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ECONOMY UPGRADATION AND ENVIRONMENTAL DEGRADATION:

A CASE STUDY ON UTTRAKHAND DISASTER

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ABSTRACT

The present study gives the dreadful scenario of casualties occurred on June 13, 2013 in Uttara Khand, India due to heavy rain fall leading to uncontrolled devastating floods and landslides, where a large number of people comprising women, children and elderly lost their lives. Besides, this dreadful disaster caused severe damage to human population, buildings, roads, plants etc. Even, whole biodiversity and natural ecosystem comprising aquatic flora and fauna have been completely destroyed in the region. This is an eye opener and a big challenge before educationists, researchers, environmentalists, decision makers and policy makers to think about sustainable growth of the society without damaging our environment and future generations. Sustainable development ensures the well-being of individual by integrating social development, economic development, environmental conservation and protection. It is necessary for the sustainable development that the policies and technologies should be green so that environmental ability meets present and future generation in equal manner. Efforts have been made to suggest measures to prevent such devastating disaster.

Keywords: *UttraKhand floods, environment, power projects, landslides, planned development*

INTRODUCTION

The landmark report of the World Commission on Environment and Development entitled "Our Common Future" warned that unless we change many of our lifestyle patterns, the world will face unacceptable levels of environmental damage and human suffering. The Commission, echoing the urgent need for tailoring the pace and the pattern of global economic growth to the planet's carrying capacity, said that "Humanity has the ability to make development sustainable and to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs." In June 2013, a multi-day cloudburst centered on the north Indian state of Uttrakhand caused devastating floods and landslides in the country's worst natural disaster since the 2004 tsunami. Though some parts of Himachal Pradesh, Haryana, Delhi and Uttar Pradesh in India, some regions of Western Nepal and some parts of Western Tibet also experienced heavy rain fall , over 95% of the casualties occurred in Uttrakhand. As of 16 July 2013, according to figures provided by the Uttarakhand government, more than 5,700 people were "presumed dead." This total included 934 local residents. Destruction of bridges and roads left about 100,000 pilgrims and tourists trapped in the valleys. Landslides, due to the floods, damaged several houses and structures, killing those who were trapped.

SOME EXPERT'S VIEW

This is what the head of the Department of Environmental Studies at Delhi University (DU) New Delhi, India had to say about the Uttarakhand floods when asked by the *New*

Scientist, a magazine that ought to know a thing or two about people who understand nature: "The current devastation and human misery is largely man-made." The DU professor, Maharaj Pandit added that "rampant unauthorized and mindless building activities on the river flood plains in the Himalayas" are the prime causes of the disaster." The valleys of the Yamuna, the Ganga and the Alaknanda witness heavy traffic of tourists. For this, the government has to construct new roads and widen the existing ones.

A report of an expert committee, constituted by the Union Ministry of Water Resources to find out the causes of the June calamity, has said that a combination of many factors led to the flash floods and the subsequent destruction. But the cloud burst is certainly not the reason behind the deluge, it says in its 64-page report submitted recently to the Ministry.

The National Institute of Disaster Management (NIDM), in one of its first reports on the Uttarakhand floods, has blamed "climatic conditions combined with haphazard human intervention" in the hills for the disaster.

Surya Prakash, Associate Professor of NIDM, travelled over a 1,000 kilometers in flood- and landslide-hit areas of Uttarakhand between June 22 and 24 to prepare the report. He says that the abnormally high amount of rain (more than 400 per cent) in the hill state was caused by the fusion of Westerly's with the monsoonal cloud system. Heavy precipitation swelled rivers, both in the upstream as well as downstream areas. Besides the rain water, a huge quantity of water was probably released from melting of ice and glaciers due to high temperatures during the month of May and June. The water not only filled up the lakes and rivers that overflowed but also may have caused breaching of moraine dammed lakes in the upper reaches of the valley, particularly during the late evening on June 16 and on June 17, killing about several hundred persons; thousands went missing and about 100,000 pilgrims were trapped. Prakash says that the Alaknanda river and the Mandakini, both tributaries of the Ganga, occupied their flood ways and started flowing along the old courses where habitations were built over time (when the river had abandoned this course and shifted its path to the east side). Thus, the rivers destroyed the buildings and other infrastructure that came in its way.

The loss of human life in some areas was due to less reaction time, it is said. The loss of property was due to heavy encroachment near river banks for commercial purposes like hotels and restaurants on routes leading to religious places like Kedarnath and Badrinath.

