

Minimising impacts of disaster

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As a new comer in the disaster-preparedness/disaster risk reduction (DP/DRR) field, the writer has always pondered over the question why people in developed countries have better coping capacity than those in the developing world. There is no doubt that their affluence has enabled them to acquire more skill, equipment, and awareness to face any disaster, than we have here in the third world.

Moreover, the governments, from national to municipal and county level, have the skill and capacity to deal with distress caused by any disaster. This has helped them to tame the immediate effects of disasters, and minimize casualties and loss.

This leads me to ask: why is the level of disaster-preparedness so low in our part of the globe? Is it only because of the poverty level? Is it only because our governments are weak and unable to cope with emergency situations? Is it because of negligence that we do not think of our own survival, let alone the collective safety of the people?

We always blame disasters for our miseries. However, aren't we are vulnerable because we cannot respond to even the slightest tremor of calamity?

This makes the writer ask the following questions: Why does every disaster-preparedness project in our part of the world always have the term "community-

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based" in its title? Why must a special effort be made to clarify that a particular project is a community-based one? I suspect that we have this habit of including "community-based" in a project name because our projects do not have participation of community members, top-down, and are not sustainable! (Just like a university which claims itself to be a "research university," thus telling the public that research has never been taken seriously as an inherent part of a life in that particular academia!)

Look at the disaster-preparedness methods developed by and for people of the developed world. It can be guaranteed that their disaster-preparedness plan does not include such terms as "community-based" or "local action plan." The jargon is absent, but interestingly enough, that doesn't mean that the community is not participating. The level of preparedness at personal, family, and community level is very high.

For developed countries, disaster-preparedness at state, municipal, neighbourhood, and family level is common. South Korea is always prepared for any forthcoming attack from neighbouring

North Korea. Mock drills are organised regularly, and the response and deployment time of vital machineries is carefully calculated.

There are many resources available in developed countries, like first aid training, building codes, early warning systems, and others. That is not simply because they have more advanced information systems, skill, or professionalism. It's beyond that.

After working in Bangladesh for one year, the writer has arrived at a set of conclusions -- albeit very naively constructed -- which I offer to the public for the sake of a healthy intellectual exercise. All of the following are highly debatable, and the writer will be more than happy to receive counter arguments.

The issue of disaster-preparedness in Bangladesh and other developing countries is three-pronged:

- At personal and family level: Creation of tacit knowledge, in order to ensure behaviour change.
- At community level: Strengthening community mobilization and organization in order to ensure a strong self-

help mechanism.

- At national level, which comprises two aspects:
 - i Creation of a relatively consistent capacity across the line of authority (national-division-district (strategic decision-making level) vis-à-vis upazila-union (the implementation level).
 - ii Systematic and agreed division of labour (who's doing what, where, and how) among stakeholders: particularly the government, private sector, and academia.

Creation of tacit knowledge at personal and family level should be considered seriously. The problem is: lack of knowledge, and if some knowledge does manage to trickle down, it lacks the impetus for action (knowledge simply cannot make people change or move).

There is no doubt about the importance of a comprehensive and continuous awareness-raising campaign to let people know and, more importantly, to make people use that knowledge to make themselves as well as others safe. However, the writer must admit that the process of creating a full cycle of KAP (knowledge, attitude, and practice) is easier said than done.

Therefore, while awareness-raising campaigns should be made for the general population, investment in tacit knowledge, which will enable people to change and act, should be made. At this juncture, I argue that the best targets are children/students and mothers.

No one is more capable of than children. Children are blessed with better capacity for absorbing and preserving new values than the older part of the society as they are still in the state of tabula rasa.

Thus, any disaster-preparedness method at personal and family level can be introduced to them, while its benefit can be felt in the near future, as they grow up and create a bigger portion of community who are aware of what to do before, during, and after disaster.

Mothers and children are the main subjects for a behaviour change initiative. A mother is always at the receiving end of every misfortune in the family. It is widely acknowledged that they are the ones who will be hardest hit in the event of a real disaster.

Normally, she has to juggle with

anxiety and fear of incapability to feed her children and to make her husband happy. In a real disaster, she will be the main actor in the rehabilitation effort at family level. Mothers have been openly exposed to danger and threats. Thus, no one else can have the ability to understand the importance of DP/DRR. They all know that their failure to do so will, at the end of the day, create misery for themselves, rather than other family members.

A great mystery of development work lies at the community level: why does a community -- consisting of a group of people who have knowledge, skill, and resources -- remains isolated from each other; unorganized and unable to produce a collective solution for a common issue in their own neighbourhood?

