

1996 Participatory Strategic Planning for Strengthening EIA Capacity: Proceedings of the Workshop..., 15-18 September 1996

1997 A List of Threatened Animals of Sri Lanka and the Western Indian Ocean: Extracted from the 1996 IUCN Red List of Threatened Animals

1998 Education and Communication to Conserve Biodiversity in Sri Lanka

1999 Resource Material on Biodiversity for General Certificate of Education [Advanced Level]

2000

- The 1999 List of Threatened Fauna and Flora of Sri Lanka
  https://portals.iucn.org/library/node/7716
- 2000: Communities and Forest Management in South Asia
  https://portals.iucn.org/library/node/7770
- Report of the South and Southeast Asian Regional Session of the Global Biodiversity Forum 1999

2001

- An Overview of the Threatened Herpetofauna of South Asia
- Access to Genetic Resources and Traditional Knowledge: Lessons from South and Southeast Asia
- Using the IUCN Red List Criteria at the National Level: A Regional Consultative Workshop for South and Southeast Asia...: Proceedings and Recommendations
- Alien Invasive Species: Report of Workshop on Alien Invasive Species Global Biodiversity Forum South and Southeast Asia Session
  https://portals.iucn.org/library/node/7895
- Resource Kit for Biodiversity Planners
  https://portals.iucn.org/library/node/7900
- Agriculture and Biodiversity
  https://portals.iucn.org/library/node/7935
- Guide to Bundala: A Guide to the biodiversity of Bundala National Park, a Ramsar Wetland in Sri Lanka
  https://portals.iucn.org/library/node/8008

2002

- A Biodiversity Status Profile of Bundala National Park: a Ramsar National Wetland of Sri Lanka
  https://portals.iucn.org/library/node/8181
- Non-Timber Forest Products and Local Livelihoods in Ritigala, Sri Lanka
  https://portals.iucn.org/library/node/8194
- An Assessment of the Status of Biodiversity in the Maduganga Mangrove Estuary
  https://portals.iucn.org/library/node/8126
- An Assessment of the Status of Biodiversity in the Muthurajawela Wetland Sanctuary -
  https://portals.iucn.org/library/node/8196
- Biodiversity Planning in Asia: A Review Of National Biodiversity Strategies and Action Plans [NBSAPs]
  https://portals.iucn.org/library/node/8234

2003

- Orchids of Sri Lanka: A Conservationist's Companion. A Simplified Guide to Identification, Vol.1: The Protected Orchids and Selected Similar Species
- A Guide to the Biodiversity of Knuckles Forest Region
- Coral Reefs: A Resource Book for Secondary School Teachers
- A Comparison of the Conservation and Legal Status of the Fauna and Flora of Sri Lanka - Risk Assessment and Risk Management in Implementing the Cartagena Protocol: Proceedings of Asia Regional Workshop
  https://portals.iucn.org/library/node/8326
- Assessment of the Economic Value of Muthurajawela Wetland
  https://portals.iucn.org/library/node/8182

2004

- Enhancing Sustainable Livelihoods: A Case Study from Wanathavilluwa, Sri Lanka - ***https://portals.iucn.org/library/node/8587***
- A Biodiversity Status Profile Of Sub-Tidal and Inter-Tidal Habitats of the Rekawa, Ussangoda and Kalametiya Area ***https://portals.iucn.org/library/node/8473***
- Wetland Conservation in Sri Lanka: Proceedings of the National Symposium on Wetland Conservation and Management ***https://portals.iucn.org/library/node/8472***
- A Biodiversity Status Profile of Sub-Tidal And Intertidal Habits of the Rekawa,Ussangoda Kalametiya ***https://portals.iucn.org/library/sites/library/files/documents/2004-027.pdf***

