



## GRANTS PROGRAMME 2013

### APPLICATION FORM

#### (Valid for ICSU Members only)

(Applications must be submitted electronically to [rohini@icsu.org](mailto:rohini@icsu.org))

**Deadline for submission is 1 December 2012**

Lead applicants\* may submit no more than one application. **A ceiling of Euro 30,000 is imposed on all applications.**

**Project title: LANDSCAPE-LAC: Landslide Networking for Disaster Studies, Capacity Building, Partnership and Engagement in Latin America and the Caribbean**

**Requested amount (€):30,000**  
(Maximum Euro 30,000)

#### **Applicants:**

Lead Applicant (Organization): International Geographical Union (IGU)

Contact name & Designation: Prof. Vladimir Kolosov, President IGU

Email address: vladimirkolosov@gmail.com

Supporting Applicant(s) (Organization(s):

- (1) ICSU Scientific Committee: Integrated Research on Disaster Risk (IRDR).
- (2) ICSU Regional Office: ICSU-ROLAC
- (3) Mexican Academy of Sciences

Contact name(s) & Designation:

- (1) Sálvano Briceño - Committee Chair.
- (2) Prof. Manuel Limonta - Director
- (3) Dr. José Franco, President

Email address:

- (1) salvanob@gmail.com
- (2) manuel.limonta@icsu-latin-america-caribbean.org
- (3) pepe@astro.unam.mx

---

<sup>0</sup> (ICSU Scientific Unions, Interdisciplinary bodies)

How will this proposal address ICSU's strategic priorities as defined for the grants programme? (max. 10 lines):

The project addresses five strategic priorities 2012-2017:

1. Planning and coordinating research, Disaster Risk theme and actions (integrated landslide risk).
2. Science for policy activities, Commission on Sustainable Development and the UN Conference on SD (actions in landslide integrated risk research for Sustainable Development will be undertaken by the Latin America scientific community).
3. IPCC assessments (major landslide disasters are triggered by precipitation, and capacity building would increase awareness and decrease vulnerability).
4. Universality of Science (ICSU-ROLAC presence will be strengthened and the science-society link stimulated).
5. ICSU's structure-function issues (activities will engage the participation of national members, the IRDR scientific committee and the ICSU-Latin American office).

## **Project plan (max 3 pages)**

State clearly the objectives of the project and the beneficiaries. Elaborate on its relevance to the review criteria – e.g., innovative nature, interdisciplinary and international nature, visible and measurable outputs, relevance to the programme priorities and priorities of ICSU Regional Offices. If the activity targets young scientists, women scientists, and/or scientists from developing countries – please refer to it here. [N.B. ICSU will not normally support travel grants to attend standard scientific meetings and conferences, nor support fellowship programmes.]

- Objectives (1/3 page)

The objectives of this project are based on an integrated research perspective for landslide disaster risk. They are as follows:

1. Development of landslide regional networks with commitment for understanding risk as a socially constructed process.
2. Engagement of young scientists in integrated landslide risk research.
3. Inducing a scientific multi- and trans-disciplinary approach for integrated landslide risk research.
4. Development and implementation of capacity building.
5. Contributing to the dissemination and application of IRDR methodologies by carrying out two workshops on forensic landslide disasters investigations (FORIN).
6. Strengthening collaboration on integrated landslide disaster risk research in Latin America.

- Project description (2 pages)

### **I. Introduction**

This project recognizes the need for integrated landslide research for disaster risk, and particularly the necessity to promote capacity building for young scientists in Latin America by considering the shift of disaster paradigm to recognize the “unnaturalness” of disasters (Maskrey, 1993).

### **II. Background**

Notwithstanding the lack of certainty in landslide disasters data, it is important to recognize their significance due to human and economic losses as well as their environmental impact. According to the EM-DAT database (OFDA/CRED Database), during the period 1900-2011, landslide disasters have caused more than 64,000 deaths. The largest number of people affected by landslides has been in Asia, followed by the Americas, Europe, and Africa respectively. During the period 2000 to 2011, the population affected by landslides worldwide amounted to 4,041,000 people, in other words, one third of the total registered since 1900.

