

## Editorial

# Development in the rural areas

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## EDITORIAL

Rural areas are still the place where many people live, despite ongoing urbanization. In Africa, most of the population is still rural and will be so for at least another generation. The development of the rural tropics is not merely a contribution to the growth of individual countries. It can be a way of reducing poverty and inequalities in access to water, health care, and education that the process of urbanization is unable to alleviate. However, it can also be a way to reduce greenhouse gas emissions that drive climate change if rural development is pursued in a sustainable way. This means stopping deforestation. Then, reducing livestock-related emissions, which now account for 56%, 83%, and 87% of the greenhouse gases produced in Asia, Latin America, and Africa, respectively, according to the Food and Agricultural Organization's latest estimates. To investigate ways of increasing local knowledge of risks to contribute to rural development. It also aims to ascertain the status of essential resources, such as water and soil, and identify what undermines their integrity. Finally, it seeks to identify local policies for risk reduction and adaptation. The 22 articles collected here cover case studies from 12 countries. More than half of the articles concern Africa, as the subcontinent contains most of the Earth's surface in the tropical zone. The 94 authors mobilized cover a wide range of disciplines, such as agronomy, architecture, civil engineering, climatology, earth sciences, ecology, economic policy, environmental engineering, geography, geology, geomatics, hydraulics, materials science, oceanography and atmospheric physics, remote sensing, and spatial and regional planning. Eleven articles are devoted to the knowledge of risk. Two of them are dedicated to hazard knowledge. consider the best datasets among the Climate Hazards Group InfraRed Precipitation with Station, the Global Precipitation Climatology Center, and the Kenyan Meteorological Dataset to observe monthly rainfall trends in the North Horr subcounty in northern Kenya between 1983 and 2014. As a result, the Kenyan Meteorological Dataset corrected with a procedure based on the Global Precipitation Climatology Center monthly dataset performs better in terms of resolution and response to local scale precipitation differences. Flood exposure is analyzed by. in a 135 km<sup>2</sup> of the most densely populated wetlands in Niger: The Maouri temporary creek in Guéchéme. The dynamics of the built-up area in the flood zone are observed over the last ten years.

Human settlements appear to be expanding by 52% in flood prone zones. House consolidation with corrugated sheet metal roofs is stronger in that zone than outside it. Finally, three articles deal with the early warning and forecasting of extreme events. Tarchiani et al. present a locally and community-based flood early warning system designed with, and implemented for, the riverine communities along the Sirba River in western Niger. The main result is the demonstration that an early warning system can be set up operationally, involving the beneficiary communities through observation and preparedness. water resources in three districts of the Ethiopian Rift Valley. The study observes trends in fluoride presence, pH, and electrical conductivity values in the wells. The information obtained is useful for increasing access to drinking water in this semi-arid region. Bertone et al. focus on actions to ensure greater access to water in the Kayes region of Mali. In particular, the reconstruction of damaged mini-dams with the participation of beneficiary communities is described. The restored dams increase the development of micro businesses. Finally, Tiepolo et al. investigate the state of disaster risk reduction mainstreaming in local development plans for 198 rural jurisdictions over tropical Africa. Emphasis is placed on the quality of the plans rather than their number, as is done in the monitoring of the Sendai framework for DRR. Lack of climate characterization, little DRR, and low participation characterize these plans, which remain anchored in providing basic services such as electricity, water, sanitation, and hygiene. In the rural tropics, local communities are exposed to climate-related hazards, as well as to an unsustainable use of land and water resources. Their role in the economy and society is too important to be obscured by urban-centric policies. Support for local risk reduction should be more concerned with informing rural communities, building shared responses to face threats, and the quality of policies implemented, instead of merely considering their quantity.