Bengal Coastline Vanishing into Sea

ATTILA, close to Digha town on the Bay of Bengal in India's West Bengal state, was a flourishing village and a favourite tourist spot— until a decade ago.

Today, it does not exist. The rising waters of the Bay of Bengal, constantly chewing at the coastline, have engulfed it. Thousands of Attila's inhabitants — mostly fishermen — now live in makeshift huts close to Digha. But geologists have warned that Digha itself will meet Attila's fate in another 50 years if the sea continues eating into the coastline at the present rate.

No wonder land an house owners in Digha are a sad lot today. Estate prices have plummeted, construction work has slowed down.

And Calcutta port — one of India's four principal ports — has also been hit by the erosion of land by the sea. Its semaphore station has been abandoned by the authorities because, during high tide each day, the station building was inundated by water.

Attila is just one of scores of villages along West Bengal's 200-km coastline to have been swallowed by the sea in the last decade. Thousands of hectares of arable land has also been eroded.

"Disaster may be a weak word to describe a phenomenon that has already swallowed many villages," says S Chakravorti, an observer. "It's much more drastic."

Experts fear that if this continues an ecological and human catastrophe of colossal scale may be just around the corner.

"Islands have already disappeared altogether while the beaches recede," rues Ruben Banerjee on the biggest island in the Bengal delta, Sagar island. "I believe the Bengal delta is dead because the Ganga has swung drastically towards the Padma river in Bangladesh."

As a result, rivers like Malta, Saptamukhi, Jamia and Gosaba have lost their freshwater connections.

The Bengal delta now gets hardly four per cent of the sedimentation volume that the Bangladesh portion gets. "It's geological nightmare," says Bandyopadhyay.

Sagar island is the worst hit by sea erosion. Once a single, solid land mass, the sea's ceaseless onslaught over decades has split it into small inlets like Ghoramara, Lohachara and Subarnabhanga.

"Now even Lohachara and Subarnabhanga have gone under without a trace," says R Banerjee. "And Ghoramara is barely able to keep its head above water. On its (Sagar's) western side there was a vast tract of land known as Kashimara. That too has disappeared.

In the last decade, scores of villages along West Bengal's 200-km coastline have been swallowed by the sea, and thousands of hectares of arable land have been eroded. Rehabilitating the erosion victims — mostly fishermen and farmers living along the coastline — is only part of the problem, reports Gemini News Service, as sediment begins to threaten Calcutta port.

Now, West Bengal's entire coastline — from Digha to Fraserganj — is under a similar threat.

A Geological Survey of India (GSI) mapping study — the only of its kind to date — whose findings encompass the five years 1984-89, shows that in the Bakhkhali-Fraserganj belt, the sea eroded 51.50 metres of coastline on average. In Digha it was 85 metres, in Sagar island 14.5 metres.

However, K K Basu, deputy-director-general of the GSI's eastern region believes the study was not broad-based. He says the Bakhkhali beach faces a serious threat and Ganga-Sagar beach is partially endangered.

Experts say that the loss of land to the sea cannot be halted. "You can check its rate, land.

It is a two-pronged disaster. When the sea swallows a village, thousands of its inhabitants become refugees. But the relentless erosion of the coast is also posing a serious threat to ports by clogging the navigable channels used by ships.

Relocating and rehabilitating the lengthening queue of erosion victims is becoming unmanageable. It is accentuated by a lack of funds from the government.

It is worst for those refugees who lived by the sea and did not move far inland when their village was engulfed.

In a few years, as coastal erosion continues, the sea comes knocking at their doors, uprooting then once again. For some victims this means destitution.

When fisherman Bindu's village was submerged, he borrowed money and built a hut a hundred yards away from the coast.

But in the last five years, the sea has engulfed all the land up to his new cottage, forcing him to borrow money yet again to build another hut.

The fate of the farmers whose arable land gets washed away is also tragic. "I'm completely ruined," says Das, a farmer in Sagar island who lost 20 acres of land to the sea.

Once a farmer loses his land and home, he loses virtually everything. In overpopulated West Bengal, where land is scarce, such victims are forced to migrate to the nearest city or town and become labourers.

