

## **World Centre of Excellence (WCoE-2017-2020)**

### **Progress Report Form 2017**

**29 May 2017 to 31 December 2017**

1. Short Title of WCoE Landslides Integrated Research for Disaster Risk Reduction
2. Name of Institution (Name of leader and email) National Autonomous University of Mexico (UNAM), Prof. Irasema Alcántara-Ayala, e-mail: irasema@igg.unam.mx
3. List of core members
  - Ricardo Garnica-Peña, Institute of Geography, National Autonomous University of Mexico (UNAM). E-mail: garnica@igg.unam.mx
  - Ana Rosa Moreno, Faculty of Medicine, National Autonomous University of Mexico (UNAM). E-mail: ana\_rosa\_moreno@yahoo.com
  - Javier Urbina-Soria, Faculty of Psychology, National Autonomous University of Mexico (UNAM). E-mail: jaurso@gmail.com
  - Karina Landeros-Mugica, Faculty of Psychology, National Autonomous University of Mexico (UNAM). E-mail: karinapsicologia@gmail.com
4. Progress report of activities up to 31 December 2017 (up to 30 lines)

Capacity building in terms of community awareness and preparedness at local level.  
Involvement of authorities and communities in activities related to DRR.  
Carrying out risk perception analysis as input for risk communication.  
Preparation of materials for the community needed for the implementation of the landslide risk communication strategy at local level.  
Participation in the 4WLF in Slovenia in 2017.  
Involvement of young scholars and scientists in DRR activities.  
Participating in ICL activities.  
Undertaking activities to bridge the collaboration among scientists and decision makers.  
Supporting the implementation of the Sendai Framework for Disaster Risk Reduction (SFDRR).  
Publication of a book (Atlas type) on Landslide disaster risk.
5. Plan of future activities (up to 30 lines)

To continue with all the activities related to landslide integrated research, particularly strengthening the relationships with different stake-holders at community level.  
Scientific publications.

Organization of landslide workshops.

Contributing to integrated research on landslides in Mexico.

Linking scientific contributions with the needs of Civil Protection authorities in vulnerable communities.

Developing landslide risk perception studies.

Building a strategy of landslide risk communication for mountain regions.

Supporting capacity building.

## 6. Publication (in Landslides, proceedings, meeting reports, or WEB)

### **Publications in Landslides**

Alcántara Ayala, I., Garnica Peña R.J., Murillo-García, F.G., Salazar-Oropeza, M.O., Méndez-Martínez, A., Coll-Hurtado, A., (Submitted) Landslide disaster risk awareness in Mexico: community access to mapping at local scale, *Landslides* (in review).

Alcántara-Ayala, I., Garnica-Peña, R.J., Domínguez-Morales, L., González-Huesca, A., Calderón-Vega, A. (2017), The La Pintada landslide, Guerrero, Mexico: hints from the Pre-Classic to the disasters of modern times, *Landslides* 1, 14, 3, 277-291.

### **Publications in other international Journals**

Murillo-García, F.G., Alcántara-Ayala, I. (2017), Landslide inventory map of the municipality of Teziutlán, Puebla, México (1942-2015), *Journal of Maps*, 13:2, 767-776.

Alcántara-Ayala, I., Sassa, K., Mikoš, M., Han, Q., Rhyner J., Takara, K., Nishikawa, S., Rouhban, B., Briceño, S. (2017) The 4th World Landslide Forum: Landslide research and risk reduction for advancing the culture of living with natural hazards, *International Journal of Disaster Risk Science* 8, 4, 498–502.

Murillo-García, F.G., Rossi, M., Ardizzone, F., Fiourucci, F., Alcántara-Ayala, I. (2017) Hazard and population vulnerability analysis: a step towards landslide risk assessment, *Journal of Mountain Science* 1, 14, 7, 1241–1261.

Collins A., Tatano H., James W., Wannous C., Takara K., Murray V., Scawthorn C., Mori J., Aziz S., Mosalam K.M., Hochrainer-Stigler S., Alcántara-Ayala I., Krausmann E., Li W.S., Cruz A.M., Samaddar S., De-Groevé T., Imamura F., Ono Y., Berryman K., Suzuki K., Parry M.A., McGowran P., Rees J.G. (2017) The 3rd Global Summit of Research Institutes for Disaster Risk Reduction: Expanding the Platform for Bridging Science and Policy Making, *International Journal of Disaster Risk Science* 1, 8, 2, 224-230.

### **Publications in Proceedings prepared by ICL**

Alcántara Ayala, I., Murray V., Daniels P., McBean G., 2017, On the future challenges for the integration of science into international policy development for Landslide Disaster Risk Reduction, In: Sassa K., Mikos M. and Yin Y., *Advancing Culture of Living with Landslides*, Vol. 1. ISDR-ICL Sendai Partnerships 2015-2025, 143-154, Springer.