In fact, it might serve us well to remember a true son of the fast-eroding Uttarakhand soil who martyred himself trying to communicate a message to the state administration that, if heeded, would have gone a long way in minimizing (if not preventing) the scale of destruction brought by the rains.

On 13 June, 2011, exactly two years before this disaster (the spell of heavy rainfall that triggered the floods began on 14 June, 2013), a sadhu known as SWAMI NIGAMANAND passed away at the Himalayan Institute of Medical Sciences at Dehradun. He had been on an indefinite fast to protest against the rampant stone crushing and strip mining along the banks of the Ganges in Uttarakhand. The first principle of disaster management is prevention—by taking the necessary precautionary measures. But Uttarakhand, captive to local interest groups, has been doing the exact opposite: actively soliciting disaster.

ROLE OF PEOPLE

The cabal of bureaucrats, businessmen, technocrats and politicians that call the shots in developmental policy and decision-making—when not corrupt—take a perverse pride in a managerial tunnel vision that believes only in "getting things done". They see environmental issues purely as roadblocks on the path of development, not as facts of nature that must be dealt with on their own terms. They cannot see that human beings—even CEOs, bankers and shareholders—are an integral part of nature and derive their sustenance from it.

Their narrow pragmatism that avoids thinking of the final consequences of their choices is nothing but a form of magical thinking that is different only in degree from that of the other, more populous, and unscrupulous, bunch that simply does not have the time of day for such

romantic nonsense as "Mother Nature" and "ecological balance", and thinks nothing of deploying all their assets—cerebral and material—to circumvent the law and line their pockets.

REASONS FOR SUCH HUGE DISASTER

After analyzing the views of various people, committees and the facts, this is for sure that it is not merely a happening due to natural causes but the man-made reasons are more behind it. The various reasons are listed as follows:

Roads destabilizing mountains

"A new (mountain) range like the Himalaya will remain steady if not tampered with much. But the huge expansion of roads and transport is bringing the mountains in Uttarakhand down," says Prof. Pandit. Road, he says, is a major destabilizing factor for a mountain and it is a new phenomenon for the Himalaya.

Data with the Uttarakhand State Transport Department confirms this. In 2005-06, 83,000 odd vehicles were registered in the state. The figure rose to nearly 180,000 in 2012-13. Out of this, proportion of cars, jeeps and taxis, which are the most preferred means of transport for tourists landing in the state, increased the most. In 2005-06, 4,000 such vehicles were registered, which jumped to 40,000 in 2012-13. It is an established fact that there is a straight co-relation between tourism increase and higher incidence of landslides

Threat from dams

The Ganga in the upper reaches has been an engineer's playground. The Central Electricity Authority and the Uttarakhand Power Department have estimated the river's hydroelectric potential at some 9,000 MW and have planned 70 odd projects on its tributaries. In building these projects the key tributaries would be modified through diversion to tunnels or reservoirs to such an extent that 80 per cent of the Bhagirathi and 65 per cent of the Alaknanda could be "affected". As much as 90 per cent of the other smaller tributaries could be "affected" the same way.

Landslides more frequent now

"Our mountains were never so fragile. But these heavy machines plying everyday on the kutcha roads have weakened it, and now we suffer landslides more often," says Harish Rawat, a B.Sc. student in Uttarakhand's Bhatwari region that suffered a major landslide in 2010.Rawat lost his home to the landslide when a major part of the main market and 28 shops were wiped out by the landslide. About 25 other houses were destroyed completely.

Another local resident, Ram Prasad Tomar, a driver by profession in Uttarkashi town, says it is road cutting that has made the mountains so weak. He says the way mountains are cut to make roads has rendered the mountains unstable. "Road contractors, who come from outside, do not understand the mountains. Most of the expressways that are being constructed now are tangled in legal cases. After cutting of mountains, landslides continue for up to four years, and contractors go bankrupt clearing the debris," he says.

Experts say promotion of the state as a tourist destination is coming in way of sustainable development.

Huge traffic of tourist

According to media reports, when the floods struck, about 28 million tourists were visiting the state, while the local population is close to half that number. First of all, it is irresponsible to let such a huge volume of human traffic into an ecologically sensitive area, that too in the monsoon season. But once the decision had been taken to milk tourism to the maximum, you would naturally need to build infrastructure to cater to such tourist inflows. This requires planning. And given the fragile nature of both the climate and eco-systems of the Himalayan region, it also requires a strict adherence to building and environmental norms. The first principle of disaster management is prevention by taking the necessary precautionary measures. But Uttarakhand, captive to local interest groups, has been doing the exact opposite: actively soliciting disaster.