Lack of drive for self-mobilization and organisation in our communities has made everybody passive. Great effort is needed for the community to have productive collectivity to acquire, create, and institutionalize a culture of collective solution.

Mobilisation and organisation of the community will be needed most in the event of a real disaster, when every public service system collapses and presence of state apparatus is minimal. Without mobilisation and organisation an unorganised community will only cry for help, without thinking of what they can do to revive themselves with the remaining resources. At the end of the day, it will create another missing link in the chain of "relief-rehabilitation-development," as a disaster-affected community depends on relief, rather than involving itself in a participatory self-help mechanism. No rehabilitation effort will be successful in a dependent community.

At the national level, the issues are two-faceted. It entails the need to create a consistent capacity level of state apparatus across different hierarchies. While the national, divisional, and district levels seem to have similar level of knowledge and complete picture of the issue, the upazila (sub-district) and union or village levels tends to in a modest state, not to say lack of capacity.

It is true that those in the local level will be the implementation

arms of a body, however, with lack of capacity, problems will be serious in the field as preparedness, mitigation, and response level will be disrupted. Therefore, investment to enhance the capacity of upazila and union to prepare and response to disaster should be increased.

Meanwhile, systematic and agreed division of labours across different types of actors in disaster preparedness/disaster reduction is somewhat different from the "standing orders on disaster" which has been produced by the government.

What the writer is trying to emphasize here is more of a general and loose idea of a more integrative involvement of private sectors and academia to the entire effort disaster preparedness/disaster risk reduction, with government as the main facilitator.

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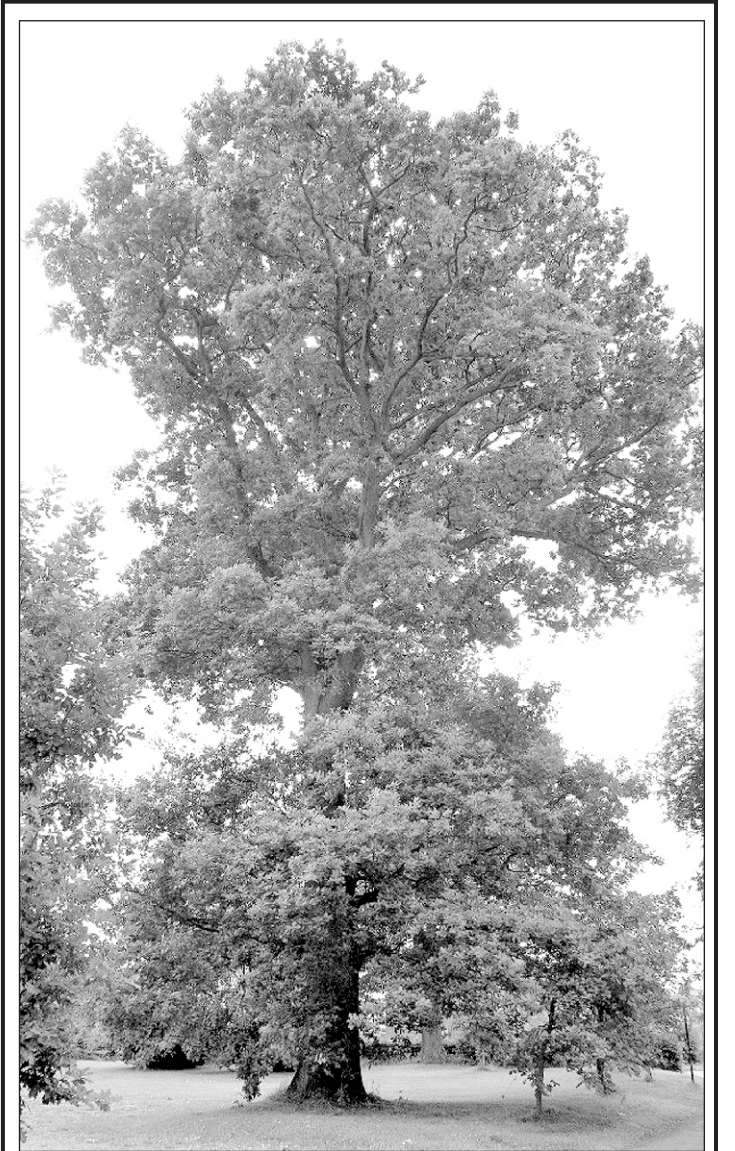
The global warming and climate change issue is developed from academia, until it becomes a collective concern of all of us. The list goes to aspects like safe construction system, adherence to building code, and early warning system. More researches from academia on disaster should be stimulated and adopted by all parties concerned.

