Climate Change Adaptation:
Applying Science and Strategies at the Local Level
(in the Sierra Gorda Mountains of Mexico)

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Beginning in 2011, the CATALYST project undertook to enhance the transfer of best practices and knowledge from the regional scale to the local level. This process began with the collection of knowledge from key experts and stakeholders in the field of DRR/CCA, relevant to the Central America and Caribbean region, as part of the CATALYST project, and concluded with the setting up of a PhD Winter Academy in which students lived and worked with members of the marginalised rural community of Las Palomas in the Sierra Gorda mountains of Mexico, to understand how knowledge on DRR/CCA can be applied at the local level, in a way that is relevant to the needs of local communities. Training future researchers to be able to apply DRR/CCA knowledge at the local level in this way is considered an effective manner of ensuring that future scientific knowledge bridges the gap between regional and local levels.

The village of Las Palomas (left) and surrounding farmlands (above) in the Sierra Gorda of Central Mexico

The hazards: water shortages, contamination
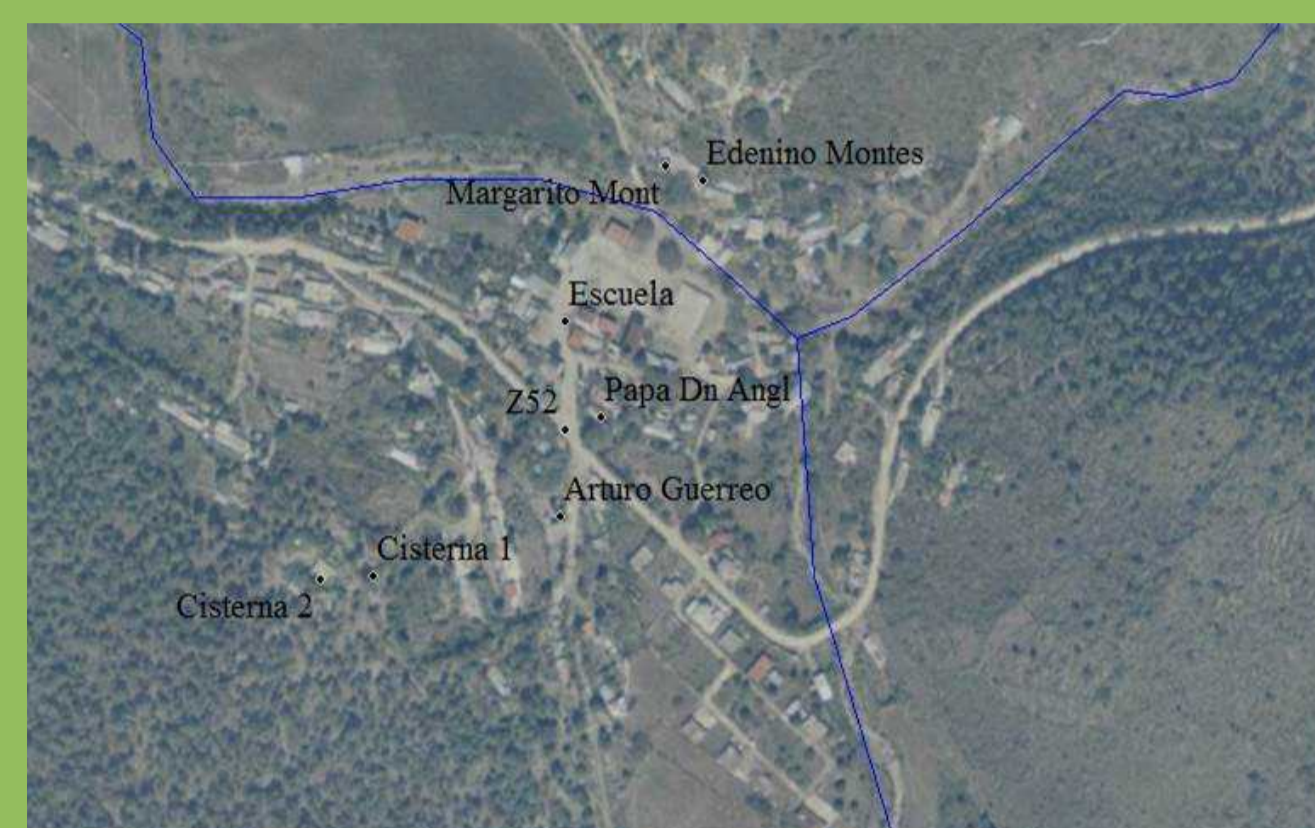
Water from nearby springs is in short supply

