

Date of Submission	2 November 2015
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IPL Project Proposal 2016

(MAXIMUM: 3 PAGES IN LENGTH)

1. Project Title: A Study on Socio-economic and Environmental Impacts of Landslides

2. Main Project Fields: Landslide Impacts

Select the suitable topics. If no suitable one, you may add new field.

(1) Technology Development

A. Monitoring and Early Warning, B. Hazard Mapping, Vulnerability and Risk Assessment

(2) **Targeted Landslides: Mechanisms and Impacts**

A. Catastrophic Landslides, B. Landslides Threatening Heritage Sites

(3) Capacity Building

A. Enhancing Human and Institutional Capacities

B. Collating and Disseminating Information/ Knowledge

(4) Mitigation, Preparedness and Recovery

A. Preparedness, B. Mitigation, C. Recovery

3. Name of Project leader: Dr. Surya Parkash

Affiliation: (office and position): **Head, Knowledge Management & Communication Division, National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India**

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Core members of the Project

Names/Affiliations: (4 individuals maximum)

4. Objectives: (5 lines maximum; what you expect to accomplish?)

- Systematic compilation of socio-economic and environmental impacts data from the archival records of the different affected states in India
- Statistical analysis of landslide impacts (state-wise distribution)
- Identify and assess the significant factors affecting degree of landslide impacts
- Formulation of contextual and rational strategies for reducing landslide impacts and risks
- Suggest action plan for different stakeholders for prevention, mitigation and preparedness against landslides

5. Background Justification: (10 lines maximum)

Landslides have been frequently affecting the hilly terrains in India. But there are no credible systematic structured scientific or socio-economic and environmental data bases on landslides available from the affected states. It has been often very difficult to decipher and differentiate between the degree of incidences and impacts of landslides among the various states, due to lack of adequate and reliable data. Although some records are made in the revenue departments or by the concerned field agencies,

after a landslide event occurs and causes damages / losses of human lives, livestock, crops, land, buildings, roads, and other infrastructures / properties. Sometimes, the significant landslide events are reported in the media like newspapers, TV and related websites. All such landslides records or information are sparsely distributed across different stakeholders but no systematic efforts have been made to organize this data / information systematically for assessing the cumulative impacts of landslides in any particular district or state. However, this information is very important in planning and decision making for investments in avoidance, prevention, mitigation and preparedness against landslide risks. Hence, the present study proposes to initiate such an attempt to compile data base on landslide incidences and impacts in different states of India.

6. **Study Area:** The study will be done in all the states affected by landslides in India.

7. **Project Duration:** 1 year (2016)

8. **Resources necessary for the Project and their mobilization**

The resources for the implementation of project would include communication facilities like computers, internet, email, fax, phone and postal services for correspondence with concerned authorities, officials, organizations / departments / ministries to get available / existing data on landslides from the archival records and their consequences either directly or through meetings and workshops. A statistical software will be used for data analysis and interpretation. Finally the results will be published and disseminated along with recommendations and outcome of the study among the concerned stakeholders for promoting their capacity to reduce landslide risks and impacts in the affected areas. The overall budget will include expenses on the facilities, services and meetings / workshops for this work.

9. **Project Description:** Landslides have adversely affected the lives, livelihood, living places, livestock and life-styles of the people in the hilly terrains in India. But there have not been any systematic efforts to compile database on the impacts of landslides so that a rational and contextual approach could be adopted with due considerations of the socio-economic and environmental aspects. Hence, it is proposed to systematically compile the available / existing data on landslide impacts from the archival records in different states of India.

10. **Work Plan/Expected Results:** (20 lines maximum; work phases and milestones)

The work plan will include the following phases of activities

- a. Communication, Data Collection and Compilation – 3 to 4 months
- b. Re-organization of available data into a systematic structured database – 1 month
- c. Analysis of landslide database and assessment of the degree of landslide problems – 2 months
- d. Plotting and Visualization through graphs and maps for understanding the distribution and trends of landslide incidences and impacts – 1 month
- e. Identification and assessment of underlying risk factors for landslides – 1 month
- f. Formulation of strategies for reducing landslide risks based on the above studies – 1 month
- g. Suggestions / guidelines for implementation and sustenance – 1 month

h. Final Report Preparation and Publication – 2months

11. **Deliverables/Time Frame:** (10 lines maximum; what and when will you produce?)

The study will deliver credible systematic structured socio-economic data base on landslide incidences and impacts in different parts of India. It can also help in identifying the most important landslide events for the purpose of documentation of disasters.

12. **Project Beneficiaries:** (5 lines maximum; who directly benefits from the work?)

The major project beneficiaries will be the department of disaster management in the states and in the central government who can rely on this data and formulate their plans, policies and decisions based on the distribution of landslide incidences and impacts in their administrative territories. It will also help the scientists, engineers, environmentalists, economists and sociologists in understanding the landslide situations in these areas.

13. **References** (Optional): (6 lines maximum; i.e. relevant publications)

Parkash Surya and Nair S.S. (2008), "*National Disaster Statistical System – An Initiative for Disaster Information Management with particular reference to Landslides*", Proceedings of Central Building Research Institute (CBRI) Diamond Jubilee Conference on Landslide Management – Present Scenario & Future Direction, 10-12 February 2008, pp.55-64

Parkash Surya: "*Some Socio-Economically Significant Landslides in Uttarakhand Himalaya: Events, Consequences and Lessons Learnt*", Chapter 12 published in Mountain Hazards and Disaster Risk Reduction (eds.: Rajib Shaw and Hari Krishna Nibanupudi), Series on Disaster Risk Reduction – Methods, Approaches and Practices, published by Springer Japan, 2015, ISBN 978-4-431-55241-3, ISBN 978-4-431-55242-0(eBook), pp.211-232

Parkash Surya: "*Historical Records of Socio-economically Significant Landslides in India*", Journal of South Asia Disaster Studies, published by SDMC – Delhi, Vol.4, No.2, December 2011, pp.177-204, ISSN 0974-6463

Note: Please fill and submit this form **by 15 November 2015** to **ICL network**
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