Some experts attribute the massive coastal erosion to geological reasons alone. Says Sumando Bandyopadhyay, a researcher who has studied this phenomenon from close quarters in the Sagar island.

Unsurprisingly, then, embankments built on the coast have been overcome through years of intrusion by the sea. Observers say that those being built now will meet the same fate in a couple of years.

While the sea's encroachment causes dislocation and untold misery to fishermen and farmers living along the coastline, the washing away of solid chunks of land has begun to pose a serious threat to Calcutta and Haldia port.

"As custodians of the entire waterways from Farakka to the Sandheads, we are scared stiff," admits Dr AC Ray, Chairman of Calcutta Port Trust.

This is understandable. Uninhabited Nayachar island in the delta, for instance, has receded by 200 metres in the last eight years.

"This islands disappearance alone would mean 50 million cubic metres of soil jamming our channels," warns Dr Ray.

Since the sea ports will not survive if the islands don't the port authorities have launched massive anti-erosion measures — dredging of channels (at a cost of $ 16 million a year), Fortifying Nayachar island (cost $ 3.33 million) and planting mangrove forests (cost: $23.33 million).

Most people give little consideration to the causes behind the sea's eating away of chunks of land each year, be it because of global warming or for geological reasons.

"I'm worried how I'll feed my family," says Chandan Basu, a farmer who lost his only five acres of cultivable land to the sea. "The sea has upset my life and shattered my dreams."

Yet as beaches recede, islands disappear and coastline villages get swallowed, one thing is clear: nature is busy redrawing the map of West Bengal's coastline and inflicting untold sufferings on humans in the process.

MASSACRE AT AHIRCAI

It was a quiet village but a big one judged by European standards. About 400 Muslims used to live in this village known as Ahircai. Situated on the central west of Bosnia near Croatia this village came under attack from the Croats and the Serbs, the common enemies of the Muslims of Bosnia. In their frenzy of ethnic cleansing of the Muslims in Bosnia, the Croats carried on brutal annihilation of the whole population of the village including men, women, children and their intimate surroundings, all of them unarmed. The entire village was set on fire after many of the inhabitants were shot dead by the mauroding Croat forces.

The appalling discovery was made by British troops of the UN contingent during a patrol of the area.

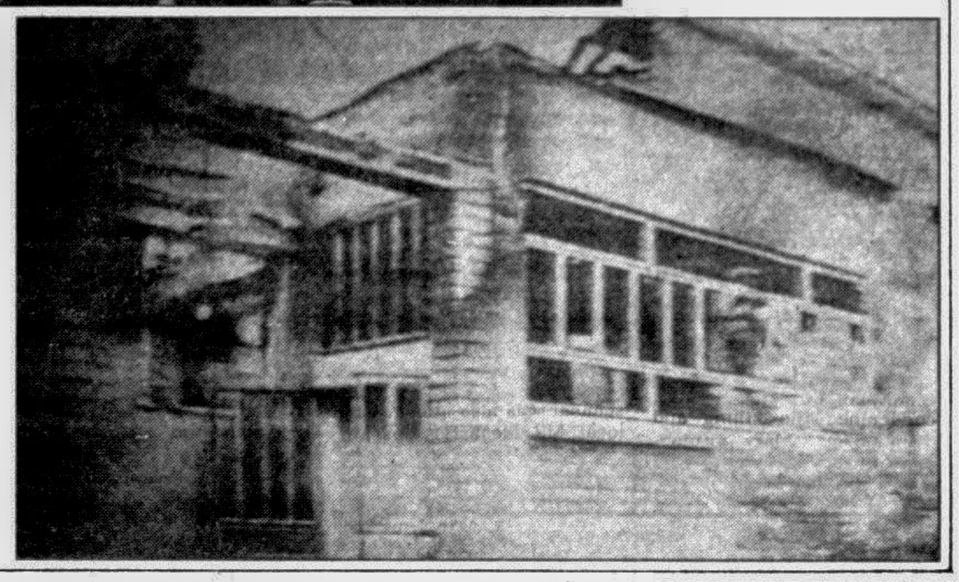
In one house the Croats forced their way, shot the father and his son and then set fire to the cellar in which the mother along with three other children locked themselves up for safety. The entire family of six were brutally murdered.

