South Asia's Biodiversity: Status, Trend and Challenges

SACEP

South Asia Co-operative Environment Programme
December 2016

South Asia’s Biodiversity: Status, Trend and Challenges

South Asia comprises the sub-Himalayan countries and also adjoining countries to the west and east. Topographically, it is dominated by the Indian Plate, which rises above sea level as Nepal and northern parts of India situated south of the Himalayas and the Hindu Kush. South Asia is bounded on the south by the Indian Ocean and on land (clockwise, from west) by West Asia, Central Asia, East Asia, and Southeast Asia. The current territories of Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, India, Pakistan, and Sri Lanka form the countries of South Asia.

Ecosystem Diversity

Occupying a major portion of the Indo-Malayan realm and a smaller portion of the Palearctic realm, this region represents five of the fourteen major ecological regions called biomes, which demonstrate the biodiversity and vegetation patterns of the region as determined by climate, water, geology, soil and diverse topography. South Asia's topography consists of an amazing variety of mountains, plateaus, dry regions, intervening structural basins, beaches, etc. It varies from world highest point, the Mount Everest to the world lowest, the sea beach.

The diversity in the latitude, altitude, climate and topography has resulted in a variety of vegetation in the region, ranging from the temperate and the tropical to the desert vegetation. About 18.6 percent of the total land area of the region is still under the forest cover and it account for 2.73 percent of the total forest area in the world. About 5 percent of the region's land area is being under protection.

Species Diversity

South Asia houses approximately 15.5 and 12 percent of the world's flora and fauna respectively. The faunal diversity of the region comprises of 933 species of mammals, 4,494 birds, 923 reptiles, 332 amphibians and 342 freshwater fishes. The floral diversity accounts for 39,875 species of flowering plants, 66 conifers and cycads, 764 ferns and 6,652 higher plants.

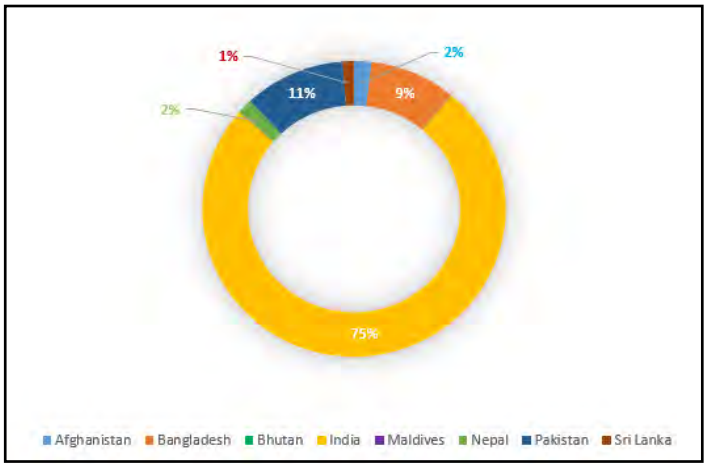
Major Challenges

- Human Population Growth
- Poverty
- Urban Expansion
- Climate Change

Human Population Growth

South Asia is home to well over one fifth of the world's population, making it both the most populous and the most densely populated geographical region in the world. South Asia covers about 5.1 million km² (1.9 million mi²), which is 11.51% of the Asian continent or 4.8% of the world's land surface area. The population of South Asia is about 1.749 billion, which is increasing at the annual rate of 1.8 percent. As the population is increasing exponentially, the demand for goods and services also increases, leading to unsustainable consumption of natural resources and resource inefficiency. Natural resources are under extreme pressure due to increasing human population.

Total Population of South Asian Countries (2015)



Source: http://data.worldbank.org/indicator/SP.POP.TOTL?locations=8S

Poverty

Agriculture is the mainstay of the economies of South Asian Countries. Throughout history, agriculture has played a central role in the economies of South Asian countries. Over two-third of the population still depends on it for a living, and it accounts for nearly one-third of the region's exports.

Majority of the population of South Asia directly depend on biodiversity for their livelihood. High population levels translate into increased resource demands on an already decreased biological diversity of the region. By 2050, the South Asia's population is likely to exceed 2.2 billion from the current level of 1.5 billion. With an estimated 600 million people subsisting on less than US$1.25 a day in South Asia, even small loss of current biological diversity can cause irreversible losses and tip a large number of people into destitution. Therefore the conservation of existing biological diversity of the region is utmost important to provide the livelihood for hundreds of millions people of the region. Successive governments of the region and number of other regional and national institutions have been working tirelessly in this regard.

Urban Expansion

According to the United Nations Department of Economics & Social Affairs, Population Division, the urban population of South-Asia during 2011 was 32.6%. It has been estimated that by the middle of the twenty-first century, at least 50 percent South Asians will be residing in urban areas, which means that the urban population of this region will over 1.2 billion (UN Department of Economics & Social Affairs, Population Division, 2011). This will be larger than the urban population of numerous countries in the world. Urbanization is not limited simply to large cities only. It is also taking place in small and medium cities.

