

## Damming a river

Land and water are ecologically linked in a natural system called a watershed. Any river is the product of the land it inhabits -- the type of rock and soil, the shape of the land, and the amount of vegetation are some of the factors that determine the river's shape, size and flow.

ZULFIQUER AHMED AMIN

THE Farakka Barrage, when commissioned in 1970, seemed to be a venture by India for saving the Kolkata port from silting up. In next few decades, the outcome in the lower riparian Bangladesh was disastrous due to the dearth of water in the entire south-western region. The country also experienced continuous losses in the agricultural, fisheries, forestry, industry, navigation and other sectors. It also caused fatal damages over the years through floods, droughts, excessive salinity and depletion of groundwater.

The project also resulted in massive devastation in Malda on its upstream, Murshidabad in West Bengal and south-west of Bangladesh on its downstream. Excessive sedimentation, increasing flood intensity, and river erosion are some of its effects.

Bangladesh is facing desertification along the normal course of the Padma river, with no water in the water-body, and the mighty river has become the reason for continuous floods and bank erosion.

Farakka, thus, was a major breach of trust by India against Bangladesh as India had repeatedly claimed before it started the project that the dam would not cause any damage to Bangladesh. The same

assurances are being given about the Tipaimukh dam.

Land and water are ecologically linked in a natural system called a watershed. Any river is the product of the land it inhabits -- the type of rock and soil, the shape of the land, and the amount of vegetation are some of the factors that determine the river's shape, size and flow. When these ties between the land and the river are breached by a large dam, the consequences are felt throughout the watershed, as well as by the web of life it supports.

The main hydraulic effect of a dam is the discharge of the collection basin to a stationary reservoir instead of a streambed. Therefore, an instant change will start downstream, which dries partially or totally whenever the reservoir begins to accumulate water. During this temporary or periodically repeating time interval, the hydrological balance can collapse, and structural damages are observed in the water-dependent ecosystem.

Dams have a significant impact on the disruption of natural sediment movement processes in rivers, which is blocked by the dam. Sediment builds up in the reservoir behind the dam, while creating sediment-starved conditions below the dam, which lead to channel bed degradation, channel narrowing and bank erosion.

It is natural that the river, which is



Dams harm rivers.

accustomed to carrying sediment and now has none, will pick up the sediment from the streambed below the dam.

Dams are engineered to withstand the force of a certain number of tons of water -- however large the reservoir is planned to be. When the pressure builds up the dam bursts, killing people and destroying settlements downstream. This disruption of sediment movement often disconnects a river from its natural floodplain downstream or submerges riverine floodplains upstream of a dam.

In some cases this leads to river systems that are no longer naturally sustainable.

Dams hinder growth, development and maturation of fishes. They hold back not only sediment but also debris, which includes leaves, twigs, branches, and

whole trees, as well as the remains of dead animals. The lives of organisms, including fish in downstream, depend on the constant feeding of the river with debris.

Many fish must move upstream and downstream to complete their life cycles. Dams act as a barrier in this migration. The cold, clear water of downstream will be starved of nutrients and provide little or no habitat for animals. A river with a dam eventually becomes little more than a dead channel of water.

About 7 to 8 percent of the water in Bangladesh is obtained through the river Barak to Surma-Kushiara river basins. Agriculture, irrigation, navigation, drinking water supply, fisheries, wildlife in numerous haors (wetlands) and low-lying areas in entire Sylhet division,

some areas of Comilla and Mymensingh districts, and some peripheral areas of Dhaka division depend on this water.

The river system also supports local industries like fertilizer, electricity, gas etc. Around five crore people of Sylhet and Dhaka division will face problems as Surma and Kushiara will lose five feet of water in the rainy season. Massive environmental degradation will take place, severely affecting weather and climate, turning a wet, cool environment into a hot, uncomfortable cauldron.

Haors around Surma-Kushiara river located in Sunamganj, Habiganj and Moulvibazar districts and Sylhet Sadar Upazila, as well as Kishoreganj and Netrokona districts, receive surface runoff water from rivers and channels in the rainy season and serve as the granaries and fisheries of the northeast. During dry season the water drains out, leaving an alluvial-rich soil suitable for cultivation of boro. The rice farmers plant when the water recedes in the winter, and harvest before the monsoon waters come.

The water carries not only fish larvae but also much-needed nutrients into the haor, which turns into a vast nursery for fish. When the water recedes in the winter, the nourished fish move out into the rivers and are caught by the fishermen. The total area of this wetland covers nearly 25,000 square kilometres and supports approximately 20 million people.

They literally live by the ebb and flow of the waters. Any artificial alteration of this haor could affect food security and bring disaster to the region.

The north-east region of India is one of the six major seismically active zones of the world, which includes California, Japan, Mexico, Taiwan and Turkey. The

Tipaimukh site is located in Zone-V of the Seismic Zoning Map of India. As per available records, about 16 earthquakes of magnitude greater than 7.0 have occurred in this region, of which 2 had a magnitude more than 8.5. An earthquake of significant scale will destroy the dam, with unimaginable damage to life and property.