With regard to private sector, many have witnessed their contribution in the aftermath of disaster through relief assistance. Their participation can be extended to DP/DRR initiatives, as it is more sustainable. Moreover, the fact that Corporate Social Responsibility (CSR) campaigns are mushrooming globally provides bigger opportunities a more comprehensive participation of actors in DP/DRR.

Those ideas might be scattered and their coherence questionable, but its intention is clear: all of us in the developing world have been disastrous so long, due to our incapability to deal with simplest disaster.

This trend should be reversed. Disaster will always happen, but its effect and impact can be minimized. DP/DRR doesn't only entail survival messages, but also community organisation, harmonising capacity of state apparatus of different hierarchies, and incorporation of other actors along with their role and responsibilities.

Surya Aslim is an Indonesian working for a disaster-preparedness project at Islamic Relief Bangladesh.



The Tree

KRISU KSHETRY

I kept fasting while I was in contemplation under the tree

The tree kept on talking humming melodious tune in my words

When I was fainting from hunger the tree gave me fruit emptying itself

When I was burning under the parching sun, the tree gave me cool shade erecting itself

While I was shivering in winter the tree gave me warmth baring itself

I followed God for long but in the invisible form God was standing in the form of tree in front of me.

The poet is a Nepalese diplomat stationed at Dhaka.



Toxic molds in immediate environment affect human health

SHALIM UDDIN

MOLDS, also known as fungi are essential components of the ecosystem causing decomposition of many organic substances necessary to plant, animal as well as human life but excessive exposure to molds has been a severe health issue for humans. Molds grow on walls, curtains, or sufficient moisture and organic matter available in private homes, office buildings, schools, automobiles, and other locations. Toxic mold or black mold can be deadly, especially to children with mold allergies. After black mold begins to grow, microscopic mold spores quickly become airborne and travel throughout air conditioning and heating systems. You can inhale over a half million spores per minute without knowing it.

Symptoms associated with toxic mold may include asthma, sinus headache and nasal congestion, memory and hearing loss, dizziness, skin rashes and hives, excessive fatigue, flu-like symptoms, ongoing sore throat and chronic cough, bleeding in the lungs, pulmonary hemorrhage, permanent cognitive defects, increased risk of tuberculosis. While it may not be possible to identify specific individuals who may be vulnerable to molds the elderly, small children and infants, and those with compromised immune systems and allergies are the most susceptible to mold related symptoms. Mold is a warning sign that there is a leak or high moist area, it needs your attention, and must be fixed.

Molds produce tiny spores to reproduce, just as some plants produce seeds. These mold spores can be found in both indoor and outdoor air, and settled on indoor and outdoor surfaces. When mold spores land on a damp spot, they may begin growing and digesting whatever they are growing on in order to survive. Three things needed for the develop-

ment of fungi are fungal spores, a food source and water. The microscopic spores can spread everywhere indoor and outdoor by air movements, people and animals. It is physically impossible for the average building to be free of fungal spores. A fungus can live on practically anything; therefore the focus on preventing fungal growth is the control of water. Moisture can enter a building through several ways: outside air infiltration, water diffusing through the building envelope, moisture in construction materials, leaks into the building and water damage from burst pipes or from fire extinguishing. Of these possible ways of entry, the more complex to control are humidity problems arising from the intrusion of humid outside air and water diffusion through the building envelope.

Certain molds are water-loving, such as Aspergillus, Penicillium, Stachybotrys, and Acremonium, and experts generally agree that excessive growth of these types can cause allergic reactions in mold-allergic individuals. A wide variety of humidity-causing conditions can facilitate indoor mold contamination. Water intrusion, often from defective construction or faulty plumbing, can be the problem. A leaky roof, a burst pipe, or reoccurring water penetration into the building will provide a moist area for mold to grow. Wood, ceiling tiles, gypsum board, and many other standard building materials may provide nutrients for mold growth. It has been found that vinyl siding on the interior side of an exterior wall may permit mold growth if any moisture reaches the inside of the vinyl siding. Building humidifiers, air-conditioning systems, damp storage areas and crawl spaces may also provide a welcome environment for mold growth. Paints, coatings, and lacquers applied to wood products are alleged to cause mold growth when the wood is wet.

Stachybotrys existing in only one well known species, Stachybotrys

Widespread contamination poses much larger problems that must be addressed on a case-by-case basis in consultation with a health and safety specialist. Effective communication with building occupants is an essential component of all remedial efforts. Individuals with persistent health problems should see their physicians for a referral to practitioners who are trained in

chartarum or S. chartarum, is known to produce the mycotoxin trichothecene which has been extensively studied since its pathogenicity first appeared in Russia in 1920. Various symptoms, including stomatitis (trench mouth), rhinitis, conjunctivitis, pancytopenia (inadequate blood cells of all types) and neurological disorders develop in animals following ingestion of hay contaminated with Stachybotrys. When more studies were done to determine if the mycotoxin could be volatilized with high air flows over large amounts of stachybotrys, the toxic effects seen with direct injection could not be duplicated, leading to the conclusion that mycotoxins of Stachybotrys can be produced or get airborne only under certain limited environmental conditions.