Climate Change

As pointed out in the Fourth Assessment Report of the IPCC (Intergovernmental Panel on Climate Change) in 2007, South Asia is likely to be one of the regions that will be a major casualty of all the negative impacts of climate change. Climate change will have wide-ranging impact on environment as a whole and terrestrial ecosystems, biodiversity and coastal zones in particular among many other sectors. Its effects include increasing rates of extinction for many habitats and species. Increasing sea level means a greater risk of storm surge, inundation and wave damage to the coastline. Drylands and mountain regions are also likely to be vulnerable and ecosystem degradation is largest in these regions.

Threats to ecosystems in South Asia

Ecosystems	Threats	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
Coastal (mangroves, mudflats, estuaries)	Inundation, salination, storm, species loss		■		■	■			■
Coral reefs	Bleaching, acidification, loss of ecological and protective services, reduction in species diversity				■	■			■
Inland wetlands	Desiccation, drainage and diversion degradation and service loss	■			■			■	■
Forests	Loss of forest cover and species, altered composition and structure, enhanced evapotranspiration			■	■		■		■
Mountain (subtemperate, temperate)	Altitudinal shift in vegetation disrupting species types			■			■		
Mountain (subalpine, alpine)	Loss of vegetation cover	■		■	■		■	■	
Glaciers	Loss of coverage	■		■	■		■	■	
Desert	Expansion	■			■			■	
Rangeland & Grasslands	Regime shift, degradation due to overgrazing and increased incidence of fire	■			■			■	
Freshwater (rivers, lakes)	Desiccation, increased salinity at coast, degradation due to increased demand	■	■		■	■	■	■	
Species diversity (floral & faunal)	Loss of diversity and habitat, changes in species composition and food web		■		■		■		■

Key: ■ Locations particularly vulnerable to impacts of climate change.

Source: World Bank South Asia Region Report, 2009

South Asia Co-operative Environment Programme (SACEP)

South Asia Co-operative Environment Programme (SACEP) is an inter-governmental organization established in 1982 by the Governments of South Asia namely; Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. It is a multilateral organization registered with the UN Secretariat in accordance with Article 102 of the Charter of the United Nations. The prime objective for setting up SACEP was to promote and support protection, management and enhancement of the environment in the region. Since its establishment, conservation of biodiversity is one of the priority areas of work and implemented number of activities in capacity building and information sharing on biological diversity.

Some Highlights of SACEP's activities related to Biodiversity Conservation

Sri Lanka national workshop on promoting synergies among the biodiversity conventions and linking SDGs

South Asia Co-operative Environment Programme (SACEP) assisted government of Sri Lanka to organize a two day workshop to discuss the inclusion of national strategy on synergies and related action plans for implementation; and to bring together national stakeholders to discuss ways and means of considering SDGs as a part of the NBSAP process, finalization and implementation to contribute to national preparedness to deliver on SDG and the convention agenda. The workshop was organized jointly by the ministry of Mahaweli Development and Environment UNEP and SACEP and was held on 8 – 9 August 2016 at the Galadari Hotel, Colombo.

The objective of this project was to enhance the capacity of Sri Lanka to finalize and effectively implement the NBSAP considering issues of promoting synergies and cooperation among the biodiversity related conventions (CBD, CITES, CMS, Ramsar, WHC, ITPGRFA and the IPPC) and to promote linkages between SDGs and MEAs using NBSAPs as the entry point. SACEP implemented this as a pilot project and expect to duplicate in other member countries in future with the support of UNEP.

South Asia Capacity Building Workshop on Indicators as part of NBSAP updating, 16 -19 July 2012, Colombo, Sri Lanka

With the adoption of the Strategic Plan for Biodiversity 2011-2020 at CBD COP-10, Parties to the CBD have been requested to update their NBSAPs with the new Aichi Biodiversity Targets, including reporting on their adopted national targets at COP-11 in October 2012 and their adopted strategies at COP-12. To support this process a workshop for South Asian countries on indicator capacity building, as part of updated NBSAPs, was being organised.

The workshop was funded by UNEP and co-convened and co-hosted by UNEP and UNEP-WCMC with South Asia Co-operative Environment Programme (SACEP). The workshop was designed in co-ordination with the Secretariat of the CBD.

Sub-Regional Capacity-Building Workshop for South Asia on the Clearing-House Mechanism, 12 to 16 December 2011 in Dehradun, India

South Asia Co-operative Environment Programme (SACEP), in collaboration with the Secretariat of the Convention on Biological Diversity and the Wildlife Institute of India organized a Sub-regional capacity-building workshop for South Asia on the Clearing-House Mechanism.

The workshop was held with the generous support of the Governments of Japan and Belgium.

