Application Form for World Centre of Excellence on Landslide Risk Reduction

1. Name of Organization: Asian Disaster Preparedness Center (ADPC), Thailand

2. Name of Leader: Mr. N.M.S.I. Arambepola
   
   Affiliation/Position: Deputy Executive Director, ADPC.

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Core members of the activities/Names/Affiliations: (4 individuals maximum)

a) Dr. Peeranan Towashiraporn, Department Head, Disaster Risk Assessment and Monitoring, ADPC
b) Dr. Senaka Basnayake – Department Head, Climate Change and Climate Risk Management/Climatologist, ADPC
   
c) Mr. Atiq Kainan Ahmed- EWS specialist, ADPC
d) Dr. Krishna Chandra Devkota , Engineering Geologist, ADPC

3. Date of Submission of Application- 28.06.2013

4. Activity scale and targeted region- Regional and National

5. Short Title (10 words maximum) characterizing past and planned activities;
   
   “Promoting Knowledge, Innovations and Institutions with South-South focus through a Regional network of Landslide Risk Reduction in Changing Climate Scenario in Asia”.

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

   ADPC was selected as one of the WCoE for the period of 2008-2014. With such recognition ADPC continued activities for promoting landslide risk management in Asia
   
   In the next period 2014-17, ADPC would continue to have a special focus on promoting good practices for landslide risk management in a changing climate scenario to save lives, property with following specific objectives:
   
   ➢ Promote innovative practices for Landslide risk management in Asia
Promote concept of landslide monitoring, early warning through pilot initiatives in partner countries:
in particular in adopting methodologies such as establishing precipitation threshold values for
landslides in different geological materials
Facilitate a dialogue among Landslide risk reduction practitioners, policy makers, academia and
disaster management community through organization of networking events for enhancement of
knowledge on Landslide Risk Reduction
Support learning opportunities for partners in higher education.

7. Background Justification: (10 lines maximum)
ADPC has been engaged in building the landslide risk management capacity of the partner countries in Asia for
more than a decade. The ADPC is facilitating a program with a support of different agencies/universities/research
institutions in more than 11 countries (Bangladesh, China, India, Indonesia, Lao PDR, Nepal, Pakistan, Philippines,
Vietnam, Sri Lanka and Thailand) to advocate for good practices for landslide risk management. The limited
number of interventions in landslide mitigation and preparedness in the Asian region was the rationale behind the
initiation of this program: namely the Asian Program for Regional Capacity Enhancement for Landslide Impact
Mitigation (RECLAIM). This program concentrated on raising awareness of landslide risk management, promoting
innovative practices, sharing experience among network partners, promoting sound practices for landslide
monitoring and early warning and engaging in capacity building on landslide risk mitigation. The activities of
ADPC will have an added value and recognition by becoming a World Center of Excellence.

8. Resources available for WCoE activities:
The interventions of the program are mainly supported through the cooperation agreement between Norwegian
Ministry of Foreign Affairs (MFA) and ADPC. In addition ADPC has obtained funding to undertake various
activities through projects in Bangladesh, Lao PDR, Thailand and Myanmar. Norwegian Geo-Technical Institute
(NGI) has been providing support for organizing networking events and training programs. In addition technical
support to the partner institutions for activities of the program is provided by ADPC through in-kind contributions.
Through such initiatives ADPC intend to promote South-South cooperation for adopting a proper landslide risk
management practice in Asia.

9. Description of past activities related to risk reduction of landslides and other related earth system disasters
(30 lines maximum)
ADPC has implemented under the Asian Program for Regional Capacity Enhancement for Landslide Impact
Mitigation (RECLAIM) to promote landslide risk reduction activities in partner countries with the technical and
financial support by the Government of Norway. The activities of the program included organizing regional and
national level experience sharing workshops and training programs on landslide risk mitigation. To date, ADPC has
organized 08 such Regional workshops in different partner countries annually.

The landslide risk mitigation demonstration projects were carried out in Philippines, Thailand, and Sri Lanka during
2006-2012. The pilot demonstrations had been carried out in Bagio city – Philippines and Patong city, Puket in...
Thailand during 2006-2009 and in Sri Lanka during 2009-2012. The objective of conducting these demonstration projects was to enhance the knowledge and skills of local professionals and decision-makers on investigation, instrumentation and structural mitigation in landslide prone areas and share the experiences at the regional platforms as a learning process.

