## ENVIRONMENT

### International Year of Ecotourism

.N. officials speaking at a special event January 28 marking the launch of the International Year of Ecotourism highlighted the development potential of ecotourism as well as the disturbing environmental trends of increasing tourism.

Several government ministers, heads of intergovernmental organisations and representatives of leading industry associations participated in the event held at U.N. head-quarters in New York. The International Year of Ecotourism,

being coordinated by the United Nations Environment Programme (UNEP) and the World Tourism Organisation (WTO), will provide an opportunity to review the ecotourism industry's effect on biodiversity, its potential contribution to sustainable development, and its social, economic and environmental impacts.

"If handled properly, ecotourism can be a valuable tool for financing the protection of ecologically sensitive areas and the socio-economic development of populations living in or close to them," said UNEP Executive Director Klaus

High level delegates and experts from around the world are expected to attend the World Ecotourism Summit to be held in May in Quebec City, Canada.

Ecotourism is a form of tourism in which visitor experiences are nature-based. It is also considered a land use method that promotes sustainable development in that it seeks habitat protection rather than exploitation of natural resources.

# Eco-tourism : Opportunity for environment conservation and regional cooperation

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LOBAL tourism galore is likely to witness a shift from the traditional inquisitiveness of the tourists in watching the Taj Mahal in India, Pyramids in Egypt, Great Wall in China, Leaning Tower in Italy, Eiffel Tower in France Angkor Wat in Cambodia and several other monuments of great historic significance. While certainly tourists will keep on flocking around these breath-taking spots, declaration of the current year by WTO as the Eco-Tourism Year shall instill a new wave of interest among them to seek new destinations.

After a short lull following the September 11 episode in the USA global tourist movement has been on the ascending track again. The tourist flow maintained its healthy magnitude in the Asian region though the Afghanistan war and tension between India and Pakistan had enough potentials to scrap it down significantly. In the South Asian region particularly, tourism industry is ever vibrant and growing steadily. Besides the traditional destinations like Nepal, Thailand, China, India, Singapore and Indonesia, Malaysia and the Philippines have registered an increase in tourist inflow recently.

With the WTO declaration of 2002 as the Eco-Tourism Year, it is expected that tourist flow into the south and south east Asian region shall gear up significantly. Besides having vast unexplored natural settings all across this region. massive infrastructure development in many countries is bound to prop up the inflow of tourists mainly from the North America and Europe. They would like to be ensured of such basic facilities like smooth accessibility, sufficient and standard accommodation and above all, peaceful socio-political atmo-

The entire expanse of south and south east Asian region is full of geographic diversities. Edged by the Arabian Sea, Indian Ocean and the Pacific Ocean on one side and covered by long stretches of mountainous ranges and thick forests on the other, this region holds scintillating natural spectacles. It also has pristine lakes, quiet valleys and wide stretches of reserves with rare species.

It is absolutely undeniable that tourism is the single largest productive sector in today's world. It is a sector that is closely related to aviation, hotel industry, domestic transport facilities, food industry, and even to small manufacturing like production of handicrafts. As a

Eco-tourism could be boon for the region to alleviate poverty to a greater scale while at the same time, allow it to uncover its real resources—the geographic splendours of rivers, lakes, hills, mountains, forests, animal reserves and sea beaches. More importantly, development of eco-tourism shall strike a balance between conservation of environment and economic and social development



The Sundarbans: Abode of the Royal Bengal Tiger

whole, it employs, directly or indirectly, about 11 per cent of the world's total workforce. Furthermore, besides being a key stimulator of national economies in many countries, tourism has been the major foreign exchange earner for many.

Eco-tourism may be a new paradigm but it has enormous potential to invigorate new dynamism in the sector. It merits special significance in the backdrop of growing concern about environment which digs deep into several human activities that have harmed the ecological balance of our planet. Through eco-tourism, no doubt, a substantial contribution can be made in not only supplementing the efforts to safeguard ecological treasures but intensify massive small scale infrastructure and industrial development leading to the creation of widespread employment opportunities. This will also invigorate sustainable develop-

For Bangladesh, it should be a matter of great opportunity to develop its tourism sector which

unfortunately has been at low ebb and could not be any significant contributory factor for our national development so far.

Bangladesh is blessed with a topographical structure which has several characteristics to be tapped for substantial economic benefits. It has the sea front, largest mangrove forest, hills and lakes, etc. Many other countries do have similar natural treasures and many have brought those to their socio economic benefits. In our case, unfortunately, we could not exploit these for our good.