2005

- Financial Incentives for Ecosystem Conservation: A Review of The Development of Markets for Environmental Services in Sri Lanka ***https://portals.iucn.org/library/node/8908***
- A Biodiversity Status Profile of Lunama, Kalametiya Wetland Sanctuary ***https://portals.iucn.org/library/node/8774***
- Tropical Rainforests: A Resource Book for Secondary School Teachers ***https://portals.iucn.org/library/node/8691***
- The Value of Traditional Water Schemes: Small Tanks in the Kala Oya Basin, Sri Lanka ***https://portals.iucn.org/library/node/8910***
- Multiple Benefits of Small Irrigation Tanks and Their Economic Value: A Case Study in the Kala Oya Basin, Sri Lanka ***https://portals.iucn.org/library/node/8706***
- Ley Man's Guide to the Convention on Migratory Species
- A Biodiversity Status Profile of Anawilundawa Sanctuary - A Ramsar Wetland in the Western Dry Zone of Sri Lanka
- Marine Turtle Conservation Strategy and Action Plan for Sri Lanka
- Values and rewards – 2005 (produced by)
- Case Studies in Wetland Valuation – Kala Oya (English & Sinhala)

2006

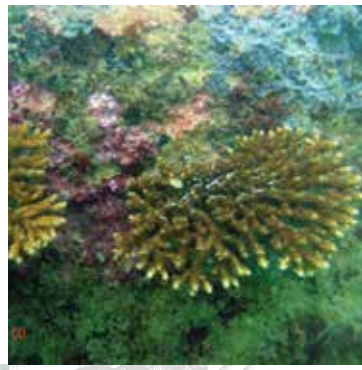
- Valuation, Rehabilitation and Conservation Of Mangroves in Tsunami Affected Areas of Hambantota, Sri Lanka: Economic Valuation of Tsunami Affected Mangroves ***https://portals.iucn.org/library/node/9092***
- National Wetland Directory of Sri Lanka
- Counting Coastal Ecosystems as an Economic Part Of Development Infrastructure ***https://portals.iucn.org/library/node/9094***
- Guide to Sinharaja: A Biodiversity Hotspot of the World
- Insitu Turtle Conservation Guide
- Strategy for Integrating Environmental Concerns into District Level Post-Tsunami Recovery: District of Matara
- Occasional Paper No 12: Strategy for Integrating Environmental Concerns into District Level Post Tsunami Recovery: District of Hambantota
- A Rapid Assessment of Post Tsunami Environmental Dynamics in Relation to Coastal Zone Rehabilitation and Development Activities in the Hambantota District of Southern Sri Lanka
- An Inventory of Medicinal Plant Populations in Five Sri Lankan Sustainable Management Areas

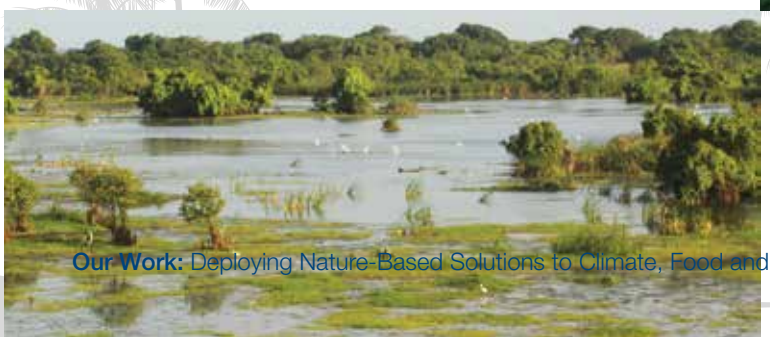
2007

- The 2007 Red List of Threatened Fauna and Flora of Sri Lanka ***https://portals.iucn.org/library/node/9141***
- Best Practice Guidelines for the Establishment of a Coastal Greenbelt ***https://portals.iucn.org/library/node/9099***
- Technical Guidelines for The Establishment of a Coastal Greenbelt ***https://portals.iucn.org/library/node/9098***

