

Application for World Centre of Excellence on Landslide Risk Reduction (WCoE) 2020 - 2023

1. **Name of Organization:** National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Government of India, New Delhi, INDIA

2. **Name of Leader:** Surya Parkash, Ph.D.

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Core members of the activities

Names/Affiliations:

1. Dr. Chandan Ghosh,

Professor & Head, Resilient Infrastructure Division (RIFD), NIDM

2. Ms. Harjeet Kaur, Young Professional, Centre for Coastal Disaster Risk Reduction (CDRR), NIDM

3. Mr. Anil Kathait, Young Professional, Centre for Hill Area Disaster Risk Reduction (HADRR), NIDM

4. Ms. Nitu Singh, Young Professional, Centre for Early Warning and Communication (EWC), NIDM

3. **Date of Submission of Application:** 14 August 2019

4. **Activity scale and targeted region:** National - India

5. **Short Title (10 words maximum):** *Documentation, Training and Capacity Enhancement on Landslides Risk Reduction and Resilience*

6. **Objectives for the initial 3 years: (5 lines maximum; what you expect to accomplish?)**

- Training on Landslides Risk Reduction and Resilience
- Networking, Linkage and Coordination to mainstream Landslide Risk Reduction and Resilience including SFDRR, SDGs, New Urban Agenda, and Climate Action Plans across different sectors at various levels
- Integrating Landslide Risk Management with Development, Climate Change Adaptation, Urbanization and Public Safety
- Community involvement in landslides risk management
- Documentation of Socio-economically and environmentally significant landslides including good and bad practices with respect to landslides management and hill area development for disaster risk reduction and resilience

7. **Background Justification: (10 lines maximum)**

NIDM has been mandated by Parliament of India for training and capacity building on disaster management in India. It has a multi-disciplinary team of faculty members (geologists, engineers, sociologists, economists, planners, environmentalists, administrators and other related disciplines etc.) specializing on various aspects and dimensions of disaster management. The Institute has been regularly organizing training courses related to landslides risk management at national level

as well as state level, based on a training module on the subject developed by the Institute. The Institute is involved in preparation of plans, policies and guidelines for disaster management (including landslides) at national level and also supporting the States in their strategies for disaster risk reduction and resilience. Further, NIDM has also organized international programmes jointly with USAIDS, USFS, UNHCR, UN ISDR, UNDP, UNICEF, ADPC-Bangkok, FEMA-USA, ADRC-Japan, EMI-USA, PWRI-Japan, NILIM-Japan, ITC-Netherlands and various other international organizations / agencies in different areas of disaster management.

8. Resources available for WCoE activities

NIDM has regular faculty members supported by young professionals and consultants to assist in implementation of activities related to documentation, training and capacity enhancement on disaster risk reduction and resilience among different stakeholders throughout India. The Institute's activities are supported by several partners including international organizations, national and state level institutes / line departments as well as National and State level Disaster Management Authorities. The Institute library has a very good resource base of books, journals, periodicals, video CDs, cassettes and documentaries etc. related to disaster management. The Institute has good facilities for organizing training programmes and workshops with state-of-art IT infrastructure in the training halls and computer centre. It is working on preparation of training of trainers' module in landslides risk management. It has already prepared a directory of organizations and resource persons working on different aspects of landslides in India as well as the annotated bibliographic database of publications related to landslides.

The Institute is fully funded by Government of India and executes several national disaster management and capacity building projects / schemes. It has links with several national and international organizations for collaborative programmes on disaster management. It has its own web server for running online training programmes (www.onlinenidm.gov.in) and self study courses (www.nidmssp.in) on disaster management. Presently online trainings are organized in collaboration with World Bank Institute and GFDRR.

As a member of ICL/IPL-GPC, the Institute had the proud privilege of being conferred a WCoE on LDR (2011 – 2014) and has made significant contributions as reported in its progress reports. The Institute would again like to host the WCoE on Landslide Disaster Reduction (2020 – 2023) to involve the international experts and experiences in the process of documentation, training and capacity enhancement on landslides risk reduction and resilience. It would be able to share its literary resources and infra-structure for supporting such activities related to landslides risk management, exchange experiences including organization of national and international trainings/conferences. It expects to serve better and more effectively / efficiently with contributions from international consortium on landslides.