Landslide disasters have major impacts in developing countries due to the social vulnerability of communities and the absence of integrated risk research. In the last several decades landslide disasters in Latin America triggered by both precipitation and earthquakes have increased considerably. Therefore, scientific contributions towards reducing the vulnerability of exposed communities to landslides are quite urgent. This project would

contribute to the activities and challenges of the International Consortium on Landslides (ICL), which was formed in January 2002, and a year later, founded a Cooperation Programme on Landslide Risk Mitigation for Society and the Environment with the support of UNESCO and the Kyoto University UNITWIN Network (University Twining and Networking).

ICL established the International Programme on Landslides (IPL) by adopting the 2006 Tokyo Action Plan with the support of seven global stakeholders. Promotion of IPL has taken place since 2006 through a Memorandum of Understanding with the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Meteorological Organization (WMO), the Food and Agricultural Organization of the United Nations (FAO), the United Nations International Strategy for Disaster Reduction (UNISDR), the United Nations University (UNU), the International Council for Science (ICSU), and the World Federation of Engineering Organizations (WFEO).

ICL organized the First and Second World Landslide Forums at the United Nations University, in Tokyo (2008) and at the Food and Agriculture Organization of the United Nations, Rome, (2011) respectively. In 2014, the Third World Landslide Forum will take place in Beijing.

During the ICL 10th anniversary meeting, in Kyoto, Japan in January 2012, the ICL Strategic Plan 2012-2021 was adopted. As an international non-governmental and non-profit making scientific organization, ICL aims to promote landslide research for the benefit of society and the environment, and capacity building, including education, notably in developing countries. Additionally, the Strategic Plan includes integrating geosciences and technology within the appropriate cultural and social contexts in order to evaluate landslide risk in urban, rural and developing areas including cultural and natural heritage sites, as well as to contribute to the protection of the natural environment and sites of high societal value. Combining and coordinating international expertise in landslide risk assessment and mitigation studies; and promoting a global, multidisciplinary Programme on landslides are regarded as a significant challenge.

ICL has established five thematic and three regional networks to promote the thematic and regional activities of the International Consortium (ICL) on Landslides and the International Programme on Landslides (IPL). One of the three regional networks is the ICL-Latin-American Network (ICLLAN). ICLLAN aims to (a) set up a database of experts on landslides in the region; (b) identify the areas of landslide expertise of the participants; (c) establish a programme of necessities and priorities to be addressed for the region; (d) organize a summer/autumn/winter school of landslides for young students/researchers, and different landslide workshops; (e) strengthen activities associated with landslide capacity building within Universities and governmental institutions; and (f) facilitate scientific support during and after landslide disasters.

ICCLAN is committed to strengthening collaboration among Latin American countries in the field of integrated disaster risk research on landslides from a multi- and trans-disciplinary approach. That commitment will be realized by organizing two workshops on forensic disaster investigations of landslides (FORIN-LAND), the main goal of this project (LANDSCAPE-LAC).

### III. Workshops on FORIN-LAND

Disasters are not natural. However, a considerable amount of disaster investigations are still concentrated either on hazards or vulnerability. The IRDR-Forensic Investigations of Disasters (FORIN) working group has established different scientific objectives, among which, “changing paradigms, by shifting responsibility from nature, the physical environment and distributing it accordingly to real circumstances and conditions involving all sectors of society including the individual and the collective”, can be regarded as a challenging goal towards achieving a more realistic framework for Disaster Risk Reduction. The FORIN model comprises four major methodological approaches to understand the social construction of risk: A. Critical cause analysis; B. Meta-analysis; C. Longitudinal analysis; and D. Scenarios of disaster. By incorporating these perspectives, FORIN aims to comprehend the fundamental causes of disasters and to engage any and all types of specialists needed to undertake multi- and trans-disciplinary risk investigations (Burton, 2010; Fujiwara, 2011; Nakasu, 2011; Sagara, 2011; IRDR\*).

One of the main activities to be carried out within the LANDSCAPE-LAC project is focused on capacity building for both scientists and young scientists based on the understanding of disaster risk as a social construction, and therefore, acquaintance with and analysis of FORIN landslide disaster cases becomes a meaningful endeavor.

To fulfill such requirements the organization of two workshops is planned. The first one will include a training programme on landslide hazard evaluation, and on the methodology applied by the IRDR-FORIN working group to guide leaders from different countries to carry out landslide research integrated study cases. In the second workshop, activities will be mostly concentrated on the presentation and evaluation of results derived from each of the study cases developed by the participants (multi- and trans-disciplinary team work based). Participants will be required to get involved in both regional workshops. E-networking feedback will take place between the two workshops. Facilities for networking will be constructed also as a part of the project.