Stachybotrys has also been associated with "sick building syndrome," the media-friendly label given to residential or commercial structures thought to have conditions that adversely impact indoor air quality (IAQ). Stachybotrys has been detected in buildings with problematic ventilation systems, but it is less common and in lesser amounts compared to other molds such as Aspergillus, Penicillium, Alternaria, and Cladosporium.

The last ten years have seen an explosion of mold claims in the courts and in the media. Due to the lack of scientific evidence supporting these claims there have been conflicting results when evidence of the health effects of mold is offered to a court.

Sources of moisture may include improper "drying in" during construction; or improper design, construction, or maintenance of the building envelope, the HVAC

system, or both. Sources of moisture for mold growth typically include: (1) stagnate water and slime found in drain pans of fan coil units and other elements of the HVAC system; (2) water spray components of HVAC systems; (3) excessive relative humidity within the building or HVAC system; (4) flooding or excessive water or fluid leaks within the building; (5) flooded carpeting; (6) permeable materials such as acoustic dust liners within the HVAC system; (7) external microbial contaminants drawn into the building as a result of improperly located air supply intakes; and (8) other external water leak sources such as roof leaks.

The medical and scientific literature contains differing opinions regarding the potential health impacts of mold exposure. Many plaintiffs in toxic mold cases say that exposure to mold has either made them sick, caused them to lose their job, or exacerbated pre-existing physical conditions. Others allege that mold growth has damaged and destroyed their property, causing them to move out, or damaged and destroyed their business, causing them to have to sell the business.

Medical research has shown a potential link between certain mold growth in buildings and human disease. However, the lack of specific "dose-response" data and the numerous other sources of indoor air pollution (tobacco smoke, chemicals, dust mites, and so forth) present problems in proving that exposure to a specific mold caused specific symptoms.

Compounding the problem is the fact that a building may have both microbial and chemical con-

tamination with multiple causes for each type. Poor indoor air quality may result from fumes or gases emitted from plastics, fibres, coatings, or chemicals used in building components or furnishings, office operations, or building cleaning. Some fungi emit VOCs (Volatile Organic Compounds) that cause unpleasant odors, including the characteristic moldy smell associated with damp basements. Thus, pinpointing mold as the cause of an individual's health complaints can be difficult where there are multiple materials in that individual's environment.

Although full coverage of the medical aspects of mold contamination is beyond the scope of this article, certain medical issues are important for building professionals whether they are architects, engineers, lawyers, contractors, owners, or suppliers. Over the last few years there has been a huge increase in lawsuits involving mold. Property damage and personal injury against insurers; construction defect claims against builders, contractors, and architects; Personal injury claims against building owners and managers; workers' compensation claims against employers; and, contractual claims between occupants and landlords.

Regardless of the source of the complaints, building owners/managers, contractors, sub-contractors and designers should not ignore them. Complaints related to hot/cold temperatures, excess humidity, unusual odours (chemical or musty) or health complaints of headaches, sinus problems, lethargy, shortness of breath and similar types of health issues must be taken seriously,

for and remedy the mold with conflicting theories on the best method.

Dr. Redd opened his testimony by stating that: "While there remain many unresolved scientific questions, we do know that exposure to high level of molds causes some illnesses in susceptible people. Because molds can be harmful, it is important to maintain buildings, prevent water damage and mold growth, and clean up moldy materials."

Doctors testified that studies show mold infections occurring in susceptible people such as immunosuppressed individuals in hospitals and that mold is associated with some cancers. There are two mycotoxins produced by mold that are classified as human carcinogens: aflatoxin and ochratoxin A. Ingestion of these toxins has been associated with liver and kidney tumours. Other respiratory infections, such as hypersensitivity, pneumonitis, as well as allergic reactions due to mold exposure

have been reported. However, mold growth should be prevented because some people are, or may become, allergic to molds.

Widespread contamination poses much larger problems that must be addressed on a case-by-case basis in consultation with a health and safety specialist. Effective communication with building occupants is an essential component of all remedial efforts. Individuals with persistent health problems should see their physicians for a referral to practitioners who are trained in occupational/environmental medicine or related specialties and are knowledgeable about these types of exposures.

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Susceptible immediate environment