9. Description of past activities related to risk reduction of landslides and other related earth system disasters (30 lines maximum)

NIDM was conferred the recognition as the World Centre of Excellence on Landslides Disaster Reduction during the period between 2011 and 2014 by ICL and IPL ISDR. It has been organizing education, training and capacity enhancement related activities on various kinds of disasters with particular emphasis on geo-hazards like earthquakes, landslides and flash floods. The Institute has also been involved with planning, policy development and formulation of guidelines for landslide

by the National Disaster Management Authority (NDMA), Government of India. It plays a major role in networking, linkage and coordination among different stakeholders and resources. The Institute hosts a website for sharing information on resources for disaster management through a portal (www.idrn.gov.in) and provides free access to its publications and presentations through its website www.nidm.gov.in

The Institute established a Centre of Excellence on Landslides at Disaster Management Cell in the Dr. R.S. Tolia Uttarakhand Academy of Administration, Nainital in the Uttarakhand State of the Himalayan region to enhance the national efforts in documentation, training and capacity building on landslides. It works to bring knowledge into practice and develops indigenous knowledge / resources for reducing disaster risks. The Institute has also developed a national plan for capacity building and development of human resources for disaster management in the country. It has prepared training designs and modules for landslides risk management as well as other disasters. It has also coordinated for development of a national database on landslides.

10. Planned future activities/Expected Results: (20 lines maximum, work phases & milestones)

The Institute has a vision to become a Centre of Excellence in the field of Disaster Management. The Institute's annual planned activities related to training programmes and conferences can be seen at its website www.nidm.gov.in. The main activities related to landslides are national / state level training programmes, national workshops/conferences and carried out joint activities on landslides studies jointly with NILIM and PWRI, Tsukuba, Japan as part of Indo-Japanese Action Plan. It is also planned to evolve some joint training programme with ICL under the IPL project-166. In addition to landslide trainings, there are many other training programmes on Community Based Disaster Risk Management, District Disaster Management Planning, Earthquake Risk Management, Risk Analysis etc. NIDM has also worked on knowledge web-portal namely, India Disaster Knowledge Network (IDKN) which also forms a part of the South Asia Disaster Knowledge Network (SADKN).

It is expected that Institute's efforts in different directions with multiple perspective and integrated approach would lead to development of an effective and efficient disaster risk management system and strategies leading to drastic reduction in disaster damages / losses. It would try to achieve safe and sustainable development of structures, infrastructure, facilities and services in this region under changing climatic conditions and accelerated pace of urbanization. A better informed, trained and prepared community would not only be able to assess, prevent, mitigate / resist and respond to the impacts of landslide hazards but also help in reducing the vulnerabilities of elements exposed to landslide hazards. It will promote the applicability of disaster resistant technologies and practices which will ensure greater safety from the disasters and also ensure reduced chances of disaster incidences. The Institute craves to cater to the needs of the people of this region with specific emphasis on disaster risk reduction and resilience following SDGs, SFDRR, New Urban Agenda and Climate Change Adaptation / Agreements.

11. Beneficiaries of WCoE: (5 lines maximum; who directly benefits from the work?)

- Central and State / Local Governments in India
- Ministries / Departments / Organizations / Institutes / Agencies working on landslides
- Administrators, Developers, Planners, Policy and Decision Makers
- Professionals, Academicians, Researchers, Disaster Managers and Authorities etc.
- Line Departments, Community and Humanity

12. **References: 10 lines maximum, i.e. relevant publications, international/regional/national recognition supporting items 9-10.**

