

## ENVIRONMENTAL IMPACT ASSESSMENT

## Importance of public participation: Japanese experience

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FOR an effective Environmental Impact Assessment (EIA) public participation or public consultation is very important. In our country most of the people are still not fully aware of the consequences of bad environment. So their voice remains mute when any project begins in their locality. They only think that it would help them in developing the area and to create employment opportunity. This kind of unawareness makes it easy for the proponent to start a project in the area without considering the environmental issues. On the other hand if in some cases Public Participation (PP) is involved it does not fully serve the purpose because proper participants (significantly affected) are not properly identified and included, only the positive impacts are discussed and briefing on the project and environmental impacts are hard to understand.

Very recently I had the opportunity of visiting a Japanese site called Fujimae Tidal Flat which is near the Nagoya city. Nagoya is the

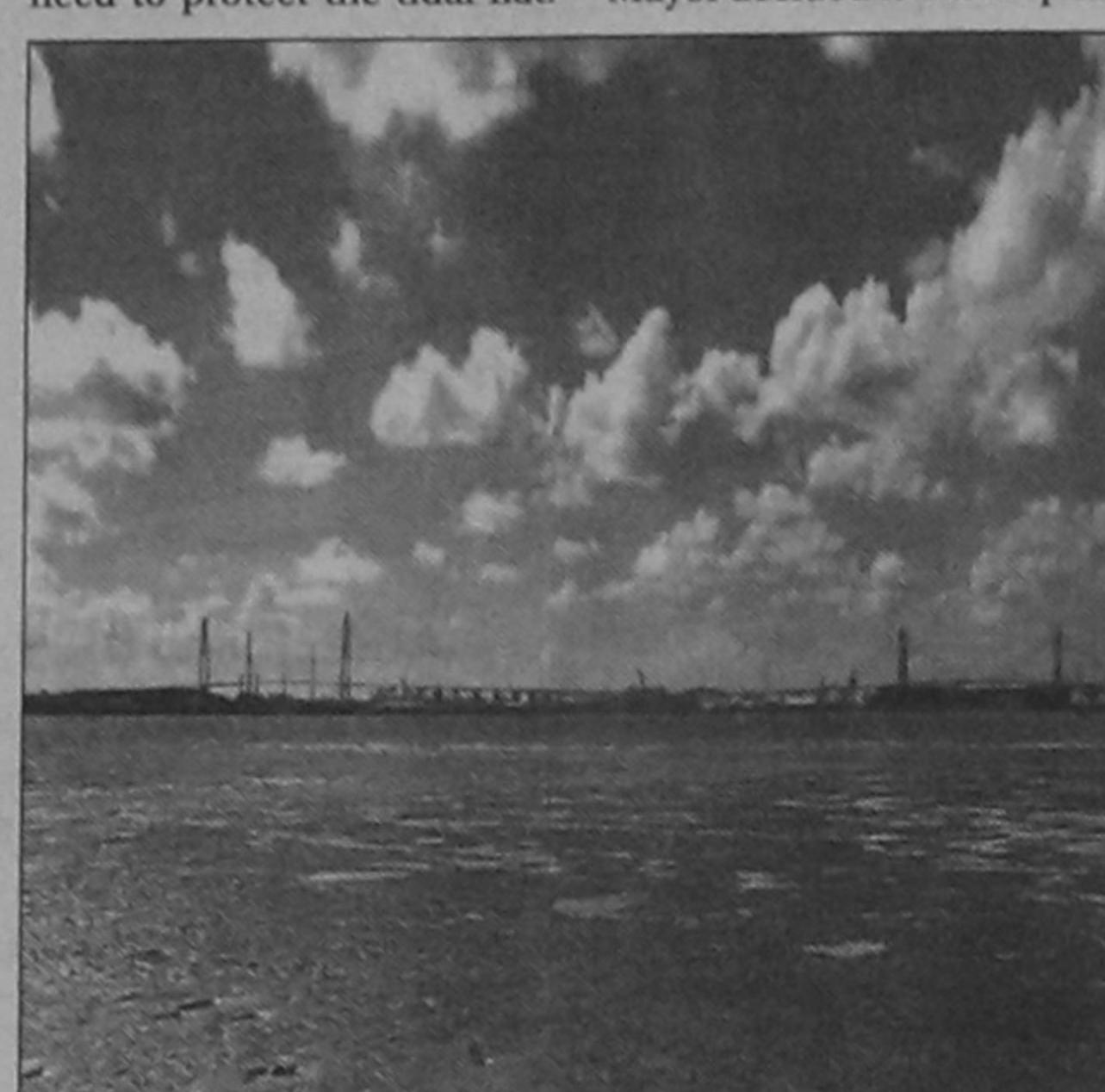
fourth largest city in Japan under Aichi Prefecture (state). Fujimae Tidal Flat is internationally known for its diverse ecology and biodiversity. This is a stopover site for migratory birds that fly through East Asian Flyway from Siberia to Australia-New Zealand.