Cattle are insurance against future losses but grazing near springs can affect water quality

The Inspiration: CATALYST Project - EU FP7, 2011-2013

We have enough knowledge to make significant strides in climate change adaptation (CCA) and disaster risk reduction (DRR), but it is just not yet sufficiently made use of. This core message of the IPCC special report on extreme events (IPCC, 2012) is reflected in the recently completed FP7 project, CATALYST (*Capacity Development for Hazard Risk Reduction and Adaptation*) with its contribution to the strengthening of this capacity in 4 regions exposed to climatic and tectonic hazards (South and Southeast Asia, Mediterranean Europe, East and West Africa, and Central America and the Caribbean). CATALYST has collated and analysed the existing knowledge base together with more than 130 researchers, decision-makers, members of NGOs, and SME's. The work of this so-called CATALYST Think Tank has strengthened the science-policy interface, promoted the integration of CCA and DRR into existing policies, plans and programmes, and added value to the existing knowledge base. The results have been published in various reports including regionally-specific best practice papers, as well as a globally-relevant best practice notebook that together with other products, have also identified Gaps in research, networks, and capacity. All are available on the project website: www.catalyst-project.eu

The CATALYST Regions

Some of the methods used

Community mapping with local school children

Conducting interviews with local farmers, medical staff, school teachers, leaders...

Cognitive mapping of water quality and quantity issues and measures

Iron levels — Arsenic levels

Drinking Water Sampling Results

Legend: Promedio, Moda, Mediana, Máximo, Mínimo, Desviasión E., NOM-127-SSA1

The follow-up: CATALYST-Local - Bringing knowledge to the local level

A key problem identified by CATALYST Think Tank members has been the difficulty in transferring knowledge generated at regional levels to the local level. The CATALYST Project partners together with a number of think tank members, therefore have initiated follow-up activities to help bring the knowledge collated in the project to the local level. Such efforts need to tailor the available knowledge to local languages, culture and governance structures. In the so-called **CATALYST-Local Community of Practice**, efforts are being made to pool resources in order to develop this capacity in selected localities.

## Training at the local level: Immersing students in the reality of local-level adaptation

In December 2013, the CATALYST-Local initiative brought together 25 postgraduates and 25 trainers in a Winter Academy on DRR/CCA. The first week focused on the theory of DRR/CCA based on knowledge collected from the CATALYST project, at the regional scale. The second week saw the students immersed in a local marginalised rural community of 300 inhabitants, Las Palomas, in the Sierra Gorda mountains, in order to live and work with community members to apply adaptation theory in practice. The Sierra Gorda region in central Mexico is known for its rich biodiversity. The rural communities in this region are primarily dependent on agriculture but are increasingly concerned about the threat that climate change poses to their livelihood.

The Winter Academy has involved participants and local community members in integrating and applying scientific knowledge from the CATALYST project and local knowledge in order to:
- enrich the applied research skills of the participants;
- increase the practical knowledge of participants of the possibilities for and the limits to the implementation of adaptation measures at the community level;
- identify community needs and adaptation solutions through teamwork in an intercultural setting.