1. Member, Core Group, National Policy and Guidelines for Management of Landslides and Avalanches, National Disaster Management Authority, Govt. of India
2. Member, Board of Representatives, International Consortium on Landslides and Leader, World Centre of Excellence on Landslide Disaster Reduction at NIDM (2011-2014)
3. Member, Curriculum Development Committee for Disaster Management at All India Technical Council of Education (AICTE) as well as at University Grants Commission (UGC), India
4. Authored the Training Module on Comprehensive Landslides Risk Management, NIDM (both English and Hindi versions)
5. Received Skoch Order of Merit Award for Awareness Creation & Sensitization in Disaster Management through E-learning (including a self study course on landslides management at www.nidmssp.in), after qualifying in India's Best Governance Projects for the year 2014
6. Kaur, H., Gupta, S., Parkash, Surya, Thapa, R., (2018). Application of Geospatial technologies for multi-hazard mapping and characterization of associated risk at local scale published in *Annals of GIS*. 24:1. <https://doi.org/10.1080/19475683.2018.1424739> Taylor and Francis.
7. T. K. Saha Roy and Dr. Surya Parkash , 2016: "A tragic landslide event at Malin village in 2014 - A retrospective development in eco-sensitive area, a part of the Western Ghat, India", published in the *Journal on Disaster Response & Management*, December 2016, Volume-4, Issue-1, ISSN: 2347-2553, Lal Bahadur Shastri National Academy of Administration, Mussoorie, Uttarakhand, India.
8. Parkash Surya and Verma Tanushree, 2016: "Convergence of Climate Change Adaptation and Disaster Risk Reduction for Safer Sustainable Development", in *Geo-Environmental Hazards in Himalaya*, 2016, pp.83-100, published by Angel Publication, New Delhi, ISBN: 978-81-921354-3-4
9. Parkash Surya, 2015: "A Study on Flash Floods and Landslides Disaster on 3rd August 2012 along Bhagirathi Valley in Uttarkashi District, Uttarakhand", published by World Centre of Excellence on Landslide Disaster Reduction, National Institute of Disaster Management, Ministry of Home Affairs, Government of India, New Delhi, 2015, ISBN 978-93-82571-10-0
10. Parkash Surya and Saha Roy T.K, 2015: "Directory of Institutions and Resource Persons for Landslide Management In India", published by World Centre of Excellence on Landslide Disaster Reduction, National Institute of Disaster Management, Ministry of Home Affairs, Government of India, New Delhi, 103 pages, ISBN 978-39-82571-12-4 <http://nidm.gov.in/PDF/pubs/directory%20landslide.pdf>
11. Parkash Surya, 2015: "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
12. Parkash Surya, 2015: "Tools, Techniques and Technologies for Capacity Enhancement to Reduce Landslide Risks and Promote Community Resilience", *Proceedings of International Conference on Landslides and Slope Stability (SLOPE 2015) - Advancement of Research, Practice and Integrated Solutions on Landslides*, held at Bali, Indonesia during 27-30 September 2015, pp.3-1 to 3-8, ISBN 978-602-71964-5-2, published by Parahyangan Catholic University, Bandung, Indonesia

13. Parkash Surya and Kathait Anil, 2014: "A Selected Annotated Bibliography and Bibliography on Landslides in India" published by World Centre of Excellence on Landslide Disaster Reduction, National Institute of Disaster Management, Ministry of Home Affairs, Government of India, New Delhi, 2014, 172pages, ISBN: 978-93-85571-11-7, <http://nidm.gov.in/PDF/pubs/bibliography%20landslide.pdf>
14. Parkash Surya, 2013: "Education, Training and Capacity Building for Mainstreaming Landslides Risk Management", Landslide Science and Practice (Editors: Claudio Margotinni, Paolo Canuti and Kyoji Sassa), Springer Verlag Berlin Heidelberg, 2013; Volume 7: Social and Economic Impact and Policies, Part IV: Landslide Education, Training and Capacity Development, pp.257-264, ISBN: 978-3-64-31312-7, ISBN:978-3-642-31313-4 (eBook)
15. Parkash Surya, 2013: "Earthquake Related Landslides in the Indian Himalaya: Experiences from the Past and Implications for the Future", Landslide Science and Practice (Editors: Claudio Margotinni, Paolo Canuti and Kyoji Sassa), Springer Verlag Berlin Heidelberg, 2013; Volume 7: Social and Economic Impact and Policies, Volume 5: Complex Environment, pp.327-334, ISBN: 978-3-64-31426-1, ISBN: 978-3-642-31427-8 (eBook)
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17. Parkash Surya, 2012: "Capacity Development for Landslides Risk Reduction in India - A National Initiative for Loss Reduction", Chapter-26, V-6, Part-V: Risk Management and Capacity Development, Book: Landslides - Global Risk Preparedness by Kyoji Sassa, B. Rouhban and S. Briceno (Eds.), Springer-Verlag Berlin Heidelberg, 2012, pp.369-384, 978-3-642-22086-9 (Print) 978-3-642-22087-6 (Online)
18. Parkash Surya, 2012: "Training Module on Comprehensive Landslides Risk Management", National Institute of Disaster Management, New Delhi, 2012, 282pages, ISBN: 978-81-924336-9-1, <http://nidm.gov.in/PDF/modules/Landslide.pdf>