2008

- Best Practice Guidelines on Restoration of Homegardens in Tsunami Affected Areas
- Coral Reefs ***https://portals.iucn.org/library/node/9178***
- For Nature and People - A Helping Hand to Rise from the Debris ***https://portals.iucn.org/library/node/9227***
- Linking Coastal Ecosystems and Human Well-Being: Learning from Conceptual Frameworks and Empirical Results ***https://portals.iucn.org/library/node/9236***
- Sustainable Livelihoods Enhancement and Diversification (SLED): A Manual for Practitioners ***https://portals.iucn.org/library/node/9391***
- Systematic Approaches to Livelihoods Enhancement and Diversification: A Review of Global Experiences ***https://portals.iucn.org/library/node/9412***
- Socioeconomic Monitoring Guidelines for Coastal Managers in South Asia
- Integrating Environmental Safeguards into Disaster Management: A Field Manual. Volume 1: Reference Material ***https://portals.iucn.org/library/node/9326***
- Integrating Environmental Safeguards into Disaster Management: A Field Manual. Volume 2: The Disaster Management Cycle ***https://portals.iucn.org/library/node/9327***
- Sea grasses and sand dunes





2009

- Integrating Environmental Safeguards into Disaster Management: A Field Manual. Volume 3: Tools, Techniques and Relevant Resources
  https://portals.iucn.org/library/node/9472
- Mangroves: A resource book for secondary school teachers
- Wilpattu: Villus and Beyond
- Children's Perception Of The Environment: A Teacher's Toolkit for Investigating Coastal and Marine Ecosystems in Asia
  https://portals.iucn.org/library/node/9762
- Small Help, Large Gain: Community Action for Environmental Management
  https://portals.iucn.org/library/node/9419
- Improving Forest Governance in Knuckles: Dialogue and Development for Better Outcomes
  https://portals.iucn.org/library/node/9336
- MFF National Strategy and Action Plan – Executive Summery
- MFF National Strategy and Action Plan: An Ecosystem - Based Integrated Coastal Management in Sri Lanka

2010

- For The People, By The People: Results and Lessons from a Small Grants Programme
- The Union People & Nature
  https://portals.iucn.org/library/node/9581
- Mangroves: Soldiers of Our Coasts
  https://portals.iucn.org/library/node/9649
- Parisarika hithakaami karmanthayakata margopadesha
- Tourism and coastal development on the Southeast Coast of Sri Lanka: Report of the Workshop held on 23 Dec 2010 in Pottuvil

2011

- Natural Resource Governance Training Manual
  https://portals.iucn.org/library/node/10227
- Threatened... Sri Lanka's Biodiversity
- An Appraisal of Mangrove Management in Micro-Tidal Estuaries and Lagoons in Sri Lanka
  https://portals.iucn.org/library/node/10197
- Governance Performance in Integrated Coastal Management
- NRG Training Manual

2012

- The Gulf Of Mannar and its Surroundings: A Resource Book for Teachers in the Mannar District
  https://portals.iucn.org/library/node/10420
- An Appraisal of Challenges in the Sustainable Management of the Micro-Tidal Barrier-Built Estuaries and Lagoons in Sri Lanka
  https://portals.iucn.org/library/node/10198

2013

- Proceedings of the Workshop on Ecological Considerations in Coastal Development
  https://portals.iucn.org/library/node/46359
- Lagoons and Estuaries
  https://portals.iucn.org/library/node/44945
- Tidal Flats
  https://portals.iucn.org/library/node/44946
- Small Grants, Large Gains: Lessons from MFF Small Grant Facility Projects in Sri Lanka (2011-2013)
  https://portals.iucn.org/library/node/44943
- Insights Into the Biodiversity of the Sampur Area in Trincomalee
  https://portals.iucn.org/library/node/10419
- Sustainable Development of Delft Island: An Ecological, Socio-Economic and Archaeological Assessment
  https://portals.iucn.org/library/node/10418
- Field Guide to Reef Fishes of Sri Lanka
  https://portals.iucn.org/library/node/45024

