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## Disaster Management Community



# Solution Exchange for the Disaster Management Community Consolidated Reply

## *Query: Disaster Risk Education for Mountain Children – Examples; Experiences*

Compiled by G. Padmanabhan, Resource Person and Nupur Arora, Research Associate

Issue Date: 12 May 2008

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**From [David Grey](#), Mountain Children's Forum, Dehradun**

**Posted 7 April 2008**

I work with Mountain Children's Forum in the Uttarakhand region and we work on empowering mountain children to make positive changes in their lives and communities by providing a forum from which they can speak and be heard, access resources and take action.

We acknowledge the need to prepare children living in mountains against various natural and manmade hazards they are vulnerable to and towards this have also organized a few campaigns, primarily workshops, on educating them on disaster preparedness and response. To view click [http://www.mymountains.org/workshops/disaster\\_horawalla.htm](http://www.mymountains.org/workshops/disaster_horawalla.htm).

Our experience says that mountain children do need adequate awareness about disaster issues and have the potential to learn and contribute constructively and significantly during many disaster situations in their mostly very rural and often also remote communities.

Solution Exchange has discussed similar issues of "Structural Mitigation for Schools Buildings" (<http://www.solutionexchange-un.net.in/drm/cr/cr-se-drm-ed-21090701.pdf> Size: 164 KB) and "Incorporating Disaster Management Education in School Curriculum" (<http://www.solutionexchange-un.net.in/drm/cr/cr-se-drm-ed-08080701.pdf> Size: 195 KB) on the Disaster Management and Education Community with focus on 'schools'.

Now, I would like to request members to share their experiences:

- What are the various natural/manmade disasters, mountain children must be educated?
- What are the best methods, tools and technologies available to do so, keeping in mind the rural and remote locations that these children live in?

Your experiences and suggestions will help us and, we would hope, other agencies, organizations and individuals to design and carry out more and better programmes for especially mountain children.

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## Responses were received, with thanks, from

1. [Amarnath](#), Centre for Environment Education (CEE), Patna
2. [Shakib Nabi](#), CARE India, Port Blair
3. [Rashmi Gangwar](#), Centre for Environment Education (CEE) Himalaya, Lucknow
4. [P. D Mathur](#), United Nations Development Programme (UNDP) Disaster Risk Management (DRM) Programme, Dehradun
5. [Ruchi Kukreti](#), Rural Litigation and Entitlement Kendra, Dehradun
6. [Srinivasan Ramani](#), Independent Consultant, Bangalore
7. [Anshu Sharma](#), SEEDS, New Delhi
8. [Kailash Ch Pandey](#), Uttarakhand Bio-Fuel Ltd, Dehradun
9. [James Susainathan](#), (Retd.) Indian Army, Chennai
10. [Rudra Prasanna Rath](#), Gol-United Nations Development Programme (UNDP) Disaster Risk Management (DRM) Programme, Orissa
11. [A. Rabinson](#), Evangelical Social Action Forum (ESAF), Kanyakumari

*Further contributions are welcome!*

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## Summary of Responses

Educating mountain children on disaster risks is a pertinent issue. Responding to the query on the topic, members shared techniques employed by NGOs for providing disaster risk education to children living in mountains.

Discussants suggested educating children on the risks and hazards present in their surroundings and on ways of coping with them. They recommended organizing block to village level awareness cum training and capacity building workshops and supported the idea of targeting primary and secondary level schoolchildren and teachers.

Respondents listed various **natural and manmade disasters mountain children need education** on. Among major mountain specific natural disasters, they suggested including information on earthquakes, landslides, flash floods, avalanches, forest fires, glacial lake outburst floods (GLOF), cloud bursts and stone batting. For manmade disasters, members advised covering the dangers connected to opencast mining, deforestation, big dams and road accidents. They also felt that climate change related changes is a future "disaster," which largely comes under the man made category and needs inclusion as well.

Highlighting that the Himalayan region is highly prone to earthquakes, discussants stressed the importance of preparing mountain children for earthquakes and opined that as part of the earthquake preparedness, fire fighting, evacuation and first aid also need to be covered.

Sharing **experiences educating children and communities on disasters**, members mentioned that in [Uttarakhand](#), a NGO conducted regular mock drills and trained teachers on disaster management in primary schools and in the [Andaman and Nicobar Islands](#) another NGO is undertaking a school disaster education programme, generating awareness and building capacity of primary school students on various forms of disaster and their impact.