There are about 500 important wetlands in Japan (2001). Types of wetlands are marshlands, rivers, lakes and ponds, coastlines, seaweed beds, tidal flats, mangroves, coral reefs, etc. But Fujimae tidal flat which is about 46 hectares in area is the Japan's largest shorebird site. In 2002 this was registered as a Ramsar wetland site of international importance that attracts numerous migratory birds. In the course of their long journey, the birds use this wetland as stopover site to rest and regain strength.

In 1981, due to increased volume of waste in Nagoya, the city government announced a plan to use Fujimae Tidal Flat as a waste disposal site (landfill site).

Immediately after the announcement of the plan, a citizen campaign was launched to save Fujimae Tidal Flat. This led to growing

public awareness about the need to protect the tidal flat. By January 1999, the city Mayor decided to cancel plans



Fujimae Tidal Flat

and instead issued the "Emergency Announcement for Waste Reduction" in February in an effort to reduce waste. In 2000, the city implemented a programme to sort waste in order to reduce the non-burnable waste designated for landfills. At the same time, rules for sorting waste and resources were adopted by Nagoya in their current form.

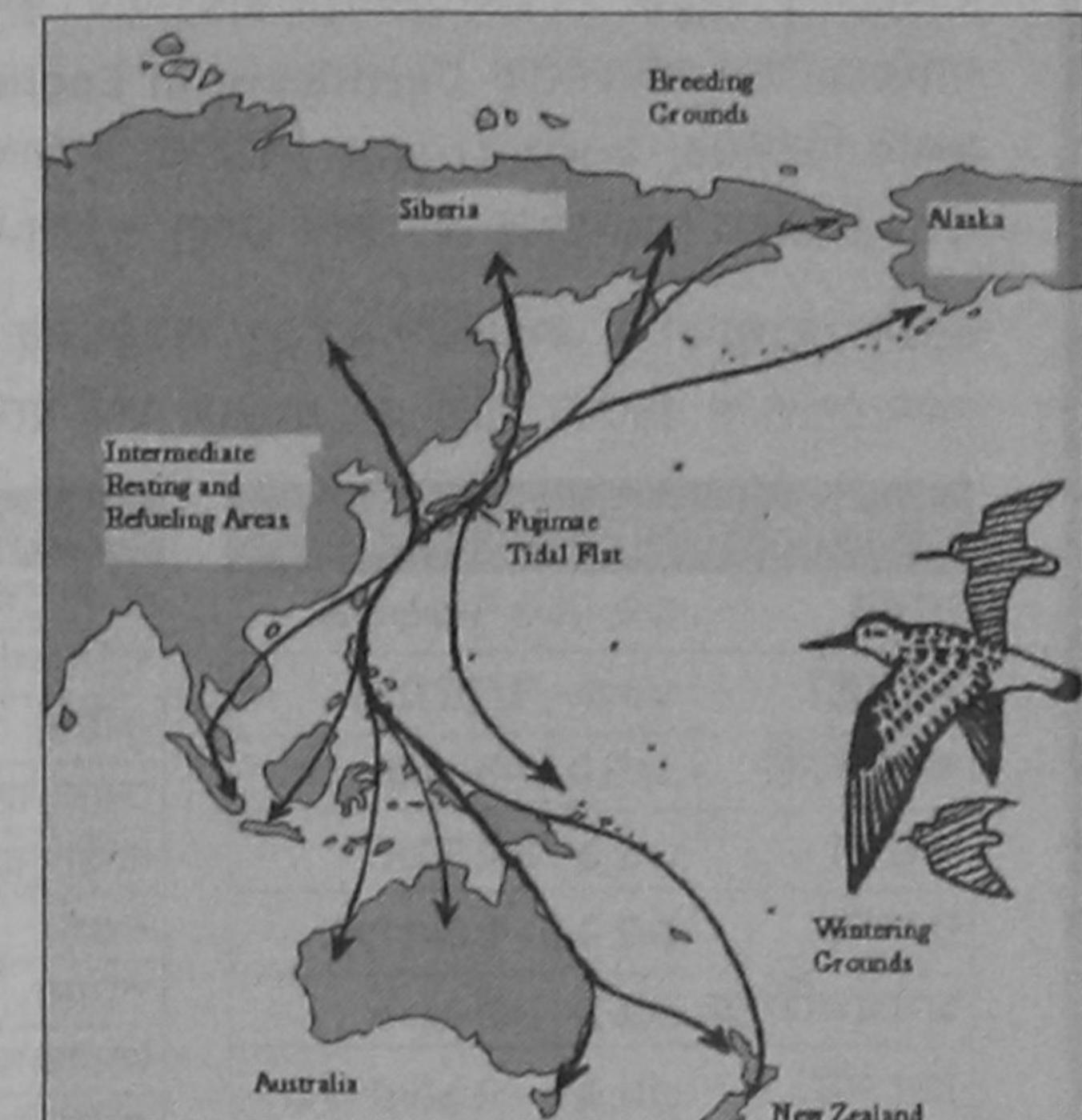
To establish the landfill site at Fujimae Tidal Flat the city government conducted the EIA but overlooked or did not take into proper consideration some of the important issues which eventually led to cancellation of the project. Rare case in Japan where EIA stops the government project; also the typical case where environmental issues shift from pollution to natural conservation.