The **next CATALYST-Local Academy in Spring 2015** will build on the results of the 2013 Academy, thus gradually enhancing the knowledge base of the community of Las Palomas while training future practitioners and researchers.
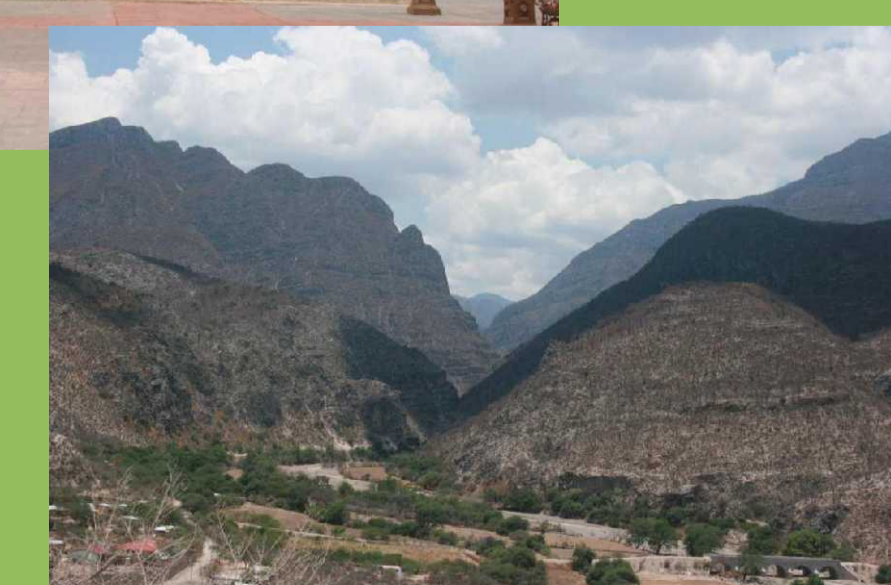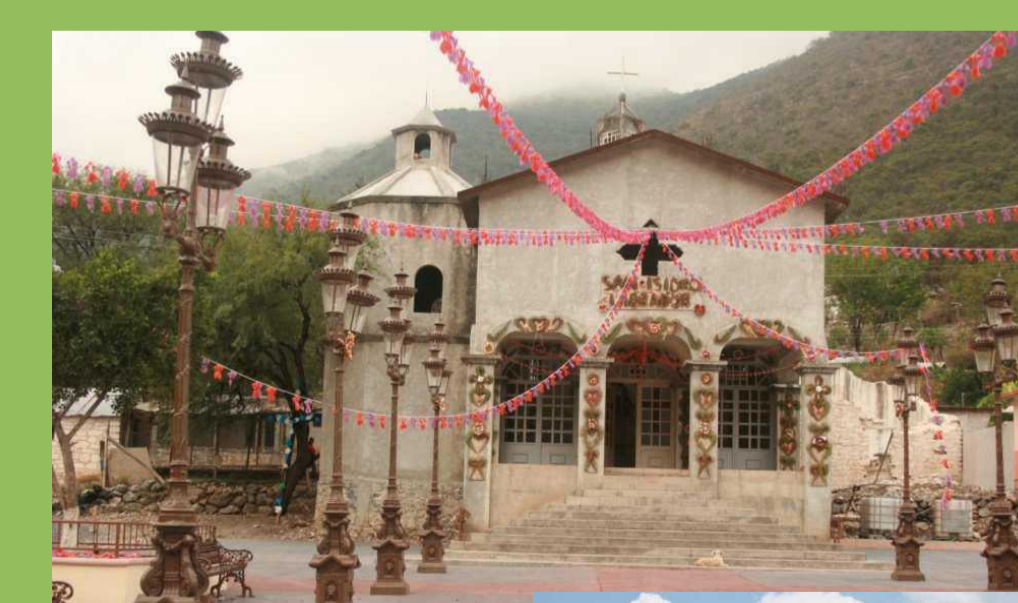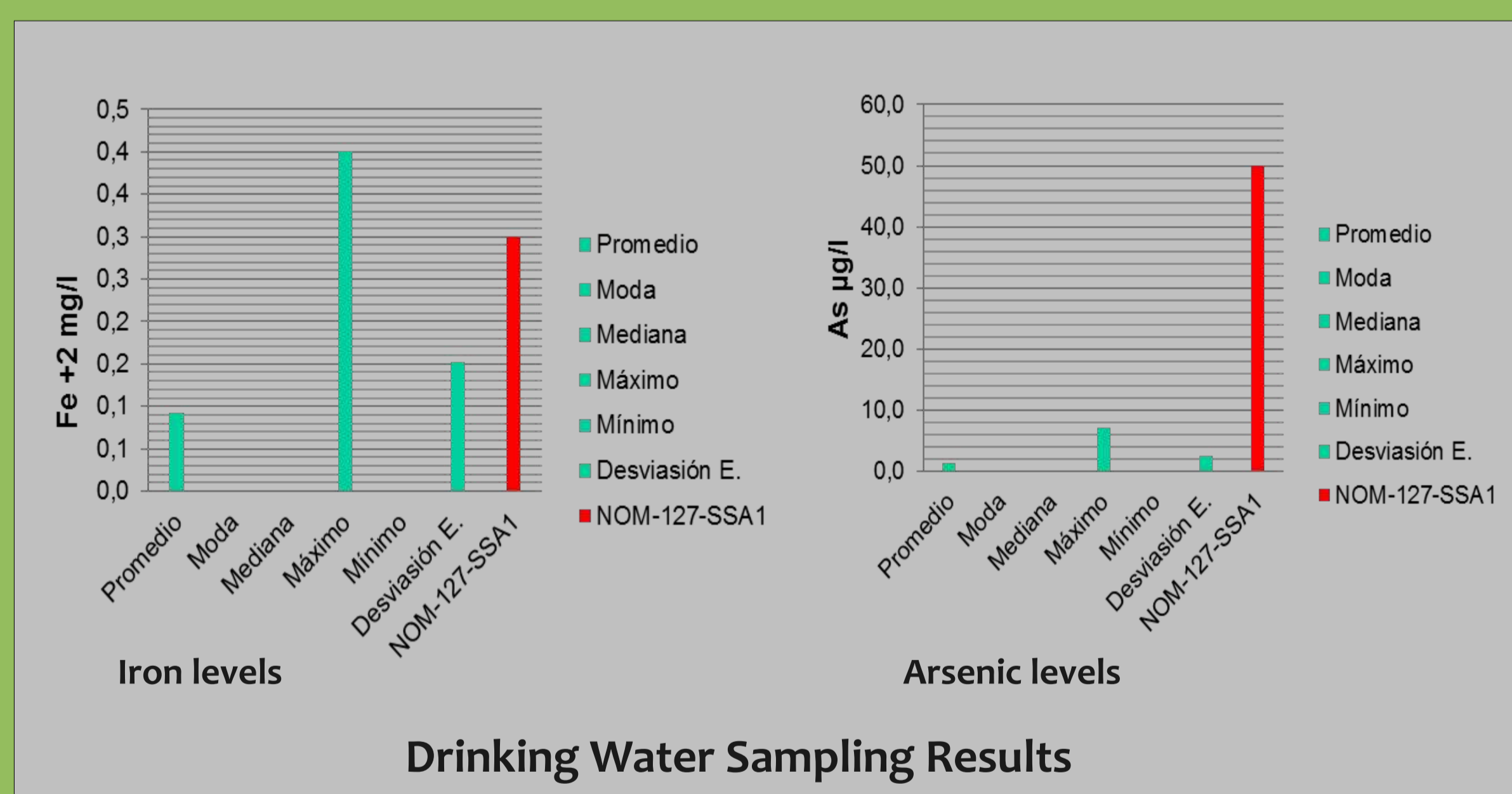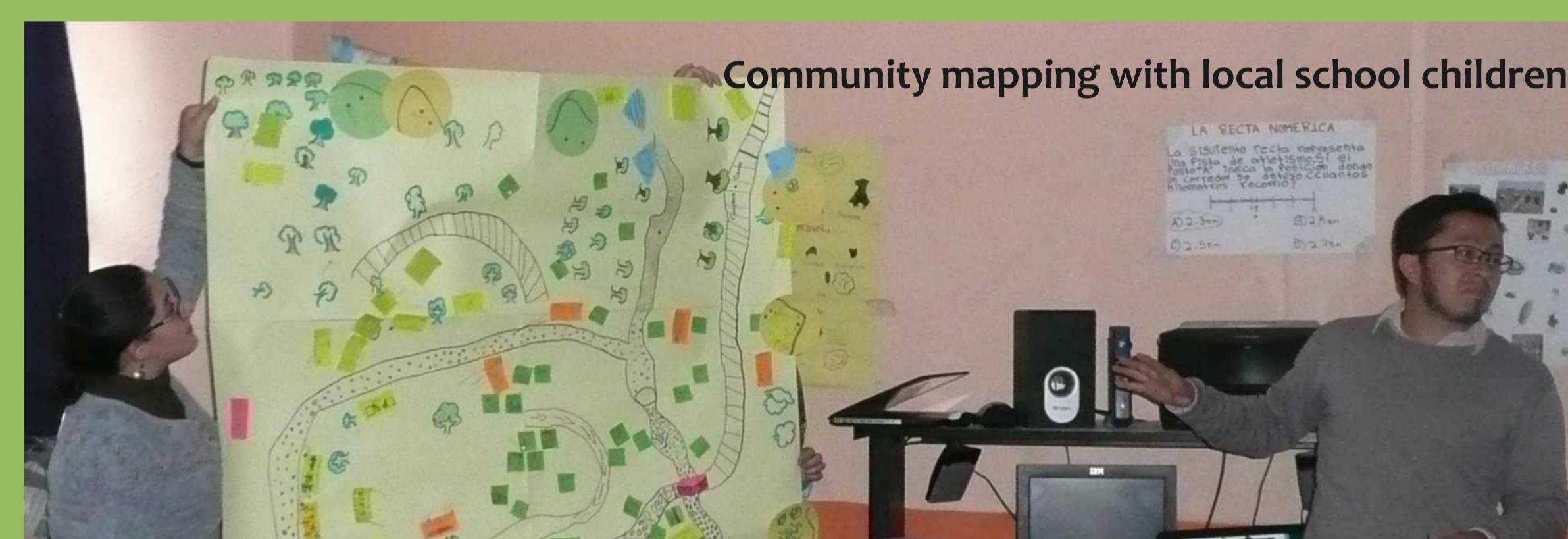
Impressions of Las Palomas and the Sierra Gorda