Members opined that one of the most important aspects of **working with children** is keeping their interest level high, and therefore programmes need to be very innovative and engage in “out of the box” thinking. ‘Activity based participatory teaching and learning,’ for example is an educational tool that ensures the interest of children. In the [Jammu and Kashmir](#), a NGO is using this approach to conduct disaster risk educational activities. The organization performs risk mapping of schools and surrounding areas and buildings, evacuation and rescue drills, and first aid and fire safety demonstrations through trained teams, etc.

Respondents felt that using existing teaching tools in combination with informal learning aids would deliver good results. For example, under a “School Earthquake Safety Initiative” in [Himachal Pradesh](#), a NGO has worked with a number of urban and rural schoolchildren, and has developed and tested such approaches.

Discussants also pointed out mobile exhibition and simple experiments can help children understand the basic science of disasters. In [Gujarat](#), the [Vikram Sarabhai Community Science Centre](#) under their ‘Science behind Tsunami’ programme developed a laboratory for hands-on exhibits, models and experiments. Members suggested using these types of units to help educate children in rural and mountainous areas.

Additionally, respondents suggested **using multimedia kits** like ‘[Stop Disasters](#)’ and other tools comprising of games, crossword, puzzles, etc. and translating them in local languages to use another useful tool making the awareness programmes attractive and interesting.

Highlighting the importance of **information sharing**, members urged making children aware of disaster warnings and forecasts. For this, they suggested using radio, TV, newspapers and internet and recommended responding appropriately to encourage children to use this information. Addressing concerns related to the remoteness of locations, respondents opined that informal tools and local media are of major significance in such places and suggested exploring the use of community radio for educational purposes.

Members also suggested training Anganwadi workers and ASHA workers as they felt that most of the villages are not in comfortably reachable zone and the best way to reach those children is through these frontline workers.

Finally, respondents recommended working with corporate and government entities in mountain areas to educate children on disasters. For example, they felt corporate bodies that package mountain water could be requested to use a portion of their profits for sensitizing children on disaster issues.

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## Comparative Experiences

### Andaman and Nicobar Islands

#### **Innovative Tools to Educate Children on Disasters** *(from [Shakib Nabi](#), CARE India, Port Blair)*

CARE is carrying out a school disaster education programme in 10 islands of Andamans. Various techniques were used, like awareness generation and capacity building of children using different forms of media and involving teachers and other stakeholders in the disaster risk education programmes. Also innovative measures are used to keep the children's attention in the programme. This has enabled school administrators to create a “disaster safety culture” in many schools. Read [more](#)

*From [Rashmi Gangwar](#), CEE Himalaya, Lucknow*

## Jammu and Kashmir

### Activity Based Participatory Teaching and Learning, Baramulla and Kupwara Districts

In earthquake affected districts of Baramulla and Kupwara, the Center for Environmental Education (CEE) Himalaya is undertaking a DRR awareness campaign in 700 primary, middle and high schools. The delivery mechanism is through a module of 5-6 hours which involve students, teachers and headmasters. It is a blend of some interactive teaching on the disasters followed by hands on activities, practical experiments, demonstrations and games helping them to learn more on disasters. Read [more](#)

## Gujarat

### Teaching the Science of Disasters, Ahmedabad

The Vikram Sarabhai Community Science Centre has developed successful a 'Science behind Tsunami' programme based on middle school science curriculum. It includes a mini-laboratory consisting of hands-on exhibits and models, where experiments can be performed and informative posters to help children explore basic concepts related to dynamics like energy, force, motion, friction, momentum, etc. and relate the knowledge to occurrence of a Tsunami. Read more

## Himachal Pradesh

### Earthquake Safety Initiative, Shimla (from [Anshu Sharma](#), SEEDS, New Delhi)

SEEDS, an NGO successfully carried out an Earthquake Safety Initiative. They used tools such as activity books, card and board games and audio-visual materials to educate children on disaster risk reduction. Lessons learnt from the project are that informal teaching methods are better at attracting the attention and interest of children and along with existing teaching tools and using an informal learning approach, delivers good results. Read [more](#)

## Uttarakhand

### Training Teachers on Disaster Preparedness, Uttarkashi District, Tehri District and Chakrata Region (from [Ruchi Kukreti](#), Rural Litigation and Entitlement Kendra (RLEK), Uttarakhand)

Rural Litigation and Entitlement Kendra (RLEK) runs 16 primary schools for the children from marginalized, SC/ST hill communities. They conduct regular training and mock drills for children and teachers using various techniques, and have also trained and sensitized sixty RLEK teachers and many students on disaster mitigation and management.