But how the people succeeded? When the citizens thought they have the right and responsibility to conserve the

natural ecosystem and have the responsibility to maintain the site for migratory birds and some other rare aquatic species (especially mud shrimp) they themselves conducted the EIA and pointed out the issues rightly in their report. This is the first example of EIA in Japan conducted by citizens. When the EIA report was placed to the local Mayor he was so convinced that he changed his mind.

Finally Fujimae Tidal Flat was protected and conserved by the strong desire of the people of Nagoya, who did not want to bury the tidal flat under their own garbage, and took-out efforts in the city to reduce waste.

Consequently, in November 2002 the area was registered as a Ramsar site. Good news for the site is that, the 10th meeting of the Conference of the Contracting Parties (COP 10) to the Convention on Biological



Diversity (CBD) is going to be held in Nagoya city in October 2010.

Fujimae Tidal Flat is a unique example which can serve as a global model for the successful protection of the environment against indiscriminate development. On the other hand this is a very

good lesson for us how to involve the citizens in the process of environmental management to conserve the sustainable biodiversity for the people as well as for the other natural creatures.

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## Let's reduce the burden of waste

MAHMUD RIAD

TODAY you will read this newspaper and maybe tomorrow you will throw it out. The nice shirt you purchased last year may have the same fate, along with the book you have just finished, and which nobody else in your family wants to read! Besides, your wife has promised to make your favourite mutton curry for dinner where all the bones and leftovers other will be generated waste.

Usually today's precious belongings become tomorrow's waste. What we proudly owned today we tend to dispose tomorrow. They are no more of interest to us. Is that the correct attitude?

Many of the things we throw out are resources that may be re-used or recycled into other products such as glass and paper. And then there are the kitchen wastes that if not properly managed and disposed may pollute

our environment. All of us venture outside our clean homes to go to our schools, workplaces and markets which we also need to keep clean as much as our homes to protect our health.

So we have to keep our interest on our waste.

Then where does the waste go?

A primary waste collector with a rickshaw van will pick up our waste from our houses. He will go through the waste and remove some recyclable materials. He then takes the waste to a collection point.

The Dhaka City Corporation manages the collection point by raising a dust bin or putting a large container there. DCC then sends a collection truck to collect the waste from the collection point daily. This is called secondary collection and transportation.

DCC transports the waste to two disposal sites -- Matuail landfill in the eastern perimeter of the city and Amin Bazar

If we all agree that tomorrow's waste is due to our consumption practices of today, then we must acknowledge our combined responsibilities to manage the waste properly so that we do not create an unsanitary city, and also to conserve our God-given resources.

landfill in the western perimeter.

The Matuail landfill has been developed as a sanitary landfill as claimed by DCC and this means that the waste is disposed of there in an engineered manner so as not to pollute the surrounding area. DCC is also in the process to develop Amin Bazar landfill in a similar way. Sooner is better.

It is estimated that around 1,700 to 2,000 tons of solid waste is disposed of this way every day. We wish this does not pollute our environment anymore.