#### \*PRINCIPAL REFERENCES

(Investigations developed by IRDR based on FORIN)

1. Burton, I, 2010, Forensic Disaster Investigations in Depth: A New Case Study Model, *Environment*, 52, 5, 36-41.
2. Fujiwara, N., 2011, Scenario Analysis of Mega Earthquake and Tsunami in Central Japan, IRDR International Conference, Beijing.
3. IRDR, 2011, Forensic Investigations of Disasters, FORIN-Report, available at: <http://www.irdrinternational.org/>
4. Maskrey, A., 1993, Los desastres no son naturales, La Red, Red de Estudios Sociales en Prevención de Desastres.
5. Nakasu, T., 2011, Meta and Longitudinal Analyses of High Death Rates of Some Particular Municipalities in GEJET, IRDR International Conference, Beijing.
6. OFDA/CRED Database, <http://www.emdat.be/>
7. Sagara, J., 2011, Critical Cause Analysis of Delayed Evacuation in the Great East Japan Earthquake and Tsunami, IRDR International Conference, Beijing.

- Relevance to review criteria 1/3 page)

LANDSCAPE-LAC focuses on the need to develop and implement integrated landslide research for disaster risk from a multi- and trans-disciplinary approach considering that scientific achievements must be visibly useful for societies. Understanding risk and investigating the natural and social dimensions of disasters are critical processes for disaster risk reduction. Consequently, integrated risk research can be regarded as a key factor for sustainable development, as disasters quite frequently have become an obstacle to development, particularly in vulnerable countries exposed to hazards. As such, strengthening capacity building and promoting disaster risk research on landslides would help to increase resilience and awareness in the Latin-American region. That goal would, undoubtedly be best achieved by joining the efforts of different parties of the ICSU family (IRDR, ICSU-ROLAC, MAS, IGU).

- Targeting of priority groups (1/3 page)

1. Young scientists will be one of the main targets to participate and to be engaged with integrated risk research on landslides.
2. Young scientists and scientists from Central America and the Caribbean will be particularly welcome to take part of the activities, since the impact of landslide disasters has been widely felt in this region and there is little scientific development in the landslides field.
3. Scientists from Latin-America whose background is centered on “pure science” also would be considered as a priority group to be involved in the understanding, practice, and implementation of FORIN methodology, as the significance of integrated, multi- and trans-disciplinary approaches is highly valued for the development of this project.
4. Scientists from different disciplines will be an essential part of the project.

### **Work plan (max 1 page)**

Specify time schedule, major events, methodologies to be used, leadership and management structure, and key milestones in the implementation process, etc.

Phase 1 March – May, 2013:

Initial planning of the LANDSCAPE-LAC project will take place in this phase. It will involve the identification of a core team from different countries to lead the activities. The core team will be in charge of networking, as well as the preparation and logistics of the Landslide FORIN workshops to occur in summer 2013 and spring 2014. Their work will yield the Workshop call and identification of participants.

Phase 2 June – September, 2013:

First Landslide Disasters Workshop, FORIN-LAND (training).

Date to be decided based on the availability of FORIN teaching experts (IRDR methodology).

Arrangements and networking.

Preparation of materials.

Two possible venues have been identified for the First workshop: Mexico City (at the Mexican Academy of Sciences-ICSU-ROLAC facilities) including landslide fieldwork in the province of Puebla (four hours drive from Mexico City), or at the Science and Arts University of Chiapas (UNICACH), in Tuxtla Gutiérrez, Chiapas, México (training and fieldwork in the same place).

Phase 3 October, 2013 – March, 2014:

Development of FORIN-LAND study cases by participants in their respective countries (implementation phase).

Permanent international networking on FORIN-LAND.

Dissemination of activities.

Preparation of publications.

Phase 4 April, 2013:

Second Landslide Disasters Workshop, FORIN-LAND (follow-up/results).

Results and assessment- FORIN-LAND study cases by participants.

Recommendations for future work and FORIN-LAND research improvements.

Dissemination of results.

Publications.

### **Expected results (max 1/2 page)**

What outcomes are expected from the project: publications (including audience and dissemination plan), new programme initiatives, etc? Explain how an ICSU grant can strengthen your own overall programme of work, e.g., leveraging funds from other sources, enhancing visibility, enhancing impact or role of your organisation. Assess potential follow-on action that may result from the activity.

Platform of landslide integrated risk networking.