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## Related Resources

### *Recommended Organizations and Programmes*

**Centre for Environment Education Himalaya (CEE), Ahmedabad** (from [Amarnath](#), Centre for Environment Education, Patna and [Rashmi Gangwar](#), CEE Himalaya, Lucknow)

Thaltej Tekra, Ahmedabad 380054 Gujarat; Tel: 91-79-26858002; Fax: 91-79-26858010; [ceehimalaya@ceeindia.org](mailto:ceehimalaya@ceeindia.org); <http://www.ceehimalaya.org/>; Contact: Dr. Avdesh Gangwar, Programme Director, Himalaya, Centre for Environment Education (CEE)

*Strengthens environmental education towards sustainable development and disaster preparedness in the mountain ecosystems of the Indian Himalayan region*

**Bihar Institute of Public Administration and Rural Development (BIPARD), Patna**

Walmi Complex, Phulwarisharif, Patna 801505 Bihar; Tel: 91-612-2452585; Fax: 91-612-2452586 [support@bipard.org](mailto:support@bipard.org); <http://www.bipard.org/home.htm>

*Disaster Response Cell is developing a programme on school education for disaster risk reduction for the rural children of the flood prone districts of Bihar*

**CARE India, Port Blair** (from [Shakib Nabi](#))

Premises No. 106, J. N. Road, Delanipur, Port Blair 44102 Andaman Islands.; Tel: 03192-238272; <http://www.careindia.org/ManageProgramKey/VisitProgramCategory.aspx?CategoryID=1>;

*Under the post Tsunami intervention funded by DIPECHO is carrying out disaster education programmes for primary schoolchildren in 10 schools on the Islands.*

From [Rashmi Gangwar](#), CEE Himalaya, Lucknow

**Vikram Sarabhai Community Science Centre, Ahmadabad**

Opposite Gujarat University, Navrangpura, Ahmadabad 380009 Gujarat; Tel: 91 79 26302085, 26302914; <http://www.vascsc.org/activities.htm>

*Has created a mobile exhibition to help children understand the basic science of disasters through simple experiments, exhibit can be used in rural and mountain areas*

**United Nations Educational, Scientific and Cultural Organization (UNESCO), New Delhi**

UNESCO House, B-5/29, Safdarjung Enclave, New Delhi 110029; Tel: 91-11-26713000; Fax: 91-11-26713001; [newdelhi@unesco.org](mailto:newdelhi@unesco.org); [http://portal.unesco.org/geography/en/ev.php-URL\\_ID=5972&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/geography/en/ev.php-URL_ID=5972&URL_DO=DO_TOPIC&URL_SECTION=201.html)

*Specialized agency for education and developed multimedia kits and games for educating children on disasters*

**United Nations Strategy for Disaster Risk Reduction, Switzerland**

International Environment, House II, 7-9 Chemin de Balexert, CH 1219 Chatelaine, Geneva 10, Switzerland; <http://www.unisdr.org/>

*Developed 'Stop Disasters', an on-line game to teach children how to save lives and livelihoods that can be translated and used for educating mountain children*

From [Anshu Sharma](#), SEEDS, New Delhi

**Sustainable Environment and Ecological Development Society (SEEDS) India, New Delhi**

D-11, Panchsheel Enclave, New Delhi 110017; Tel: 91-11-26498371, 41748008; Fax: 91-11-26498372; <http://www.seedsindia.org/SCP.htm>

*Working to make communities resilient to disasters, a thematic area is safe construction practices- has experience training masons on disaster resistant construction techniques*

**School Earthquake Safety Initiative, New Shimla**

D-25, Sector-1, Main Road, New Shimla 171009 Himachal Pradesh; Tel: 91-177-3295128; [info@seedsindia.org](mailto:info@seedsindia.org); <http://www.seedsindia.org/SESIS/>

*Programme aims to ensure seismic safety in schools, as part of their agenda to create a disaster resilient community.*