Alcántara Ayala, I., 2017, *Landslides and Society-a foreword*, In: Sassa K., Mikos M. and Yin Y., *Advancing Culture of Living with Landslides*, Vol. 1. ISDR-ICL Sendai Partnerships 2015-2025,

487-490, Springer.

Garnica Peña R.J., Alcántara Ayala, I., 2017, Landslide synchronic evaluation by using Unmanned Aerial Vehicles (UAV): some insights on disaster risk in Teziutlán, Puebla, México, In: Mikos M., Tiwari B., Yin Y., Sassa K., and Advancing Culture of Living with Landslides, Vol. 2. Advances in Landslide Science, 209-218, Springer.

### **Publications for the community**

Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM, 223 pp. ISBN: 978-607-02-9136-4 (In Spanish).

Garnica Peña R.J., Coll-Hurtado A., Maldonado Martínez A, Murillo-García F.G, Alcántara Ayala I., 2017, II The regional context: Sierra Norte de Puebla. 1a. Nature I. In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Garnica Peña R.J., Coll-Hurtado A., Maldonado Martínez A, Alcántara Ayala I., 2017, II. The regional context: Sierra Norte de Puebla. 2a. Nature II, In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Murillo-García F.G, Garnica Peña R.J., Alcántara Ayala I., 2017, III. The municipality of Teziutlán (maps at 1: 62,000 scale) 3a. Factors determining the susceptibility to landslides. In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Murillo-García F.G, Garnica Peña R.J., Alcántara Ayala I., Ruiz Cortés N.S., 2017, V. The municipality of Teziutlán (maps at 1: 62,000 scale) 5a. Factors determining the susceptibility to landslides. In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

González Sánchez J., Gutiérrez de MacGregor M.T., Coll-Hurtado A., Garnica Peña R.J., Maldonado Martínez A., Alcántara Ayala I. 2017, III. The municipality of Teziutlán (maps at 1: 62,000 scale) 3b. Inducers of vulnerability. In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Alcántara Ayala I., Garnica Peña R.J., Urbina Soria J., Moreno A.R., Landeros Mugica K., 2017, III. The municipality of Teziutlán (maps at 1: 62,000 scale) 3c. Landslide disaster risk perception. In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Ramos Hernández S., Murillo García F.G, Garnica Peña R., Cossío Pérez I., Hernández Moreno M.A., Ruiz Meneses Y.E., Ruiz Cortés S.N., Alcántara Ayala I., 2017, IV. Urban space of Teziutlán (Maps at scale 1: 30,000) 4a. Factors determining the susceptibility to landslides, In: Alcántara Ayala,

I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Coll-Hurtado A., Garnica Peña R.J., Maldonado Martínez A., Alcántara Ayala I. 2017, IV. Urban space of Teziutlán (Maps at 1: 30,000 scale) 4b. Vulnerability-inducing factors, In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Alcántara Ayala I. Suárez Lastra M., Garza Merodio G.G., Ruiz Rivera N., Garnica Peña R.J., Murillo García F.G., Salazar Oropeza M.O., Méndez Martínez A., Delgado Campos G.J., 2017, IV. Teziutlán urban space (1: 30,000 scale maps) 4c. Factors inducing disaster risk due to landslides, In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Murillo-García F.G., Alcántara Ayala I., Garnica Peña R.J., 2017, V. Urban spaces at a local scale in Teziutlán 5a. Factors determining the susceptibility to landslides. In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Alcántara Ayala I., Garnica Peña R.J., Urbina Soria J., Moreno A.R., Landeros Mugica K., 2017, V. Urban spaces at a local scale in Teziutlán 5b. Perception and communication of disaster risk. In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Alcántara Ayala I., Coll-Hurtado A., 2017, Conclusions: the social construction of disaster risk, In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

Alcántara Ayala I., Maldonado Martínez A., 2017, General guidelines for the application of public policy for the reduction of disaster risk associated with landslides in Teziutlán, Puebla, In: Alcántara Ayala, I., Garnica Peña R.J., Coll-Hurtado, A., Gutiérrez de MacGregor M.T. (Eds.) 2017, Landslides in Teziutlán, Puebla. Disaster Risk Drivers, Institute of Geography, UNAM (In Spanish).

### **Book**

Wymann von Dach, S., Bachmann, F., Alcántara-Ayala, I., Fuchs, S., Keiler, M., Mishra, A. Sötz, E., eds. (2017) Safer lives and livelihoods in mountains: Making the Sendai Framework for Disaster Risk Reduction work for sustainable mountain development. Bern, Switzerland, Centre for Development and Environment (CDE), University of Bern, with Bern Open Publishing (BOP). 78 pp. (preparada para y distribuida como documento oficial en la Plataforma Global de Reducción del Riesgo de Desastre, 2017).

### **Other publications**

Landslide Dynamics: ISDR-ICL Landslide Interactive Teaching Tools

\* Alcántara-Ayala I., Landslide risk perception

\* Alcántara-Ayala I., Landslide risk communication