The Croats not only burnt down the whole village they even destroyed the local mosque sending clear signals about their intentions to the outside world.

The massacre at Ahircai will put to shame a thousand Mai Lai.

— Text and Photos from BBC TV by T A Khan

Charred bodies of an unfortunate father and his young son lay on the stairs and the floor (top); the fallen minaret of a demolished mosque (left); a British soldier looks into a burnt out house through the window (far left) and the remains of a burnt down house which was once the home of a family in Ahircai.



Steeper Climbing Fees to Give Breathing Space to Mt Everest

by Jan Sharma

IN an apparent bid to save the world's tallest peak from pollution and overcrowding, Nepal has made a five-fold hike in royalty fees on Mt Everest.

Trekking and mountaineering agencies said the drastic increase — from US $10,000 to US $50,000 per expedition — makes the peak more expensive. They warned that mountaineers may be lured to the Tibet side of Mt Everest.

A joint meeting of the Nepal Mountaineering Association (NMA) and the Trekking Agents Association of Nepal (TAAN) asked for an immediate withdrawal of the hike.

"The decision, made without any consultation with the people involved in the trade, is not only unpragmatic but result in a major setback to the tourism industry and the national economy," trekking agents said.

Trekking agents said the hike will discourage mountaineers coming to attempt Himalayan peaks and their reduced numbers would hamper the industry's growth.

Tourism Ministry officials said the policy only affects the Khumbu Valley and that the hike would not lead to any dramatic decrease in the number of climbers willing to challenge Nepal peaks.

They said the revised rates might also help deal with the problem of overcrowding on the 8,848 metre high Mt Everest. Nepal has eight of the world's 14 peaks above 8,000 metres.

Mt Everest has been booked to climbers until 2000. But new regulations will limit expeditions to five persons and climbers to the Khumbu Valley will have to take back their garbage to their home countries.

Announcing the new regulations, the Tourism Ministry said the price hike was "a part of a series of measures to conserve the environment of the Khumbu Valley in the Mt Everest region by reducing the number of climbers." The new measures, which come into effect this September, will be gradually extended to other areas, it said.

"There is no dispute that we need to control the volume of climbers on the mountain peaks," said Dr Harka Gurung, eminent geographer and scholar. "But Mt Everest is not our monopoly. If the fees are drastically high and only a small number of climbers are allowed, the Tibet side of the peak would be attractive."

Mt Everest has been booked until 2000. The climbers would have to pay the difference in royalty and reschedule their summit assault, the Ministry said.

Under the new regulations, each climbing team to the Khumbu Valley on the lap of Mt Everest will have to take back their garbage to their home countries.

The teams have to make a refundable cash deposit to assure that they take back the garbage back home once the climbing is over. But such a garbage disposal system is not going to work, critics say.

The NMA insists that Mt Everest has 16,500 kg of garbage accumulated on the peak that needs to be brought back to lower altitudes for burial and burning. Trekkers and climbers leave behind 50 tons of garbage annually on the mountains.

Instead of asking the climbers to take away their garbage, more practical way would have been to ask them to burn garbage, bury those that cannot be burnt, take away those that can be recycled, and take back home only hazardous materials that cannot be safely disposed of in Nepal such as mercury batteries.

Such a system would help develop a recycling and garbage disposal industry in the mountains and provide employment to local inhabitants.

The new regulations also limit the number of climbing members to a maximum of five persons on Mt Everest. Two more members could be added but only after paying US $20,000 extra.

Mt Everest, climbed by more than 345 alpinists from all over the world, continues to be the Mecca among climbers of different ages and professions. It was first conquered in March 1953 by Sir Edmund Hillary of New Zealand and Tenzing Norgay Sherpa of Nepal.

Last spring, 12 teams had put altogether 53 men and two women atop Mt Everest in just one week — a record. And there was virtually a traffic jam atop the peak on May 12 when 32 climbers from four different expeditions reached the highest summit at about the same time.

The attempt created a record in the alpine history. But the garbage they left behind worries environmentalists.

It is estimated by mountaineers there are about 18 tons of junk on Mt Everest. Each year, about 100 climbing expeditions scale the world's highest peak, each expedition carrying an average of three to five tons of equipment, canned food, tents, etc. Each team is accompanied by about 40 potters who do further damage by illegally chopping trees for firewood.