**Christian Aid, United Kingdom**

Christian Aid, 35 Lower Marsh, London SE1 7RL United Kingdom; Tel: 440-20-7620-4444; [info@christian-aid.org](mailto:info@christian-aid.org); <http://www.christianaid.org.uk/emergencies/>

*Works on preventing and responding to emergencies, supported the School Earthquake Safety Initiative in Himachal Pradesh, implemented by SEEDS*

***Recommended Tools and Technologies***

**Stop Disasters: A Disaster Simulation Game, UN/ISDR, Switzerland** (from [Rashmi Gangwar](#), CEE Himalaya, Lucknow)

Game; <http://www.stopdisastersgame.org/>; Contact Brigitte Leoni Tel: 41-22-917 8908/8907; [isdr@un.org](mailto:isdr@un.org)

*Game for school children between 9-16 years that aims to build awareness and capacity to respond and mitigate the impact of disasters. Can be used to educate mountain children too.*

### **Related Consolidated Replies**

**Incorporating Disaster Management Education in School Curriculum, from Siddhartha Choudhury Gujarat State Disaster Management Authority, Gandhinagar (Experiences; Examples).** Education Community and Disaster Management Community. Issued 26 September 2007

Available at <http://www.solutionexchange-un.net.in/drm/cr-public/cr-se-drm-ed-08080701-public.pdf> (PDF, Size: 194 KB)

*Seeks experiences on introduction of textbooks and views on how dealing disaster management as a separate subject can lead to more preparedness at school level*

**Structural Mitigation for Schools Buildings, from A. S. Arya, Ministry of Home Affairs, New Delhi (Advice; Experiences).** Disaster Management Community. Issued 21 September 2007

Available at <http://www.solutionexchange-un.net.in/drm/cr/cr-se-drm-ed-21090701.pdf> (PDF, Size: 150 KB)

*Seeks advice on various issues that need to be factored in for reducing risks arising out of unsafe school buildings and experiences of effective structural mitigation in schools*

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## **Responses in Full**

**[Amarnath](#), Centre for Environment Education, Patna**

Mr. David Gray has put up a very nice query. I would like him to inform briefly about the work done by Dr. Avdesh Gangwar, Programme Director, Himalaya, Centre for Environment Education (CEE) while doing the rehabilitation work after the earthquake hit the mountain region of Kashmir, details of the programme can be referred from the following website [www.ceehimalaya.org](http://www.ceehimalaya.org). I would also request Dr Gangwar to respond to the group.

In Patna, CEE is planning to develop a programme with the Disaster Response Cell of Bihar Institute of Public Administration and Rural Development (BIPARD) on the School Education for Disaster Risk Reduction for the rural children of the flood prone districts of Bihar. Although there may be different approaches in comparison to the Mountain regions, but we would like use the information shared by the group to develop the programme for rural flood affect region of Gangatic plane.

This would certainly help us develop the programme and enrich through the inputs of the group.

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**[Shakib Nabi](#), CARE India, Port Blair**

We have a program on Community Based Disaster Preparedness in the Andaman and Nicobar Islands of India. This is a post Tsunami intervention funded by DIPECHO. Through this program we are also working with Primary School children across 10 schools in the Islands. The intervention with the school children is sort of an action research project and based on the learning from this we would like to expand our program further.

Some of the intervention assisted with our school program is **awareness generation and capacity building** of the primary school students on various forms of disaster and its impact on them. Then we

are doing some other activities like the formation of school level task force, school contingency plan and mock drills.

I think the most important aspect of working with the school children is to keep **their interest level high in the program**. For the same one needs to be very innovative and thinking out of the box.

The use of **various forms of media** also plays a very important role and we are having a special emphasis on the visual media as the infrastructure required for it is there.

It has been observed that if we involve the teachers and other stakeholders then the probability of the program being a success increases manifold.

One of the focus points of our program is also to see how the knowledge acquired at schools by the teachers contributes to the increase of knowledge at the household level and how the information dissemination takes place from the students to their parents.

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**[Rashmi Gangwar](#), Centre for Environment Education (CEE) Himalaya, Lucknow**

In response to your query, I would like to share with you the initiatives being taken by Centre for Environment Education (CEE Himalaya) in Jammu & Kashmir in earthquake-affected districts of Baramulla and Kupwara. CEE Himalaya is undertaking a DRR awareness campaign in 700 schools including Primary, Middle and High Schools.