Some of the Asian countries have not updated the network of rain gauges maintained by the Meteorological Department for a considerable time due to resource constraints. The data flow to the community at risk is not direct and slow and therefore it is difficult to provide location specific landslide early warning through such national network. Hence, with the idea of supplementing additional information to community directly, ADPC with the support of Norway, has donated movable high performance rain gauges equipped with an automatic information flow to nodal agencies and selected community leaders in Bangladesh, Bhutan, Myanmar, Sri Lanka etc. With such initiative ADPC has helped them to demonstrate development of local “precipitation thresholds” so that the communities can take timely action in the event of landslide trigger.

ADPC has implemented a project to introduce a school base rainfall data collection system in Sri Lanka which is expected to help collecting rainfall data using existing resources relatively quicker. The system also helped in more reliable community level early warning for landslide risk reduction, flood vulnerability reduction, drought risk management etc. The project helped to develop a landslide early warning system on the basis of rainfall threshold limits for identified areas. Schools and the children were recognized as animators to create awareness at the community level on landslide risks.

ADPC organized three regional meetings for discussion and promotion of early warning for landslide in Asian Region. The main objectives of the workshops were to share the country experience on setting up different early warning systems, to share the different mechanisms in monitoring of landslides and discuss approaches for predicting the behavior of landslides. The workshops were held from 25-27 November 2009 in Bangkok, Thailand and 1-3 December 2010 in Dhaka and in 26-28 January 2012 in Yangon, Myanmar. The workshops have been attended by representatives of partner countries (Bangladesh, Bhutan, China, Nepal, Myanmar, India, Indonesia, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam). Other than ADPC; NGI representatives also participated in the workshops.

Another project implement during 2011-2012 under the Comprehensive Disaster Management Program of Bangladesh funded by UNDP, ADPC has made an attempt to model the landslide hazards in slopes in Cox’s Bazaar municipal area. This municipality is susceptible to potential slope failures triggered by heavy rainfall and project also aimed at introducing a community-based early warning system as a pilot initiative in Bangladesh. Another objective of the project is to use the project experience as a model for landslide disaster risk reduction in urban areas of Bangladesh.

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

In the initial three year following activities would be conducted:
ADPC will implement a project in Lao PDR for developing a framework for a countrywide landslide inventory for critical national and provincial roads during 2013-2015. This framework will take into consideration landslide hazard and associated risk, and make recommendations on the identification and monitoring of high-risk areas and priority mitigation measures.

- Developing the methodology for landslide inventory and hazard assessment
- Field work and undertaking the pilot initiative to come up a framework - 2013
- Up scaling the success of the pilot initiatives to cover critical national and provincial roads-2014-2015
- Capacity building of national agencies – 2015
- Experience sharing meetings- 2015

Promote the concept of landslide monitoring and early warning in countries in Asia through the activities of the network( Pilot projects are planned in Bangladesh, Bhutan, Nepal, Thailand and Sri Lanka) (1st – 3rd Year);

Activities in partner countries of the program to promote community based landslide risk management interventions(1st and 2nd Year)

Providing resource inputs for development and gap assessment of Landslide EW systems(1st and 2nd Year);

Organization of regional meetings annually to facilitate dialogue among Landslide risk reduction practitioners, policy makers, academia, disaster management authorities (1st, 2nd and 3rd Years)

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

The activities carried out by ADPC are intended to contribute to landslide risk management practice in Asia.

The direct beneficiaries of ADPC initiated activities are the Government Ministries, Mandated institutions, academia, researchers and the practitioners involved in landslide risk reduction activities in the target countries.

The indirect beneficiaries are the communities living in the landslide risk prone areas and the civil society at large.

Through such initiatives ADPC intend to promote South-South cooperation for adopting a proper landslide risk management practice in Asia.

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

- [http://www.adpc.net/v2007/Programs/UDRM/PROGRAMS_PROJECTS/RECLAIMIII/Participating%20Institutions/Participating_Institutions.asp](http://www.adpc.net/v2007/Programs/UDRM/PROGRAMS_PROJECTS/RECLAIMIII/Participating%20Institutions/Participating_Institutions.asp)


h.  Recommending regional rainfall threshold values for early warning of landslides. Udeni P. Nawagamuwa(1), Rajinder K. Bhasin, Oddvar Kjekstad, N.M.S.I. Arambepola, Proceedings of the World Landslide Forum 2, Italy

i.  Examples of Cost Effective Practices for Landslide Monitoring for Early Warning in Developing Countries of Asia, R.M.S. Bandara, Rajinder K. Bhasin, Oddvar Kjekstad and N.M.S.I. Arambepola, Proceedings of the World Landslide Forum 2, Italy