While the theme of eco-tourism is bound to nourish competitiveness among many countries, Bangladesh should seize the opportunity to make a massive projection of its eco-treasures, particularly the Sundarbans and the quiet valleys in the Chittagong Hill Tracts. At the same time, there must be pragmatic efforts to complete certain basic infrastructures at the shortest possible time to enable the tourists be assured of such primary needs. For example, accessibility to the

Sundarbans still depends on riverine vessels. While many tourists would like to have a riverine trip, appropriate vessels have not been in sight. Only a couple of small scale private enterprises are currently engaged in such endeavours. This could be stimulated by encouraging more private enterprises to come to this sector whence competitiveness shall bring in great improvement in the standard of services which have been witnessed in the case of long haul road transports in the country over the last few years.

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Along with this, a small air strip should be built in the periphery of the Sundarbans, suitably at Satkhira or Mongla, to facilitate air link with Dhaka and Chittagong. Moreover, this air strip could be used for encouraging aerial tours over the Sundarbans, much like the one done in Nepal to have such trips

over the Himalayas.
In the case of the Chittagong Hill
Tracts, the opportunities are limitless. It only needs a pragmatic
approach to develop certain infrastructure facilities. In today's world

of market economy, a wise step could be to allow foreign investment in developing such infrastructure. Malaysia has implemented a mammoth development in its tourism industry, particularly in developing her ample eco-tourism spots which were in decaying or uncared stages only few years back. Today, the country is not only having a huge earning from these but that the projects have enabled the preservation of many endangered forest and woodlands.

woodlands.

While most of the countries in the region have many similarities in geographic structures, there are many contrasts too. These could be exploited through a web of cooperation for regional tourism and its development. While there are placid hills and mountains in Bhutan, Nepal and India, there are the forests and long stretch of seabeaches in Bangladesh. For any nature-wandering tourist from Europe or North America or even Japan and Australia, a visit to all these through a single package deal could bring in boon.

With their foreign exchange earnings normally pegged to foreign aid and small scale exportables, countries in the region could do better under an umbrella of cooperation for tourism development. While they could develop the needed infrastructure either themselves or through joint ventures or through international assistance, on the part of making promotions they could achieve better results in making concerted efforts.

Despite having enough potentials, south Asian region has failed to make any limelight in global tourism. Most of the countries are reeling with acute poverty precipitated with unabated unemployment, low rate of literacy, poor infrastructure development and so forth. However, the region is rich in nature treasures and interestingly, these are widely diversified. In the interest of ecotourism, these hold the key for excellent rewards provided proper harnessing is done. It could be boon for the region to alleviate poverty to a greater scale while at the same time, allow it to uncover its real resources the geographic splendours of rivers, lakes, hills, mountains, forests, animal reserves and sea beaches. More importantly development of eco-tourism shall strike a balance between conservation of environment and economic

#### Tribute to an environmentalist

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HE death of Anil Agarwal at the age of 54 on January 2, 2002 is a loss to the environmental movement in India. He was an activist whose passion, vision and prodigious energy brought environmental concerns from the margins of the public sphere into the mainstream. By asserting that ecological sustainability and social iustice are two sides of the same coin, Agarwal helped establish a distinctive identity and direction for environmentalism in the country. Drawing on the experience and insights of people involved in environmental struggles across the land, Agarwal made a powerful case linking ecological degradation to economic and political inequality. This framework for analysis and action went on to become the hallmark of Indian environmentalism, and was globally acknowledged as a powerful and original critique of capitalist development from the

The staggering breadth and depth of Agarwal's concerns were demonstrated first in The State of India's Environment: A Citizens' Report. Published in 1982 by the Centre for Science and Environment (CSE), the non-governmental organisation (NGO) that Agarwal founded and directed along with Sunita Narain, this monumental document presented, for the first time, an overview of India's ecological problems. After a decade of rising environmental awareness in the West, the Indian media had begun to cover environmental issues sporadically. However, the dominant perspective was elitist. focussing on protecting wildlife from the exploding population of the poor and their livestock.

In this context, Agarwal's report was an eye-opener. No mere compendium of environmental ills, its detailed examination of ecological degradation, especially the burden borne by women who have to deal with the decline of the biomassbased rural economy, offered a powerful perspective for understanding the relationship between environment and development. This lucid and readable account was a cooperative effort that involved voluntary organisations and individuals across the country. Widely read, it was translated into Hindi, Kannada and other languages. The Report gave voice to a nascent 'red and green' environmental consciousness within the country, creating links between ecology and social justice.