Failure of adherence to building and environmental norms

As recently as February 2013, the Uttarakhand high court had passed an order

asking the state government to demolish structures that had come up within 200 meters of the river banks. But the administration did not act. When the floods came, many of those illegal structures got demolished anyway.

Absence of radars

Under modernization of IMD, 55 Doppler radars were approved by the government of India way back in 2007-08. The IMD was to furnish an estimated price which would then go to the Ministry of Earth Sciences, which in turn sends it to Planning Commission for approval. But in these six years, the file is shuttling between three departments, moving at a snail pace and net result is zero.

Dr. Chandan Ghosh, the head of the Geo Hazards, National institute of Disaster Management said, " Uttrakhand government has placed request for Doppler radar which can forecast cloudburst when attached to supercomputer to the centre but the same couldn't be installed due to bureaucratic hurdles."

It is a surprise that in the first phase of installation of these radars Uttrakhand got the miss. Seventeen radars were installed in various locations but none in Uttrakhand. Isn't this utter neglect on the part of the centre? Despite being prone to frequent cloudbursts, flashfloods and landslides Uttrakhand has virtually no system in place for early warnings, weather forecasts or even dissemination of rainfall and landslide related data.

What should be done?

Indian mythology is replete with instances of ' Akaash-vani'(heaven speak) to warn both kings gone astray and common people deviating from the path of dharma. The most famous of them is 'akash-vani' predicting king Kansa's death at Krishna's hand. But 'heaven speak' does not just belong to the realm of mythology. What happened in Uttrakhand in June is proof enough. The heaven in form of nature spoke loud and clear on June 15, 16 and 17. The message was not just for the kings (state) but also the common people. Mind and mend your ways, else….

If we wish to heed heaven speak, then the state must:

- Need to introspect without bias or fear. If it has gone wrong in understanding Uttarakhand's proper developmental needs, then let it not hesitate in admitting so.
- We have to realize that the Himalayan hills are young, restless and fragile. And accordingly set its developmental priorities and policies. These should be based as much on local and traditional knowledge and aspirations, as on the use of 'state of art' science and technology.
- The state is endowed with expert institutions and experts. So we should not import ideas and projects incompatible with local conditions and ecology, merely in the name of development or economic growth.
- Annual yatra or pilgrimage to Char Dham and many other places of religious and spiritual significance on the banks of the Ganga and the Yamuna and its tributaries is certainly the state's 'signature' activity. It should be restored in a non-commercial manner. It is agreed the world over that places in hills cannot accommodate people beyond their carrying capacity. So the yatras shall have to be strictly regulated with verifiable standards. Tariffs for lodging and boarding should be set by competent and efficient state agencies. Let a 'Yatra board' with membership from government as well as non-government representatives, including experts and the religious leaders, be constituted by an Act of the state legislature.
- Meteorological monitoring, weather advance warning systems and post extreme-event rescue and relief operations shall have to be upgraded to levels befitting the fragility of the state's natural environment and ecology, so that never again is the state machinery caught likewise napping.
- The policy for water-based energy in the region needs to be carefully balanced to take these concerns into account. The policy should lay down mandatory ecological flow provisions (at least 50 per cent in lean season); a distance criterion (5 km) and tough enforcement measures and penalties for

ensuring that construction of the project does not harm the mountain stability or local water systems. It must be noted that while rivers cannot and must not be re-engineered, dams can be re-engineered to optimize on available water for energy generation

- **Ecosystem-based tourism for development to be used but with safeguards and local benefits .** High mountain, adventure, biodiversity and nature tourism are the most obvious routes to economic development in the Himalayas. But this tourism is greatly dependent on the ecology of the region. If the environment degrades, tourism will also be impacted. On the other hand, tourism has impacts on the environment, if not carefully managed. The Uttarakhand flood teaches us that we must learn to build sustainable models for pilgrim-based tourism in the fragile hills. There is a problem of pollution, litter and solid waste disposal in most high Himalayan tourist sites.

CONCLUSION

June 2013, Uttarakhand is a wakeup call not just for the rulers and people in the state, but planners and decision makers all over the country. Here are leanings and lessons for various ministries in the Government of India, in particular its expert agencies like IMD (India Metrological Department), CWC (Central Water Commission), EAC (Expert Appraisal Committee) of Union Environment Ministry and NDMA (National Disaster Management Authority) as well as governments and authorities in all other hill states. One lesson from the tragedy: “If we do not do environmentally sound development, there will be no development at all”

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