The delivery mechanism is through a module of 5-6 hours duration involving the students, teachers and headmasters. It is a blend of some interactive teaching on the disasters followed by hands on activities, practical experiments, demonstrations and games.

As rightly mentioned by others, **creating children's interest in DRR awareness and education is the crux for its effectiveness**.

**Major mountain specific natural disasters** include - Earthquakes; landslides; avalanches; forest fires; flash floods; glacial lake outburst floods(GLOF); cloud burst; stone battering etc. Climate change is also being projected as a future disaster which to a great extent can be attributed to the man made category. Open cast mining; deforestation; big dams etc are some other examples of man made disasters in mountain regions about which children need to be made aware.

**Activity based participatory teaching and learning is an important tool** ensuring the interest of children. CEE Himalaya is achieving this through a trained team visiting the schools and doing activities like evacuation drills; risk mapping of school building and surroundings; evacuation and rescue drills; first aid and fire safety demonstrations.

A mobile exhibition to help children understand the basic science of disasters through simple experiments is being used. This exhibition has been developed by Vikram Sarabhai Community Science Centre, Ahmedabad. In addition an Urdu adaptation of multimedia kit - 'Risk Land' comprising of games, crossword, puzzles etc. on disasters is another useful tool making the awareness programmes attractive and interesting. CEE has adapted 'Risk Land' kit developed by ISDR and UNESCO in Urdu.

DRR Trainings are being done for the Teachers/ Headmasters/ and Resource persons from Education Department to make the campaign effective.

CEE Himalaya is also developing Village contingency plans for 20 villages involving the students, teachers and community. Our organization is committed to build the capacity of mountain children to cope up with natural hazards and learn adaptive mechanisms and lifestyles in view of the possible impacts of climate change. Partnerships are welcome to strengthen the initiative in the Himalayan region.

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**P. D. Mathur, United Nations Development Programme (UNDP) Disaster Risk Management (DRM) Programme, Dehradun**

For the last 18 years I have been working in the Himalayan (Uttarakhand and Ladakh) region on various aspects of palaeoclimate (palaeo=ancient), ecology and environment, etc. Since 2003 I have been associated with UNDP under DRM programme and got an opportunity to work more closely with the community. I worked at District Bageshwar (interior most district of Uttarakhand) for four years on community based disaster preparedness including the school safety programme.

Based on my experience, I would like to comment that the major natural devastating disasters in the hilly region are landslides & flash floods (off course earthquake is always there) and human influenced disaster is road accidents. In mountainous region (particularly in the interiors of Uttarakhand) the schools buildings are in horrible condition. Children (group of children from various hamlets of a gram panchayat) come all along the way to the schools (they had to walk 5-10 kms daily) crossing all landslide prone areas, devastating nalahs (streams) etc.

In Bageshwar district you have to walk 30-40 kms from the roadside and I have experienced personally all these things. To educate, to aware all these school children we organised all block to village level awareness cum training & capacity building workshops at primary to secondary level schools & tried to educate them (teachers as well as children) on risk, hazards (& how to cope up with them) present in their surroundings. Today all the schools & colleges of the District Bageshwar have submitted their risk & vulnerability reports to the department of disaster management of Uttarakhand, not only this more than 95% schools have already prepared & submitted their school disaster management action plans to the government.

Moreover, the Government of Uttarakhand has already included Disaster management as a subject for the class of 9th & 10th (the books are already in the market) for the last 2 years & now from this year in the class 6th to 8th this subject has been included. We have already been included disaster management in Sarv Shiksha Abhyan (SSA) and have completed the training of SSA District Co-ordinators of Uttarakhand state.

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**Ruchi Kukreti, Rural Litigation and Entitlement Kendra (RLEK), Dehradun**

Greetings from RLEK. I am sharing my view with our experience in running 18 schools for the mountain indigenous children in the state of Uttarakhand, where the schools in the villages are 3-12 kms away from the nearest Road head, with a rough, difficult and mountainous terrain.

In today's scenario we need to address and link the issue of Disaster Risk to Global warming and the Important role of the Himalayan region and it's importance in the Asian/world perspective – as the source of major rivers ,the melting of glaciers, floods and then desertation if not arrested. How traditionally it has been a region where the people have adopted indigenous practices to tackle this issue. This should then be linked to Disaster Mitigation that is more important than management.