The cost of our waste management is high. DCC employs a large staff of conservancy inspectors, cleaners, drivers and mechanics for the service. Over 300 waste collect-

tion trucks are operated and there are around 10 heavy equipment at the landfills. Considerable amount of fuel is burnt to operate the trucks and equipment. The total cost for operation and maintenance are estimated to be 80 million Taka monthly. And what are we paying?

We pay the primary collector Tk. 20 to 50 per month to collect the waste from our homes. And a portion of our property tax is earmarked as conservancy tax to be used for the waste management. It is estimated that 25 million Taka is collected as conservancy tax. So the cost borne by DCC for the waste management is more than three times the conservancy tax amount.

So we need to reduce the

waste that we are producing and at the same time DCC has to use their personnel and equipment more efficiently in order to keep the solid waste management costs from rising.

Japan International Cooperation Agency (JICA) has been supporting the efforts of DCC in solid waste management (SWM) for the last nine years. Together DCC and JICA have prepared a master plan for SWM with the target year 2015. This plan covers management, technical, financial and community participation aspects. Under this plan DCC will provide more sustainable and efficient technical systems for secondary collection and disposal.

DCC has started to embark on this by developing Matuail landfill and will soon be modernising its aged waste collection trucks fleet.

But DCC's efforts alone are not enough. And that is why community participation in SWM has become increasingly important. DCC and JICA have made much effort to promote community participation.

Community units have been set up in six wards of the city during the last year. They discuss with DCC and primary collection workers in their areas on how to improve the primary waste collection, increase the public awareness against littering and eradicate the open dumping points. And these units take part in drawing up plans for locating the DCC collection points and considering the suitable collection times.

They must also put their waste in specified bags and never discard it unpacked. The Japanese municipal authorities provide secondary collection two or three days a week only, and not daily as in the case of many areas in Dhaka City.

It is often also said that it will take the passing of one generation before we can change the people's habits. So we need to start with our children. And I am sure that our children will play an important role as they are often found admonishing their parents on the latter's unsanitary habit, if witnessed.

Let's all take the responsibility to clean Dhaka as well as other cities.

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## Conserving biological diversity in South Asia

MAHFUJUR RAHMAN

SOUTH Asia comprises the sub-continent (India, Pakistan, Bangladesh, Nepal and Bhutan) and two island countries Sri Lanka and Maldives. Governments of these seven countries collectively formed SAARC (South Asian Association for Regional Cooperation) to assist regional economic development. However, these countries contain huge amount of biological diversity of this planet and to protect this precious resource they must do collectively.

The biological diversity includes the diversity within the plants, animals and microbes of this region. Due to physiographic and climatic variability various types of habitats are present to support varieties of plants and animals. To conserve this huge biological diversity various international organizations are working with the local government conservation agencies.

## Major issues

Restoration of Ganges: Ganges flows over India and Bangladesh contributing to water supply for a large area of these two countries. But discharging waste and water flow control by Farakka barrage have almost devastated the habitat of the aquatic animals like gangetic dolphin and Gharial. Once present in tens of thousands, the Ganges river dolphins have dwindled abysmally to less than 2000 during the last century; some of the pronounced reasons for reduction are habitat fragmentation by dams and barrages, indiscriminate fishing and pollution of the river (WWF India, 2008).

Protection of mangrove forest: Bangladesh, India, Pakistan and Sri Lanka have good amount of mangrove forest in global and regional context. India and Bangladesh share common patch of mangrove forest extending from southern West Bengal to

southeastern part of Bangladesh. Mangroves cover a total of 257,500 hectares in Pakistan. These forests contain wide diverse varieties of plants and animals including viviparous plant species.

Country wise biodiversity and conservation efforts

India: India is the largest country of south Asia and possesses most diverse types of habitats for terrestrial, fresh water and marine animals. India stretches from the Himalayan Range to the north, all the way down to the tip of its southern peninsula, which juts into the Indian Ocean. Between these two climatic extremes lies the fertile Indo-Gangetic Plain and the Thar Desert to the west (bordering southeastern Pakistan). India's varied habitats coasts, rainforests, swamps, mountains among other are home to 7.6% of all mammalian, 12.6% of avian, 6.2% of reptilian, and 6.0% of flowering plant species globally.

Among various wildlife found in India, WWF India is working to conserve Gharial (Gavialis gangeticus), Ganges River Dolphin (Platirhynchus gangeticus), Great Asian One-Horned Rhino (Rhinoceros unicornis), Smooth-coated Otter (Lutra perspicillata), Red Panda (Ailurus fulgens), Snow Leopard and Whale Shark (Rhincodon typus).

