

Stringent measures needed to avoid further mass destructions

It is about a month since Uttarakhand's worst disaster in living memory¹. Flash floods resulting from extremely intense rainfall and cloud bursts swept away mountainsides, villages and towns, thousands of people, animals, agricultural fields, irrigation canals, domestic water sources, dams, roads, bridges and buildings – anything that stood in the way. Several thousands lost their life in this natural disaster. Some calls it as a 'freak' incident. Starting from Odisha's super cyclone in 1999, torrential rains in Mumbai in 2005, rains in Karnataka and now the Uttarakhand downpour constitute four clear weather related events in less than 15 years, each causing massive destructions or dislocation in India.

Several reports have repeatedly warned that extreme weather incidents will become more frequent in India with global warming². When the birth of Uttarakhand state took place, many thought that their new state would pursue green developmental path. But in the 13 years after statehood, the leadership of the state has succumbed to the conventional model of development with its familiar and single-minded goal of creating monetary wealth. With utter disregard for the state's mountain character and its delicate ecosystems, successive governments have blindly pushed roads, dams, tunnels, bridges and unsafe buildings even in the most fragile Himalayan regions^{3,4}. In the process, denuded mountains have seen deforested; roads designed to minimize expenditure rather than to enhance safety, have endangered human lives; tunnels blasted into mountainsides have further weakened the fragile slopes and dried up the springs; ill-

conceived hydropower projects have destroyed rivers and their ecosystem; and hotels and land developers have encroached on river banks. Yes, wealth has been generated, but the beneficiaries are very few. This, certainly is not the approach which we have to follow towards the sustainable development and eco-friendly tourism.

'Himalayan tsunami' has sounded an alarm bell. This massive disaster not only sets an example to the hill state, but to the whole nation, wherever the sustainable ecological approaches are not being followed. To pursue development without concern for the fragile Himalayan environment, will always invite disaster. Eco-sensitive development may mean a slower monetary growth rate, but a more sustainable and equitable one. It is routine in our country, especially after a disaster or an accident, we pull our socks, analyse and take stock of the situation and forget later. Satellite images were clear predicting heavy rains in the Himalayan stretch⁵, but still our governments and administrators could not get into act in time. If so, we could have saved many human lives and livestock. It reflects on our coordination and preparedness, before any calamity strikes. We have to see and learn from the developed countries how they are taking care of their people and livestock, before a natural calamity like torrential rain, hurricane, tornado and cyclone approaches! We are in the middle of losing our natural ecosystems, resources and diversity. Our scientists, conservationists, stakeholders, policy makers, administrators and politicians need to work together to address scourge with vigor and

urgency drawing on examples and best practices from around the world and adapting them to the Indian context, coupled with strong measures. The suggestions from academicians and scientific community must be valued by policy makers. Development is must, but it should not be at the cost of damaging our own natural and fragile ecosystems. These disasters will set our nation's economy and development clock behind by few years. We must take some extreme, strong steps in protecting all our diversity and natural habitats. Any imbalance and extra pressure on our natural ecosystems may be further disastrous and recurring. 'We are playing with nature but at the same time blaming nature.' Will it be surprise, if nature itself is getting into act to take care of us for all what we are doing?

1. <http://www.rediff.com/news/special/north-india-floods/20130619.htm> (accessed on 19 June 2013).
2. Rajendran, K. *et al.*, *Curr. Sci.*, 2013, **104**, 1409–1418.
3. Gopal Krishna, http://www.toxicwatch.org/2013/06/disaster-in-uttarakhand-himachal_19.html (accessed on 19 June 2013).
4. Gopal Krishna, <http://www.toxicwatch.org/2013/06/uttarakhand-tragedy-man-made-disaster.html> (accessed on 19 June 2013).
5. www.rediff.com/slide-show-slide-show1-coulmn-forecasters-played-poker-while-uttarakhand-drowned/20130627.htm (accessed on 27 June 2013).

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DST's INSPIRE Camps need a fresh look

Developing science and fostering scientific temper are the main ideas that govern our scientific policies. The Indian Science Congress held at Kolkata this year dwelt upon various issues related to improving science and science education in India. Many programmes and fellowships have been instituted to train young, enthusiastic and bright students in sci-

ence. The idea is to retain youngsters in science and train them to take up science as a career. This is important for India to make an impact and create a knowledge-driven society having an innovative and scientific mindset. By doing so, Article 51-A(h) of the Constitution of India that mentions that every citizen of India should develop a scientific temper, is

taken note of. The Department of Science and Technology (DST) launched an ambitious project INSPIRE to encourage students of secondary schools to pursue higher education in science across the country.