While Bangladesh is concerned over the dam on the Barak river, India, too, is busy raising concerns about China's plan to build a dam on the Yarlung Tsangpo (Brahmaputra) in Tibet to generate 40,000 Megawatt power, and to divert 200 billion cubic meters of waters to the Yellow River for easing water shortages in Shaanxi, Beijing and Tianjin in northern China.

India's proposed Tipaimukh dam and China's proposed dam over Yarlung Tsangpo, India is aggressively pursuing mega-dams construction spree in India's north-east, notwithstanding concerns in the north-east and Bangladesh.

Against the backdrop of its non-viable cost-effectiveness, immense economic and environmental damage coupled with utter human sufferings, when worldwide decommissioning of dams has over-taken commissioning, India's insistence may cause deterioration of Indo-Bangla relations.

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## What motivates the suicide bombers?

The causes of suicide bombings lie not in individual psychopathology but in broader social conditions. Understanding and knowledge of these conditions is vital for developing appropriate public policies and responses to protect the public.

RIAZ HASSAN

SUICIDE bombing attacks have become a weapon of choice among terrorist groups because of their lethality and ability to cause mayhem. Though depressing, the almost daily news reports of deaths caused by suicide attacks rarely explain what motivates the attackers. Between 1981 and 2006, 1200 suicide attacks constituted 4% of all terrorist attacks in the world and killed 14,599 people or 32% of all terrorism related deaths. The question is why?

At last, now we have some concrete data to begin addressing the question. The Suicide Terrorism Database in Flinders University in Australia holds information on suicide bombings in Iraq, Palestine-Israel, Afghanistan, Pakistan and Sri Lanka, which together accounted for 90% of all suicide attacks between 1981 and 2006. Analysis of the information contained therein yields some interesting clues: It is politics more than religious fanaticism that has led terrorists to blow themselves up.

The evidence from the database largely discredits the common wisdom that the personality of suicide bombers and their religion are the principal cause. It shows that though religion can play a vital role in recruiting and motivating potential future suicide bombers, the driving force is not religion but a cocktail of motivations including politics, humiliation, revenge, retaliation and altruism. The configuration of these

motivations is related to the specific circumstances of the political conflict in different countries.

On October 4, 2003, 29 year old Palestinian lawyer Hanadi Jaradat exploded her suicide belt in the Maxim restaurant in Haifa killing 20 people and wounding many more. According to her family, her suicide mission was in revenge for the killing of her brother and her fiancé by the Israeli security forces and in revenge for all the crimes Israel had perpetrated in the West Bank by killing Palestinians and expropriating their lands. The main motive for many suicide bombings in Israel is revenge for suicide missions.

Typically, most suicide bombers are psychologically normal and are deeply integrated into social networks and emotionally attached to their national communities. Randomly attached labels such as "mad" denote one's inability to fathom the deeper reasons but don't advance our understanding of the causes of the phenomenon of suicide bombing. Rather, they impede us from discovering its real nature, purpose and causes.

Understanding the terrorist organisation's logic is more important than understanding individual motivations in explaining suicide attacks. Suicide bombings have high symbolic value because the willingness of the perpetrators to die signals high resolve and dedication to their cause. They serve as symbols of a just struggle, generate financial support for the organisation and become a source of new recruits for future suicide missions.

Suicide bombings serve interests of the sponsoring organisation in two ways: by coercing an adversary to make concessions, and by giving the organisation an advantage over its rival in terms of support from constituents. Contrary to the popular image that suicide terrorism is an outcome of irrational religious fanaticism, suicide bombing attacks are resolutely a politically-motivated phenomenon.

Humiliation, revenge and altruism appear to play a key role at the organisational and individual levels in shaping the sub-culture that promotes suicide bombings. Humiliation is an emotional process that seeks to discipline the target

party's behavior by attacking and lowering their own and others' perceptions of whether they deserve respect.

People tend to have a strong aversion to what they perceive as injustice, with the dark side manifested as revenge. One consequence of desire for vengeance is an individual's willingness to endure sacrifice to fulfill the act. Contemplation of revenge can appear to achieve a range of goals, including righting perceived injustices, restoring the self-worth of vengeful individual and deterring future injustice.

Revenge is also a response to the continuous suffering of an aggrieved community. At the heart of the whole process are perceptions of personal harm, unfairness and injustice, and anger, indignation, and hatred associated with such perceptions.

Men attach more value to vengeance than women; and young people are more prepared to act in a vengeful manner than older individuals. It is not surprising, then, to find that most suicide bombers are both young and male.

The meaning and nature of suicide in a suicide bombing are strikingly different from ordinary suicide. Suicide bombing falls into the category of altruistic suicidal actions that involve valuing one's life as less worthy than that of the group's honor, religion, or other collective interest. Religiously and nationally coded attitudes towards acceptance of death, stemming from long periods of collective suffering and powerlessness enable political organisations to offer suicide bombings as an outlet for their people's feelings of desperation, deprivation and injustice.