Beginning 1993, only one team will be allowed to operate at one time along a single route. There is no such restriction at present on six routes on the Nepal side taken by climbers to reach the summit of Mt Everest which lies on the border between Nepal and China.

The most positive of the new decisions is to open the Nepal Himalayan peaks for climbing during the summer (June-August), opening Nepal for mountaineering 365 days a year.

Spring (March-May) and autumn (September-November) are the most popular seasons. Winter (December-February) is challenging because of the high wind. The summer may help lessen the burden on the peaks at one particular season, tourism officials said.

The new decisions in keeping with the environmental concerns would provide a "breathing space" for the mountains to regenerate, said Tek Chandra Pokhrel, president of the Nepal Mountaineering Association.

"The most important thing is whether the government makes use of the raised royalty to keep the mountains clean. Unless this is done, the raised royalty would have no meaning. The high rates of royalty in fact may discourage increasingly large number of young people attracted towards challenging the peak," he said.

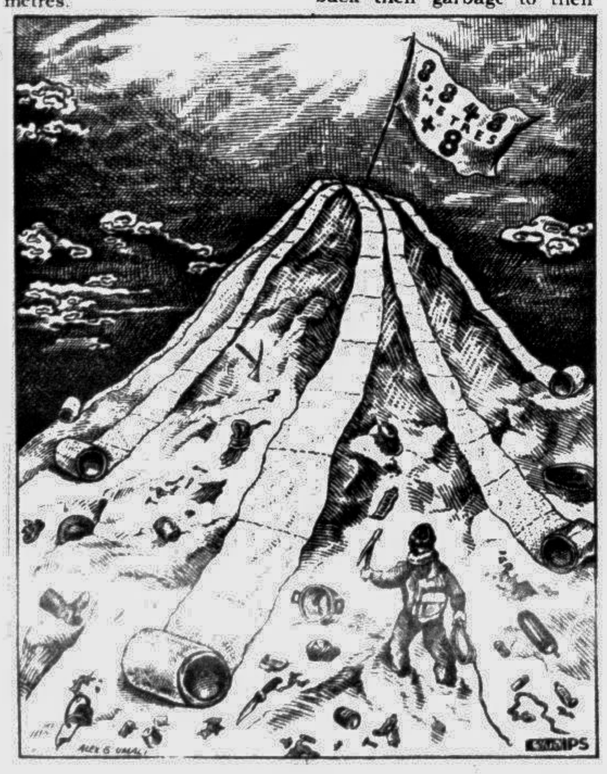
Many trekking agents agree that stricter monitoring of existing environmental regulations would be more helpful than hikes in royalty rates.

Trekking agents are confused why the new regulations are confined to the Khumbu Valley when it should be the general policy guideline for the rest of Nepal's Himalayan areas.

The crucial thing is whether the government is prepared to spend part of the royalty to keep the mountains clean. Dr Gurung suggests that half of the royalty must go to the protection and preservation of the Himalayan environment.

The tragedy is that these royalties, trekking fees and fees on peaks do not go back to the areas and for the management of the mountain environment," says Dr Gurung.

— Depthnews Asia



New Lease of Life for India's 'River of Life'

by Atiya Singh from Kanpur, India

UNTIL recently the Ganga, India's most sacred river, once considered a symbol of purity, had virtually become a dirty varicose vein, poisoned by human and industrial waste.

But today, thanks to a massive cleaning operation the 2,525-km-long river is gurgling with life. Although the river is far from clean, the Ganga Action Plan (GAP) — a massive $97 million project to resuscitate the dying river — has been declared a success.

A brain-child of late Prime Minister Rajiv Gandhi, the GAP's progress was closely monitored right from its inception in 1985.

"No doubt some mistakes have been made. No doubt a lot remains to be done," says Dr V B Mishra, who was awarded United Nations Environmental Programme's 'Role of Honour' at Rio de Janerio. "But the Ganga is certainly much cleaner."

How did a government enterprise succeed in such a short time in a country where many public sector units have been sick for years? "It was a combination of political initiative and administrative perseverance that did the trick," says D Mukherji, a local resident.