Anil Agarwal's perspective was further clarified in The Second Citizens' Report of 1985, which concluded with his essay on 'The Politics of the Environment', essential reading for anyone interested in the environment. After documenting the state of India's forests, rivers, cities and industries, Agarwal argued here for holistic management of land and water resources in the country. The report analysed the potential roles of the government and voluntary agencies and of legislation in bringing about

attempted to cover all aspects of environmental change in India, the three subsequent reports acknowledged the impossibility of such an exercise in spite of the huge expansion of environmental journalism which included the CSE's own magazine Down to Earth, Thus, the Third Report focussed on floods and the Fourth Report on traditional water harvesting methods. However, the Fifth Report was a disappointing miscellany (review carried in Frontline, September 24, 1999). While the first two reports drew on a network of activists from all over the country, the last three were primarily based on the CSE's in-house research and commissioned studies. This shift was part of the growing institutionalisation of the CSE; its establishment as a successful NGO was accompanied by a gradual fading of its links with mass movements

Although Agarwal did not champion any social movement after



Activist-environmentalist Anil Agarwal, 1947-2002

Chipko, and his support for that other great environmental cause the Narmada anti-dam struggle was inexplicably muted, he did consistently make the case for local control over natural resources. His vision, as articulated in Towards Green Villages, emphasised decentralised control by village communities as a strategy for environmentally sound and participatory rural development. The focus on the village as the locus of action was exemplified in the CSE's celebration of small initiatives such as Sukhomajri in Haryana, Ralegan Siddhi in Maharashtra and the Tarun Bharat Sangh in Rajasthan. These experiments in water harvesting and land management were brought into prominence by the CSE's efforts in documentation and dissemination. If, as Ramachandra Guha argues, every thinking Indian grapples with the ghosts of Marx and Gandhi, Agarwal should definitely be placed close to the Gandhian end of the spectrum.

Like many Indian environmentalists, he did not trust political parties or trade unions as agents of collective struggle, but preferred to pin his hopes on NGOs which he believed could pressure the state into action. The shift in Agarwal's political activism towards closer collaboration with the state probably began during Rajiv Gandhi's prime ministership, during which period he often briefed the Cabinet and senior bureaucrats on environ-

probably then that he was persuaded that winning over key politicians would be an effective strategy towards influencing environmental decision-making. In the last decade, the CSE has hyped Digvijay Singh, the Chief Minister of Madhya Pradesh, highlighting the State-wide Rajiv Gandhi Watershed Mission that claims to create decentralised institutions for sustainable land and water management. Agarwal's uncritical endorsement of Digvijay Singh's environmental credentials appalled many mass organisations in Madhya Pradesh that regularly face the brunt of state repression in their struggle to claim the rights of poor adivasis to the resources of forests, land and water. Continuing adulation for Digvijay Singh's government, combined with a studied silence about its policies which are seen to be increasingly extractive, could be said to have muddied Agarwal's record as an outspoken, independent voice for environmental justice.

AGARWAL'S skill in mounting sustained and hard-hitting environmental campaigns is best exemplified in his work against vehicular pollution. The CSE's 1996 study report titled Slow Murder showed Agarwal at his best, brilliantly dissecting the problem, assigning responsibility and not hesitating to name names. The CSE pointed out how petroleum refineries, automobile manufacturers and regulatory authorities, as well as skewed transport priorities, have variously contributed to the poisoning of air in metropolitan India. Its analysis was followed by a concerted media campaign which precipitated a series of events that finally led to the Supreme Court's orders regarding the phasing out and conversion of polluting vehicles in Delhi. The masterly use of evidence in the study embarrassed several corporate firms into cleaning up their act at least on the surface. While air quality has improved in the national capital thanks in part to Agarwal's initiative, the controversy over whether compressed natural gas (CNG) is the best alternative fuel rages on after the demise of its leading votarv Agarwal will also be remembered for his compelling intervention in the international debate on climate change. He called the negotiation a case of 'environmental colonialism' that refused to recognise the huge disparity between the North and the South in the consumption of resources, and which nations bore primary responsibility for global warming. The politics of production and consumption, both global and local, was a key theme in Agarwal's work. By identifying unexplored environmental problems and addressing them cogently, he set the agenda for all environmental NGOs involved in research and awareness-building. His opus, and informed an entire generation of environmentalists

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### Forest: The hidden medicine chest must be saved