The forest cover of India is assessed as 67.83 million hectares which constitute 20.64 per cent of the country's geographical area, ranging from the Himalayan forests to the Dry Zone forests. Being a mega-biodiversity country the nation possesses high level of endemism.

The forests play vital role in harboring more than 45,000 floral and 81,000 faunal species of which 5150 floral and 1837 faunal species are endemic. The nation has established 597 Protected Areas comprising 95 National Parks, 500 Wildlife Sanctuaries and 2 conservation reserves covering 1.56 million ha area or 4.75

per cent geographical area of the country.

Bhutan: With over 70% forest still under forest cover, and over 35% designated as protected areas, it might appear that forest and freshwater ecosystems are sufficiently protected (WWF). The tiger, one horned rhino, golden langur, clouded leopard, hispid hare and the sloth bear, grey langur, common leopard, goral and serow, Himalayan black bear, red panda, squirrel, sambar, wild pig and barking deer are example of numerous wild animals found in varied habitats of Nepal. Flora and birds abound with more than 770 species of bird and 5,400 species of plants known to occur throughout the Kingdom.

Although Bhutan's natural heritage is still largely intact, pressures on the environment are already evident and likely to be fuelled by a complex array of forces.

Bangladesh: In Bangladesh most prominent organization working for conservation of biological diversity is IUCN

later conservation in Nepal was hindered by lack of participation by local people and necessary research works. However, now King Mahendra Trust for Nature Conservation (in brief KMTNC, established in 1982) is working to complement the government's efforts in nature conservation and sustainable development. For the past one and a half decade, KMTNC has successfully undertaken over 80 small and large projects on nature conservation, bio-diversity protection, natural resource management and sustainable rural development.

The Trust's activities in the lowland are based in and around the Royal Chitwan National Park (RCNP) and the Royal Bardia National Park (RBNP) located in the central and western regions of Nepal, respectively. Similarly, the Annapurna Conservation Area Project (ACAP) and the Manaslu Conservation Area Project (MCAP) are two major projects in the mountainous region.

Fourteen plant species new to Nepal identified: A team of ethnobotanists from Kathmandu have recorded 14 new plant species for Nepal recently. The species were catalogued following a plant collection and inventory expedition in Ilam and Panchthar districts of eastern Nepal, in the foothills of the Kangchenjunga mountains.

WWF: Recognising Nepal's susceptibility to ecological risks as early as the 1960s, by mid 1970s, the Government took the first initiative to establish national parks and reserves in areas of biological and natural significance. But

local bodies and capacity building at all levels, ensure sustainability at the field and policy level.

In 1985 IUCN Country Office was established in Karachi to initiate the implementation of the NCS. Since then IUCN Pakistan has grown into the largest country programme with five programme offices and a number of offices in the field. IUCN works closely with the government at the national and provincial levels as well as with civil society at large.

Sri Lanka: Modern conservation in Sri Lanka started with establishment of IUCN's country office in August 1988 in Colombo. To date, IUCN Sri Lanka has been engaged in the conservation of small cetaceans and marine turtles. At the invitation of the Department of Wildlife Conservation, IUCN Sri Lanka prepared a National Action Plan for Marine Turtle Conservation. IUCN Sri Lanka is also involved in biodiversity assessments in marine and coastal ecosystems.

In the marine and coastal realm, IUCN focuses on marine and coastal habitats, threatened marine species, Integrated Coastal Zone Management, and Marine Protected Areas.

Pakistan: In Pakistan Both IUCN and WWF are working for conservation of biological diversity and integrity of nature. In most of the projects, WWF Pakistan extends support to local community initiatives. Thus basic principles, advocacy, lobbying with excellence, partnership with



Royal Bengal tiger



Great Asian one-horned rhino

Conclusion

South Asia contains almost all types of biomes present on the earth ranging from desert to snow covered mountains. The plants and animals of these varied habitats are facing problems due to indiscriminate development spree of human societies throughout the region. Among the countries of south Asia Bhutan and Nepal contain unusual concentration of biological diversity with small land area. India has the largest land area to support various types of habitats for different plants and animals. Pakistan has mountain, mangrove and plain land habitats. Maldives and Sri Lanka have mostly marine habitats. Bangladesh has its mangrove and wetland habitats. Conservation of biological resources of these landforms and habitats needs collective effort of SAARC member countries which can foster better outcome than the individual efforts.

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