The operation clean-up called for no great innovation, he adds. Everyone knew the cause of the problem and the remedy too, long before the GAP was launched. The hitch was money, massive dose of it, to divert and treat the sewage dumped into the Ganga.

No sooner did Rajiv Gandhi took over as Prime Minister in 1984 he sanctioned $47 million for the first phase of GAP. Later money and advice also poured in from the Dutch government and the World Bank.

Arising from near the glacier Gangotri in the Himalayas, the Ganga flows through the states of Uttar Pradesh, Bihar and Bengal to fall into the Bay of Bengal. Ganga and its tributaries — the Jamuna, Gomati, Ghagra, Sarda, Gandak, Son and Kosi — spread out like a fan in the plains of India. Covering almost one-fought of India's total area (3,287,263 sq km), they form the largest river basin of the country.

From immemorial times, the Hindus from all over India have flocked to the embankments of the Ganga to perform religious rites. Over the centuries many civilisations have flourished and perished on its banks. Myths and legends have grown about the river, nicknamed "the river of life." One of the legends has it that the ashes of the dead when submerged in the Ganga, assured them salvation and a place in the heaven.

Ganga's main pollutants were the release of domestic sewage by the cities and towns located along its banks plus the poisonous industrial waste.

The experts identified six major cities — Hardwar, Farukabad, Kanpur, Allahabad, Mirzapur and Varanasi — responsible for polluting 70 per cent of Ganga through their sewerage discharges.

Another 21 towns were also the culprit but to a lesser degree. In the first phase of GAP, plans were put into operation in these smaller towns to stop the inflow of sewerage into the Ganga. Officials found out that the city drains were primarily meant to carry excess rain water during the monsoon season and prevent water-logging. The sewers were meant to carry the sewerage to the pumping stations and from there to sewage farms.

But with the burgeoning population of these cities and towns, new housing colonies and slums had mushroomed in the last four decades, choking the sewers.

For instance, Kanpur discharges 220 million litres of sewage each day, while the optimum capacity of its main sewer is 160 million litres.

The city's 74-km-long network of sewers was clogged. The municipality had no funds to clean the network. It broke the sewers at several places and connected them to the drains. The entire sewerage of Kanpur began to flow into the Ganga.

When GAP plans got underway, 55-km of sewerage was repaired and cleaned. A new pumping station, at a cost of $0.75 million, was set up which pumped the sewerage to a 2,000 hectares sewerage farm.

In addition, two water treatment plants have been set up, at a cost of $6 million with World Bank aid. Despite this, even today almost half of Kanpur's sewage flows into the river.

Another major pollutant was industrial waste poured into the Ganga. Kanpur's 160-odd tanneries had been polluting the river by releasing their toxic waste water. When GAP came into effect India's highest court, the Supreme Court, had ordered these tanneries either to install primary treatment plants (PTP) in their premises or face closure. Many have complied with this order. But to cleanse the water fully, PTP's are not enough. Secondary treatment plants (STP) are needed. With Dutch government aid a STP is under construction.

Lovers of Ganga do not dispute whatever success GAP has made, but worry whether the tempo of development would be maintained, especially when Rajiv Gandhi is no more.

"Who will pay for future cleaning?" asks environmentalist Anil Agarwal. "Now that the equipment exists it needs running costs. Municipalities are always in the red."

The Congress, the party to which Rajiv Gandhi belonged, is still in power. Ecologists hope that the funding of GAP will continue as before. This is because the party is keen to keep Rajiv Gandhi's name alive in the media for political mileage.

Also, Ganga has a great religious significance for the Hindus who constitute 80 per cent of India's population. So, any party which tries to restore the river to its purity wins their votes.

Environmentalists say that what GAP has done is good but not enough. Ganga's water is still unfit for drinking, and, at many places, bathing in it remains a health hazard.

A dying Hindu's ultimate wish is to have a sip of Ganga's water before breathing his last. "I'd like that last sip to be of potable Ganga water," says Gobind Ram, 50, a shopkeeper in Kanpur. "Who knows it may happen within my lifetime."

Polluting the Ganga

114 cities, each with 50,000 inhabitants, daily dump untreated sewage into India's holiest river. Tanneries, pulp and paper mills, petrochemical and fertilizer complexes, and rubber factories pour untreated waste into the Ganga.