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NDISCRIMINATE logging and killing of wild life in our little known forests especially the mangrove forest of the Sunderbans, Rangamati, Sylhet etc. signal a catastrophic extinction of these vast untapped wealth and resources. Given the voracious appetite for land and wild life such as the Royal Bengal Tiger and spotted deers in the Sunderbans, elephants in the forest of Chittagong and precious wood, these forests of mystical beauty will one day remain in the history books only. As the forest area shrinks, the majestic Royal Bengal Tigers disappear from our sight. The plight of tigers only symbolises the tragic fate of the whole country's wild life to-day. To be sure, some 40 years ago, forests draped the country like an elegant green gown covering at least one fourth of the land area -- nourishing and protecting wildlife. To-day this very gown is in tatters, slashed by human interests, covering only about seven per cent of the country.

Human beings are the only ones who possess the power to snuff life out of all other species in the world. But that power can very often turn malevolent and that is where we have to be cautious. Unfortunately for us Bangladeshis, we've been more than malevolent -- we've been natural born killers of wild life and plunderers of forest resources. We've failed to understand that the earth is one intricate ecosystem of links by which all life is shaped. Lose one specie and a thousand others will be on the brink, eventually threatening our survival. Not only in our own region, far in the African plain elephants, giraffes and lions and elsewhere some rare species like the Javan rhinoceros, Philippine eagle lechwe, the Kudu and lilac breasted roller seem to be disappearing fast. Scientists are worried that in a few generations' time they could be lost even to the children of Africa and Asia.

One thing is very certain. As we enter the 21st century, a new global economy draws nations ever closer. But our growing interdependence hinges on much more than technology and trade. For we are linked intrinsically by the physical and biological webs that sustain life on planet — and increasingly, by the threat of their unraveling. Indeed, unless we reach across borders and face this threat in an united effort, the next century may dawn on an Earth in ecological crisis, with half of the species gone and our children and grand children enduring deadly floods, drought and disease brought on by global warming more frequently. Protecting the environment to-day is a sacred human obligation, as important to us as safe neighbourhoods and good schools. What is needed now for the government as well as individual is to look beyond our own cities and countryside, and provide the leadership needed to put all nations on a cleaner, and more sustainable path to prosperity.

But there are obstacles on the way. Desperate shortages of human and financial capital impoverish both the people and their land in Africa and Asia. Bangladesh situation is much more critical. The country has now a population figure of 130 million with a per capita income of 270 U.S dollars. Most obviously with limited factors of production and negligible technological progress, the population growth is unsustainable. Policies to improve the state of the environment as such has to be linked with population control

mechanisms.

Although book analysis says total forest land in Bangladesh is about 2.6

Mother Nature has been creating weird and wonderful chemicals for more than three billion years; and we are only beginning to sift through these hidden treasures. New technologies enable us to find, analyze and manipulate molecules as never before. While today's laboratory scientists can synthesize new molecules from scratch at a pace unimaginable just a few decades back, promising compounds produced by nature's most creative creatures increasingly provide the optimum starting points.

million hectares or 18 percent of the country's surface land, shockingly the actual forestry now stands about 7 percent of the land area. But unquestionably, forestry contributes to both economic and ecological stability of the country. The preservation as well as conservation of wild life and other forest resources was being depleted at an alarming rate due to poaching, deforestation, and loss of habitat. Mostly located in the Chittagong Hill Tracts, Sylhet, Tangail and Mymensingh, large sections of the forests are felled illegally every day, where forest officials in league with other timber mill owners have caused this destruction of national wealth with no money going to state coffers. Apart from the financial loss the resulting loss of bioderversity either here in Bangladesh or elsewhere in the world carries a price for us all. For instance, the rosy periwinkle, a plant native to Madagascar, has proved potent against childhood leukemia. Yet other rare species on this island nation, most found nowhere else on Earth are disappearing faster than scientists can catalogue. But this biodiversity and its wonderful efficacy seem stranger than fiction. At the dawn of the 21st century, with technology evolving at an ever increasing rate, many people mistakenly believe the natural world has nothing left to offer us in the way of new medicines. This could not be further from the truth. Mother Nature has been creating weird and wonderful chemicals for more than three billion years; and we are only beginning to sift through these hidden treasures New technologies enable us to find, analyze and manipulate molecules as never before. While today's laboratory scientists can synthesize new molecules from scratch at a pace unimaginable just a few decades back, promising compounds produced by nature's most creative creatures increasingly provide the optimum starting points.