Publication of results in scientific and popular science journals.

Wide dissemination of the progress and results of LANDSCAPE-LAC project.

Contributing to the implementation of the IRDR Programme.

Solid dissemination of FORIN methodology in Latin America (Spanish).

Enhancing ICSU and IRDR visibility.

Promoting the application of FORIN in particular landslide disaster cases.

Encouraging Integrated Research on Landslide Risk in Latin America.

### **The Role of Supporting Applicants and Other collaborative partners (max 1/2 page per partner)**

The role of each supporting applicant (minimum one from the ICSU family) (and other partner organizations such as UN agencies, if relevant), should be clearly described.

- Partner 1

ICSU Scientific Committee: Integrated Research on Disaster Risk (IRDR). IRDR will provide the scientific expertise in Risk and Forensic Investigations of Disasters methodology (FORIN) to be implemented in landslide risk research. Moreover, it will facilitate access to the existing worldwide FORIN investigations.

- Partner 2

ICSU Latin American Regional Office: ICSU-ROLAC will provide assistance through its network of disaster experts in the region and would make its best to try to arrange and facilitate joint meetings.

- Partner 3

Mexican Academy of Sciences. MAS will provide information on contact networks of scientists and young scientists to be invited to participate in the LANDSCAPE-LAC



# ICSU

International Council for Science

activities. Additionally, access to MAS's facilities will be given in order to organise scientific meetings at different stages. Interactions between MAS and LANDSCAPE-LAC activities will be sought.

- Partner 4

<b>Project budget</b>		
Amount requested from the ICSU Grants Programme:		€30,000
Estimated breakdown of cost		
Research / Content	€0	
Travel / Accommodation for Meetings	€32000	
Training / Teaching	€2500	
Planning / Coordination	€2500	
Other (specify): fieldwork logistics during the first workshop	€3000	
Amount provided by the applicants:		€5000
Amount provided from other sources (specify): under negotiations		€5000



## PROJECT SUMMARY FOR ICSU WEBSITE

Please provide a brief summary (300 words) of the project. This will be published in the ICSU website, should a grant be awarded.

- Project Summary

Landslide disasters have major impact in developing countries due to the social vulnerability of communities and the lack of integrated risk research. In the last decades landslide disasters in Latin America triggered by precipitation have increased considerably. Therefore, scientific contributions towards reducing vulnerability of exposed communities to landsliding are quite urgent. This proposal recognizes the need of integrated landslide research for disaster risk, and particularly the necessity to promote capacity building for young scientists in Latin America by considering the shift of disaster paradigm in terms of the “unnaturalness” of disasters. The objectives of this project are as follows: (1) Development of landslide regional networks with commitment for understanding risk as a socially constructed process; (2) Engagement of young scientists in integrated landslide risk research; (3) Inducing a scientific multi- and trans-disciplinary approach for integrated landslide risk research; (4) Development and implementation of capacity building; (5) Contributing to the dissemination and application of IRDR methodologies by carrying out two workshops on forensic landslide disasters investigations (FORIN); and (6) Strengthening collaboration on integrated landslide disaster risk research in Latin America.

12 November 2012

**Dear Dr. Wilson,**

I am writing to provide my support to the proposal to ICSU entitled ***“LANDSCAPE-LAC: Landslide Networking for Disaster Studies, Capacity Building, Partnership and Engagement in Latin America and the Caribbean”***, submitted by the International Geographical Union (IGU), has the full support of IRDR. Enhancing landslide networking and advancing integrated research in Latin America and the Caribbean is essential in the design of regional programmes for risk reduction.

The 2011 IRDR Beijing Declaration recognized that “Promoting and advancing research on natural, social, engineering and technology aspects of disaster risk in an integrated environment and enhancing team efforts in hazard and disaster risk research, building on existing research networks and initiatives, and integrating various stakeholder needs at all levels”, as well as “Promoting a holistic approach in natural hazards and disasters risk education and training”, represented major tasks for scientific communities in order to build resilience and reduce vulnerability. In that regard, while a number of initiatives, in Latin America and the Caribbean have been developed to address risks associated to hazards such as earthquakes, volcanic eruptions, tropical storms and floods; less attention has been given to landslides that increasingly affect more communities.