The objective of the workshop was to build capacity and provide guidance on how to establish and sustain effective national clearing-house mechanisms, in line with decision X/15 and in support of the National Biodiversity Strategies and Action Plans (NBSAPs). The workshop also expected to contribute to the establishment of a sub-regional clearing-house mechanism for SACEP member countries and to facilitate cooperation among them.

Sri Lanka National Symposium on Invasive Alien Species, 21-22 May 2009, Browns Beach Hotel, Negombo

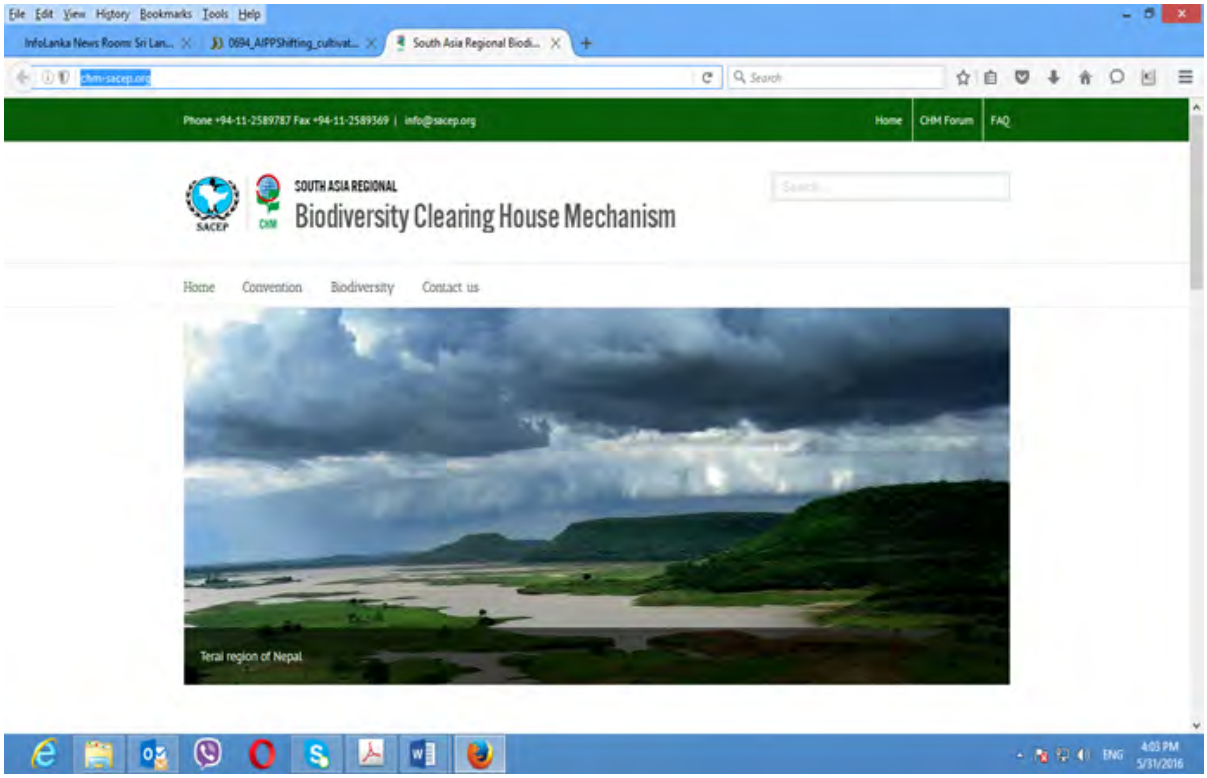
SACEP collaborated with Biodiversity Secretariat, Ministry of Environment and Natural Resources, Sri Lanka to organize a national symposium on Invasive Alien Species.

First Training Workshop for the Sri Lanka Biosafety Clearing House (BCH) Task Force , 28-30, April, 2008, Colombo, Sri Lanka

The first Training workshop for the Sri Lanka BCH Task Force was organized in Colombo (Ceylon Continental Hotel) during 28-31 April, 2008 so as to make them understand, inter alia, the Cartagena Protocol on Biosafety, the Biosafety Clearing House and information sharing among the relevant stakeholders. The Ministry of Environment and Natural Resources conducted the workshop in collaboration with South Asia Cooperative Environment Programme (SACEP), UNESCO and UNEP-GEF.

South Asia Biodiversity Clearing House Mechanism (CHM)

SACEP has developed the South Asia biodiversity clearing house mechanism with the financial assistance of BoBLME project of FAO. The objective of regional CHM is to provide wide range of information related to biodiversity in the South Asia region. The regional CHM can be access on **http://chm-sacep.org/**



Under this activity, SACEP also provides technical assistance for its member countries to develop their nation biodiversity CHMs. Currently, on request of Sri Lanka, SACEP is assisting to develop their national CHM.

National Biodiversity Clearing House Mechanism of Sri Lanka

As per the decision of the Governing Councils of SACEP, we have offered technical assistance for our member countries to develop their national CHMs. One particular instance is assisting government of Sri Lanka to develop their national CHM.

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