The schools should not only include the subject on Disaster Risk as part of the curriculum but the most important part is to introduce Disaster Drill management to enhance the responsiveness.



Each school can have Forums that focuses more on generating awareness to their peer group as well as the community.

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### **Srinivasan Ramani, Independent Consultant, Bangalore**

I want to suggest the following Tools and techniques for Educating Mountain Children about Disasters

- Obviously, awareness that disasters can hit any time and its likelihood depends upon a set of variables (like rainfall) is valuable. I have some suggestions in regard to rainfall, particularly in the context of hilly areas in India. Merely educating children in this matter will not do. The country has to create appropriate facilities to disseminate information in a timely manner.
  - Children should be aware of weather news and forecasts coming over the radio, TV, newspapers and the Internet and be encouraged to use this information. Precipitation is a major cause of landfalls. Information of the kind I have mentioned would obviously help anticipate problems, though it would require significant education and training. Such training given to teachers in local schools would help a lot. I give the following two URLs as examples of what information is available. (<http://www.weather.nic.in/>; <http://weather.yahoo.com/forecast/INXX0140.html>)
  - Why such forecasts are not widely available in Indian languages needs to be examined.
  - A news report in The Hindu newspaper deals with an exciting and simple solution to the problem: Interactive Voice Response systems giving weather forecasts for selected locations in a region, giving a choice of languages. Read here <http://www.hindu.com/2008/02/09/stories/2008020957070300.htm> with hundreds of millions of cell phones in India, this technique is very attractive.
  - Cell phone coverage in hilly areas does get to be very poor. There is a Universal Services Obligation Fund of the Government of India to subsidize telecom facilities in relatively remote and sparse population areas. Some of these funds should be utilized to provide dependable connectivity to areas where disaster risks are known to be high. Items 3 to 5 need to be taken up by state governments. Paucity of resources is a not a valid excuse any more.
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### **Anshu Sharma, SEEDS, New Delhi**

You raise very pertinent questions. In the work taken up by SEEDS in the mountain region, we have kept the focus on earthquakes, and then extended coverage to other hazards like landslides, flash floods and environmental hazards. The logic for keeping earthquakes as the central theme is two-fold: (a) that the Himalayan region is very highly prone to earthquakes, and it is scientifically established that major earthquakes are overdue in most stretches of the Himalayan Arc, and (b) that earthquakes present the 'worst scenario'. As part of the earthquake preparedness, fire fighting, evacuation and first aid also get covered. Once the kids are prepared for this worst kind of rapid onset disaster, they will also be reasonably capable of managing themselves in other disasters.

Regarding methods and tools, our experience has been that aiding existing teaching tools in combination with informal learning aids delivers good results. The School Earthquake Safety Initiative in Himachal Pradesh, implemented by SEEDS and Christian Aid with support from the Humanitarian Aid Division of the European Commission under its DIPECHO programme, has worked with a number of urban as well as rural schools, and has developed and tested such approaches. Some information on the work and the tools can be seen at [www.seedsindia.org/sesis](http://www.seedsindia.org/sesis).

With particular reference to the remoteness of locations that you mention, informal tools and local media are of even higher significance. Another tool that has still been explored in a very limited way, but holds great potential, is community radio for educational purposes. Your state is already having some of the most celebrated pioneering efforts in this area, and this is also discussed often within the ICT community of Solution Exchange.

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**Kailash Ch Pandey, Uttarakhand Bio-Fuel Ltd, Dehradun**

You have raised very significant issue. We know that there are disasters and one should be prepared for that. But when it comes for children, the gravity of sentence is changed entirely.

The mountain children are badly prone and sensitive for all forms of disaster, whether it is earthquake, landslides, cloudburst, thunderstorm, epidemics etc. The list can be long if considered. Nowadays children are rather more vulnerable for disaster. The children in remote villages are rather safe then the children in town. The haphazard life style, numbers of schools with unsafe building construction, heavily populated dense areas, slums, heavy traffic etc. all factors create more alarming situation. But, it does not mean that the children in remote areas are safe. The remote village itself an amplifying factor because of longer distance from the road head, lack of communication, transport, electricity, lack of basic infrastructure facilities etc.

Following points may consider when children are to be sensitized:

- What is disaster? through some play or diagram or Poem
- What are the basic differences in various disaster events like earthquake, landslide, Fire, Road accident etc? (you should represent one event by one children in play or drama mode)
- How they affect children differently in different situations like at house, at school etc.
- Animal behavior before any unpleasant event?
- What are the local resources may be useful for rescue or warning? and
- Last the village or house level mock drills.