2014

- Field Guide to Reef Fishes of Sri Lanka: Volume 2
  https://portals.iucn.org/library/node/45011
- A Descriptive Guide to Galapitamada
- Sustainability of Small Grants
  https://portals.iucn.org/library/node/45931

2016

- Medium to Long-Term Multi-Stakeholder Strategy and Action Plan For Management and Conservation of the Kelani River Basin, 2016-2020. Natural Resource Profile of the Kelani River Basin
  https://portals.iucn.org/library/node/45949
- Medium to Long-Term Multi-Stakeholder Strategy and Action Plan for Management and Conservation of the Kelani River Basin, 2016-2020 - Preliminary Perception Survey on Water Safety in the Kelani River Basin
  https://portals.iucn.org/library/node/45950
- Medium to Long-Term Multi-Stakeholder Strategy and Action Plan for Management and Conservation of the Kelani River Basin, 2016-2020. Map Compendium of The Kelani River Basin
  https://portals.iucn.org/library/node/45951
- Medium to Long-Term Multi-Stakeholder Strategy and Action Plan for Management and Conservation of the Kelani River Basin, 2016-2020. Final Report
  https://portals.iucn.org/library/node/45948

IUCN Grey Literature

1989 Accelerated Conservation Review of the Natural and Near Natural Forests in the Wet and Intermediate Zones in Sri Lanka: A Project

1991 Environmental Management in Forestry Development Project. Training Needs Assessment and Programmes: 1991 To 1995

1992 Development of a System of Protected Areas in the South Asian Seas Region. Country Report: Sri Lanka (unpublished)

1993

- Environmental Management in Forestry Developments Project: Conservation Evaluation of Some Natural Forests in Sri Lanka
- Manual on Environmental Assessment for Sustainable Forest Development
- Conservation Review of Some Natural Forests in Sri Lanka
- Management of Mangrove Ecosystems in Sri Lanka
- Management Plan for the Conservation of the Sinharaja forest (phase II) (unpublished report)

1994

- Traditional Uses of Forests: Report on the National Survey
- Socio Economic Survey of the Dellawa Forest: Preparation of Management Plans for Thirteen Wet Zone Conservation Forests, Sri Lanka
- Strategy for the Preparation of a Biodiversity Action Plan for Sri Lanka
- Strategy for the Preparation of a Biodiversity Action Plan for Sri Lanka

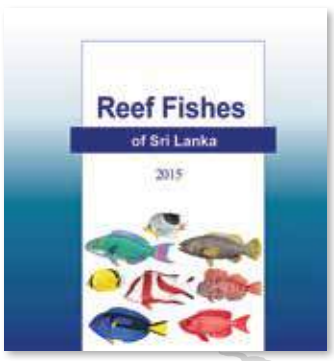
1997 Designing an Optimum Protected Areas System for Sri Anka's Natural Forest (unpublished)

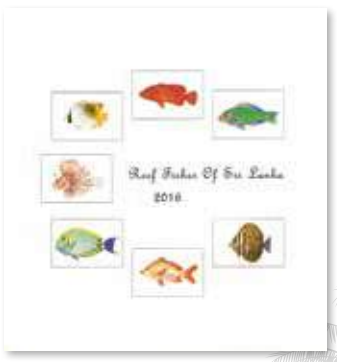
1998

- Visions of a Blue Environment: A Marine and Coastal Programme, IUCN Sri Lanka
- In Focus: IUCN Sri Lanka Programme - 1998 (Unpublished Report)

2009 From Village to Lagoon: the BMZ Project in Puttalam, Sri Lanka
https://portals.iucn.org/library/node/12774

Recent Calendars by IUCN





Thank You

"Here is your country. Cherish these natural wonders, cherish the natural resources, cherish the history and romance as a sacred heritage, for your children and your children's children. Do not let selfish men or greedy interests skin your country of its beauty, its riches or its romance."

- Theodore Roosevelt

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Kumudu Herath, Programme Officer, Water
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