Time and again, we find that plants and animals make strange molecules that chemists would never devise in their wildest dreams. For example, researchers could not have invented the anti-cancer compound "taxol" taken from the Pacific Yew tree. "It is too fiendishly complex a chemical structure", says natural-products chemist Gordon Cragg, of the U.S. National Cancer Institute. Some of the most promising natural wonder drugs come from compounds not usually associated with healing: poisons. Merck is marketing a blood thinner based on venom of the deadly saw-scaled viper. A protein from another Asian pit viper is being studied because it appears to inhibit the spread of melanoma cells related to skin cancer and a compound called SNX-482 from the venom of the Cameroon red tarantula may lead to new treatments for neurological disorders.

Natural pharmaceuticals offered by biodiversity are still underutilized. Only a few hundred wild species have served to stock our antibiotics, anti-



Diminishing forest resource: The trend must be reversed

cancer agents, pain killers and blood thinners. For example, "fox gloves' (Shial Kata) mostly found in our region has been found to be so useful to millions of people with heart ailments. These flowers provide the digoxin which regulate the heartbeat. Many sufferers from hypertension and high blood pressure owe a debt to the "Indian snake root shrub" (Sharpamool) for its reserpine. And the search continues. Extracts from an Amazonian oak tree coagulate proteins, immensely helping scientists in their search for an AIDS vaccine. People sleep deeply and breathe easily during operations, thanks to scopolamine derived from mandrake and thorn apples. Women who take the contraceptive pill for granted would not be taking it at all were it not for the yam (Sweet potato). The large tuber is the source of the pill's active ingredient, diosgenin. Even the healthiest among us take compounds first discovered in fragrant meadow sweet and willow bark and now known as aspirin. Only about 13 plants so far known have healed and soothed millions of people. They're but the merest sample over a quarter of all prescribed medicines based on plants.

Yet, of the estimated 3,50,000 flowering plants believed to be in existence, tens of thousands remain undiscovered and only some 5,000 have been tested exhaustively for their pharmaceutical attributes. Now this vast

store of known and potential medicines is under threat. Every species everywhere has the potential to teach us something new. How tragic then it is that just as innovative technologies give us the ability to take advantage of natural compounds as never before, we continue to threaten the world's species and the habitats on which they depend. The European leech source of a new blood thinner was almost wiped out by overzealous collectors. The same is true for poison dart frogs, producers of may intriguing chemicals. Tropical cone snails and sponges, known to harbour analgesic and anticancer compound respectively, live on coral reefs, one of the planet's most endangered maritime ecosystems. Known as Silphion to the Greeks and Silphium to the Romans as the most effective female contraceptive to the ancient Greeks and Romans, the plant is now extinct. Experiment on lab rats with common fennel (a close relative of Silphium's) these days did indeed show contraceptive activity. Unfortunately researchers in the sophisticated laboratories in the U.S. were unable to test the efficacy of silphium itself. Because of the insatiable demand for it in the ancient world silphium went extinct about

Assuringly, the biochemistry of the vast majority -- millions -- of other species is an unfathomed reservoir of new and potentially more effective substances. The reason is to be found in the principles of evolutionary biology. Caught in an endless arms race, these species have devised myriad ways to combat microbes and cancercausing runaway cells. We have scarcely begun to consult them for the experience stored in their genes. True, it is difficult enough to assess an ecosystem but in these days of dire economic situation followed by climatic disruption, policy makers need to understand how various ecosystems interact. Deforestation in mountains can worsen floods in grasslands or agricultural lands below as was in the case of China and more recently in Madagascar. The same thing is being done in parts of Chittagong and Sylhet in our region. So humans have hurt coastal/marine ecosystems directly by draining wetland, cutting mangrove, trawling oceans for fish and destroying reefs and lagoons. But illegal logging of woods in the lush hill forest of Lathitilla, Sylhet, once home to wild elephants and other mammals and rampant killing of Royal Bengal Tigers and deers in the Sunderbans are indications that these little known forest areas will disappear fast in our country. On the other hand, by doing so we also damage the ecosystem indirectly as rivers transport to the coasts the effluents and byproducts of agriculture, industry, urban areas, logging and dams. It is tempting to put in the words of Bill Clinton, immediate past President of the U.S. when he visited China in 2000 and met environmentalists in the scenic city of Guilin. Clinton was fascinated at the growing awareness at the grassroots level. Clinton said, "Ultimately our best hope may be that even where governments lag, their people understand both the stakes and the urgent need for action". Here in Bangladesh we must also take hold and succeed. In the struggle against history's profound environmental challenges, we must participate for the sake of our children, our country and this

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