Most of the villages are not in comfortably reachable zone. The best way to reach those children is to train Anganwadi workers, ASHA workers, Members of self help group and students of Matriculation or Intermediate classes of respective village. All these mediators are from the village itself. They can be trained and developed as an asset to spread the message.

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**James Susainathan, (Retd.) Indian Army, Chennai**

With regard to the mountain children, they should be educated on:

- Landslides in the upper reaches
- Flashfloods in the lower reaches
- Lightning
- Heavy snowfall
- Avalanches due to snowfall on the higher reaches and its impacts on the lower reaches

Of course other members have focused on a major aspect on earthquakes, but every year the mountain people face heavy rains which is due to extensive deforestation and exploitation for housing have been denuded of the top soil cover which makes the soil vulnerable to washing action by rain. Continuous heavy rain in the upper reaches loosens the soil and landslides takes place which washes away villages. We need to educate the schools to be careful during the monsoon, the signs to look for, precautions to be taken and the evacuation methods to be adopted.

Also the curricula should also include action to be taken during non school hours. Children should be shown escape route, survival kits, route marking for day and night, communication and leaderships and location of survival shelters. The most important aspects to be taught are survival and preventions/protection from cold.

I have had an opportunity to work in the URI areas of Jammu and Kashmir where as soon as the snowfall ceases the community comes out and cuts gutter or tracks in the fresh snow which becomes a track as well as passage for the community to go about their work because once the snow hardens you cannot walk on it and gutters prevent the people from the winds.

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**Rudra Prasanna Rath, GoI-United Nations Development Programme (UNDP) Disaster Risk Management (DRM) Programme, Orissa**

The issue is very particular to another vulnerable sections of the society called mountain children. To my mind, they should be taught on avalanches, landslide and flash flood issues. A better approach can be include a lot of corporate and government entities in the Mountain areas/ The services like Boarder Roads Organization, NERI could be used.

The Corporate bodies who are using mountain water for packing purpose can requested to part away a part of the profit for sensiting the children on disaster issues. The children should be made aware of the escape routes, disaster timing, as well as mitigation strategies for such disasters. I personally believe that children are settled perhaps one of the most negative realms of development in the world. Hence the imparting training, to these children will also be equally difficult. But the terrain location also demand specialized training like search and rescue, first aid and some mountain conservation techniques like gully plugging as well as contour bounding etc.

I think this is an Issue, which the DRM Community practitioners must look at with seriousness.

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**A. Rabinson, Evangelical Social Action Forum (ESAF), Kanyakumari**

Regarding Disaster Risk Management in coastal villages, they should be educated on:

- Seasonal changes in climate
  - Climate conditions
  - Tidal amplitude
  - Monsoon periods
  - Rainy season & Flood situation
  - Safety places
  - PRA (Participatory Rural Appraisal )
  - Mapping system --Evacuation Map
  - Identification of Vulnerability
  - Hazards---Risk--Disaster Mitigation
  - Identification of Hazards
  - Natural & Man made Hazards
  - Resource materials
  - Educate the Community, Village leaders, Panchayat leaders, School Teachers, School students, to know the symptoms of Hazard and the preparedness.
  - Get information about Hazard, Disaster - from their practical knowledge-then explain about Hazard & Disaster, Disaster Mitigation, Disaster Preparedness, and Capacity.
  - Disaster Management - Disaster Response like Early Warning System, Rescue ,First Aid, Relief, Rehabilitation etc Also given information about the Need of Formation of Community Based Disaster Preparedness Committee (C B D P )-
  - Train up Rapid Action Force (R A F ) from C B D P and Students, Youths, Sports club members from the village- Frequently Given Mock Drill Training with the help of Police, Fire Service , Medical, and also by Non- Govt. Organization Volunteers (NGO)
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***Many thanks to all who contributed to this query!***

*If you have further information to share on this topic, please send it to Solution Exchange for the Disaster Management Community in India at [se-drm@solutionexchange-un.net.in](mailto:se-drm@solutionexchange-un.net.in) with the subject heading "Re:*

[se-drm] QUERY: Disaster Risk Education for Mountain Children - Examples, Experiences. Additional Reply."

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