For the individual, participating in a suicide mission is not about dying and killing alone but has a broader significance for achieving multiple purposes - from personal to communal. These include gaining community approval and political success; liberating the homeland; achieving personal redemp-



Religion is not the only reason.

tion or honor; refusing to accept subjugation; seeking revenge for personal and collective humiliation; conveying religious or nationalistic convictions; expressing guilt, shame, material and religious rewards; escaping from intolerable everyday degradations of life under occupation etc. The configuration of these purposes varies and is an outcome of specific circumstances of the political conflict behind the rise of suicide attacks as a tactic and a weapon.

The causes of suicide bombings lie not in individual psychopathology but in broader social conditions. Understanding and knowledge of these conditions is vital for developing appropriate public policies and responses to protect the public.

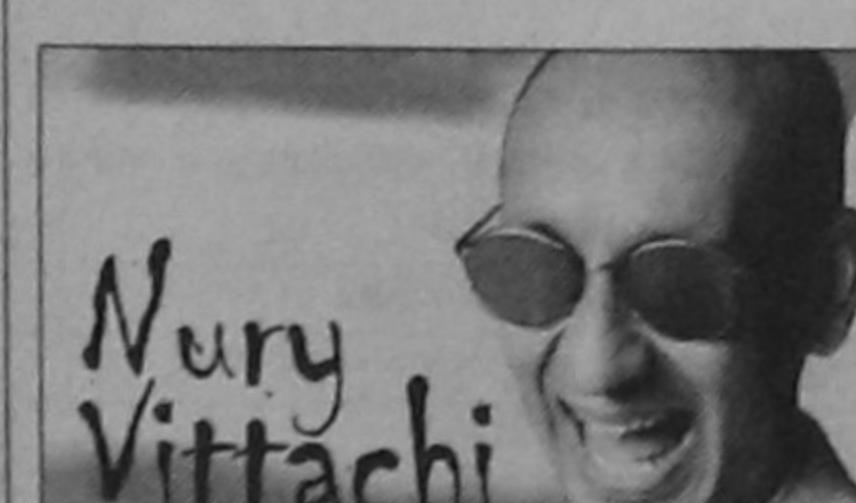
Motivated individuals associated with community-based organisations carry out suicide bombings. Strategies

aimed at finding ways to induce communities to abandon such support would curtail support for terrorist organisations. Strategies for eliminating or at least addressing collective grievances in concrete and effective ways would have a significant, and, in many cases, immediate impact on alleviating the conditions that nurture the subcultures of suicide bombings. Support for suicide bombing attacks is unlikely to diminish without tangible progress in achieving at least some of the fundamental goals that suicide bombers and those sponsoring and supporting them share.

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## Here is the news



hasn't made much money.

But other people I've discussed it with have loved the idea. It would be perfect for many parts of the world, where financial advisors and consultants charge huge fees for getting everything completely wrong. If we are going to get bad advice, at least it should be good value. So here's a special new version of the Bad Advice service. The first US\$5 worth of bad advice, below, is provided free.

Q: I want to go to America to study. What should I do?

A: Grow a beard, change your name to Bin Laden, and write "terrorism" instead of "tourism" under "purpose of visit" on the visa application form.

Q: The women in our law firm have started a legal feminists group. Should we guys be worried?

A: Not at all. Offer to sit in on their meetings "to help them with any hard words they may not understand."

Q: A new mosque is opening at the end of my street. What sort of welcome presents shall we give them?

A: A book of Danish cartoons would be an excellent gift.

Q: A group of large, dangerous-looking gangsters visited my new shop yesterday demanding protection money. What shall I do?

A: Next time they come, kick the largest one in the seat of the pants as a sign of

respect.

Q: I am going to visit Malaysia for the first time next week. What shall I bring?

A: Fill your suitcase and your pockets with illegal drugs. Don't forget to put price labels on them.

And in other news... another sacking tale: Here's a tale to add to our collection of stories of people being fired. Reader Christian Fardel once came back from a vacation in Mexico and told his employer: "I'm back from a beautiful country. I wouldn't mind living there." The boss replied: "Good. You're sacked" and thanked him for "making it so easy."

Pizza Hut is changing its name to "The Hut," because consultants say short,

generic names are more memorable. Good idea. The Government of Myanmar should change its name to "The Thugs."

Name of a new playwright in Hong Kong: Cancer Chong. I learned this from a reader named Jason, who added: "She should be the winner of the 'what were you thinking?' award."

The pay of post-graduates working at universities can be lower than welfare payments to the jobless. I heard from reader Chaminda de Silva. Okay, so who are the intelligent ones?

A committee of top scientists has created an official scientific definition of the word "space." It is the area that

begins 118 kilometres above sea level on Planet Earth. Or, the vacuum that exists between the ears of George W. Bush.

A new vending machine in Miami offers Bentley limousines at US\$1.2 million. Downside: You have to stand there for a year, feeding coins into the slot.

And finally: A woman in Germany told police she heard someone being tortured in the woods. Officers found Roland Hofmann laughing at a humorous book. A police officer told the press (I didn't make this up): "The sound of Germans laughing is unusual."

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