**Dr. Steven Wilson**  
**Executive Director**  
**International Council for Science (ICSU)**  
**5, rue Auguste Vacquerie**  
**75016 Paris, France**



# IRDR

Integrated Research on Disaster Risk

---

As a response to such need, and in the framework of the International Consortium on Landslides (ICL) and its International Programme on Landslides (IPL), LANDSCAPE-LAC aims at identifying experts and specialized institutions in the region working on landslides, and developing a scientific plan to address necessities and priorities in this field in the forthcoming years. Special attention is given to capacity building through the organization of summer/winter schools for young students and researchers, and workshops that are also seed regional forums to foster scientific collaboration and integrated research on risk, hazards and vulnerability. Such tasks are aimed at contributing to strengthening the research and education capacities of Universities and policy-making and advocacy functions of governments at all levels, from local to national.

As you may be aware, the proposal has also the support of the ICSU-ROLAC office, thus additionally contributing to reinforcing direct collaboration between IRDR and ICSU-ROLAC and enhancing science and policy collaboration in the region for greater societal benefit.

I remain at your disposal for any further information you may need and thank you in advance for your support to this request.

*Yours sincerely,*

**Sálvano Briceño**

**IRDR Science Committee Chair**

Ms Rohini RAO  
International Council for Science (ICSU)  
5 Rue Auguste Vacquerie, 75016 Paris, France

Mexico City, 26 November, 2012

Subject: ICSU ROLAC support for ICSU Grant Application for the project “LANDSCAPE-LAC: Landslide Networking for Disaster Studies, Capacity Building, Partnership and Engagement in Latin America and the Caribbean”

Dear Rohini,

This letter intends to confirm the support of the ICSU Regional Office for Latin America and the Caribbean (ICSU ROLAC) for the ICSU Grant Project proposal 2013 entitled “LANDSCAPE-LAC: Landslide Networking for Disaster Studies, Capacity Building, Partnership and Engagement in Latin America and the Caribbean”. This project proposal, submitted by the International Geographical Union (IGU), promotes research and capacity building to reduce risk related to landslides in Latin America and the Caribbean (LAC).

The IRDR/ICSU ROLAC/CONICET Regional Workshop on Disaster Risk Reduction, held in Buenos Aires, Argentina in September 2012, concluded that in LAC there is an urgent need for capacity building and training in the area of natural hazards and disaster risk reduction. The proposed project addresses this need in the specific area of landslides, promoting the integration of natural and social sciences. In the last decades, the impact of landslide disasters has been a major concern for LAC; human and economic losses have increased dramatically and there is a lack of a well-structured collaboration and of scientific networks to reduce risk.

Furthermore, the project will enhance and strengthen the collaboration between IRDR and ICSU ROLAC by implementing the scientific objectives of the IRDR Working Group on Forensic Investigation of Disasters (FORIN) in the LAC region. Given the importance of this project for the LAC region and for ICSU’s initiatives on disaster risk reduction at the global level, I would like to express again my full support of the ICSU Grant Proposal submitted by IGU.

Sincerely,



Prof. Manuel Limonta

Director, ICSU Regional Office for Latin America and the Caribbean



Mexico City,  
November 14, 2012

**Dr. Steven Wilson**  
Executive Director  
International Council for Science (ICSU)  
5, rue Auguste Vacquerie  
75016 Paris  
France

Dear Dr. Wilson,

The Mexican Academy of Sciences (MAS) strongly endorses and supports the proposal entitled ***Landslide Networking for Disaster Studies, Capacity Building, Partnership and Engagement in Latin America and the Caribbean (LANDSCAPE-LAC)*** submitted by the International Geographical Union (IGU) to the ICSU Grants Programme-2013.

This initiative is very much in line with one of the priority areas of MAS and the ICSU Regional Office for Latin America and the Caribbean (ICSU-ROLAC), currently hosted at MAS offices. As disasters are a major issue in the region, involvement and participation of Latin American scientists and young scientists from different disciplines in landslide disaster risk research is a critical aspect for scientific progress, capacity building, partnership and especially engagement with society.

The MAS will be pleased to collaborate in the project, primarily through its contact network of scientists and young scientists, and in facilitating scientific meetings that may be required by participants of the region at different stages.

I believe that by providing support to LANDSCAPE-LAC, ICSU will yield excellent returns in mapping out the Latin American agenda in landslide disaster risk reduction and management in the forthcoming years.

Should you require further information regarding MAS support for the IGU LANDSCAPE-LAC project, please do not hesitate to contact me.

Sincerely,

Dr. José Franco  
President  
Mexican Academy of Sciences