DST funds institutes equipped with basic infrastructure to host a five-day programme, known as INSPIRE Camps

for school pupils to expose them to the nuances of science. These camps serve as an interactive platform between students and scientists. During the camps students are sometimes accommodated on campus to foster interaction among peers and learn basic science, scientific methodology and skills from their mentors. However, INSPIRE Camps have not been able to match the aspirations with which the programme was instituted.

Primarily, there is a need to make changes in the selection procedure. Currently, marks or grades obtained is the sole criterion. Such a criterion deprives students interested in basic science and preferentially selects top scorers, who

aspire to be doctors or engineers. The present criteria do not take into account personal traits of students like intelligence, observational skills or their interest levels. Therefore, DST should alter the selection procedure. Secondly, several camps do not provide lodging facility, leaving no room for pupil-mentor interaction. On campus lodging should be made mandatory to cultivate informal discussions and foster pupil-mentor relationship. It is also important to choose mentors who can talk to children in a simple and lucid manner. Also, laboratory and group experimentation should be considered during these camps.

For organizing such camps, DST is allocating huge funds. The funds should be utilized in a streamlined fashion, with not too much spending on promotional activities, while the institutes should observe expenditure guidelines. With respect to the points mentioned above, DST should take a fresh look to meet the aspirations with which this programme was instituted.

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Skill development through government initiatives: anything for women?*

Jamal and Mandal¹ provide of the status of vocational education and training (VET) in India that largely constitutes schemes or programmes initiated by the Government to promote employable skill development system. However, the article misses out on reviewing the initiatives taken by the Government to strengthen skill development for women.

Women worldwide, not only in the developed countries but also developing countries, face the challenge of getting employment. Nearly, 48.4% of the Indian population are women (Census of India, 2011). However, the female labour force participation rate remains less than half of that of males. An employment and unemployment survey (2009–10) by the National Sample Survey Organization (NSSO) reveals that 23% of women are in the labour force compared to 55.6% of men. Similarly, unemployment rate has been consistently high for women since 1972–73 in both rural and urban areas. Decline in the workforce participation rate of women is a matter of concern and has implications on their overall economic empowerment. Therefore, there is an urgent need to increase productive employment opportunities for women through skill development in different sectors.

The National Policy on Skill Development (2009) emphasized on equal access to skill development among all social groups, particularly women and disadvantaged sections of the society to help them secure a decent employment and as a measure to alleviate poverty. The 11th Five-Year Plan detailed a roadmap for skill development in India that favoured the formation of Skill Development Mission (SDM), both at the state and national level. To create such an institutional base for skill development in India at the national level, a coordinated action on skill development with three-tier institutional structure was made operational. The following features were envisaged with respect to gender equality in skill development: (i) to raise women's participation by at least 30% by the end of the 11th Plan; (ii) to facilitate women's participation by providing hostels, scholarships, transport, training materials and loans; (iii) expanding Women's Vocational Training Programme (WVTP) through institutional network; (iv) to identify sectors employing large number of women in order to promote skills and employability among women and (v) to eliminate gender stereotyping from vocational courses to encourage women's participation in non-traditional occupations, including existing and emerging technological fields.

Realizing that the process of social development has to take into account the

needs, interests and aspirations of women, the gender-specific WVTP was designed and launched during 1970s under the Directorate General of Employment and Training (DGE&T), Ministry of Labour and Employment, Government of India to mainstream women into economic activities. At the central level, it was implemented through a network of 11 institutes under DGE&T that included National Vocational Training Institute for Women (NVTI) at Noida and ten Regional Vocational Training Institutes for Women (RVTIs) at Mumbai, Bangalore, Thiruvananthapuram, Panipat, Kolkata, Tura, Indore, Allahabad, Vadodara and Jaipur. These institutes offer about 7768 seats for regular courses and also run short-term courses. As on 30 September 2011, approximately 90,000 women have been trained since its inception. The WVTP aims to promote self-employment and wage-employment for women in industry as semi-skilled, skilled or highly skilled workers by increasing their participation in skill-training facilities.

Under the state sector, vocational training is organized through a network of Government and private-run women's Industrial Training Institutes (ITIs) or women's wing in general ITIs which are directly under the administrative control of the respective governments of the State or Union Territory. As on May 2011, there exist 313 Government ITIs

*Disclaimer: The views expressed here are personal and not those of the organization (NMEW/MWCD).