

# COSTA RICA

## COUNTRY PROFILE

5.1

Costa Rica has experienced a period of rapid macroeconomic growth in recent years. However, certain structural processes today represent a latent threat to the sustainability of its development model.

### 5.1.1 SELECTED RTU



#### RTU Liberia-Carrillo

The municipalities of Liberia, Carrillo and Santa Cruz (the Chorotega region) are the most urbanised due to a growing demand for tourism in recent years. These municipalities periodically flood

when rivers in the Tempisque basin overflow. This situation has worsened due to deforestation, prompted by rapid urban growth and an increasing demand for resources.

## RTU Volcán Turrialba

The Turrialba volcano, located 16 kilometres from the city of the same name, has morphological features and an explosive potential that sets it apart as one of the most dangerous volcanoes. It constitutes multiple risks based on floods, avalanches, pyroclastic flows and ash fall that have

the potential to affect a large part of the population. The concentration of toxic gases in the atmosphere is already beginning to affect crops and livestock, heralding a significant and immediate impact on the area's economy, which relies on farming and rural ecological tourism.

## RTU Río Burío–Quebrada Seca

The overflow of these two river basins occurs on a recurring basis each year. The 2004 and 2007 floods, in particular, had a strong impact on bridges and dwellings, disabled a viaduct under construction and affected both the lower (municipality of Belén) and upper parts of the river basin (municipalities of Barva, Heredia and San Rafael). In this RTU, risk is small scale.

However, damage is severe due to urban growth and demographic pressure on vital resources such as water, land and forests. In cities such as Heredia, agricultural activities (mainly coffee) have been substituted by industrial, commercial and residential activities, reproducing many of the unsustainable development patterns observed in other urban areas of the country.

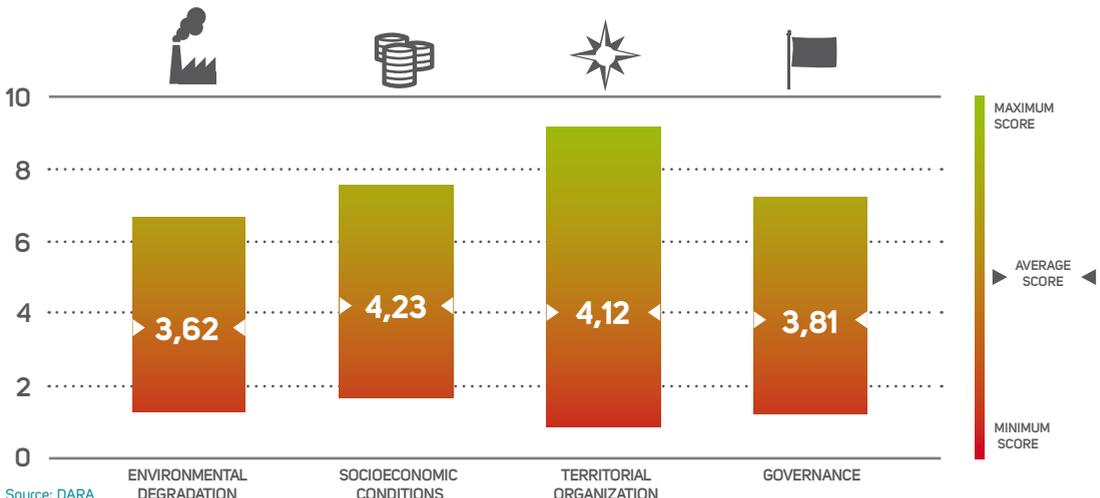
## 5.1.2 RISK DRIVERS

### RISK DRIVER 1: Environmental Degradation

Within this risk driver, the overexploitation of land is highlighted in all three RTUs as the main factor hindering effective risk management, although the federal government sets itself apart from local/subnational authorities in terms of its performance in reducing environmental degradation. However, DRR is not considered to be adequately incorporated in territorial organisation or urban planning (location

of housing, infrastructure, services and productive activities), at any level. An additional factor of importance in this risk driver is climatic variation over the last 10 years: informants have observed changes in the average and extreme temperatures, the frequency of droughts and the intensification of storms (RTU Liberia-Carrillo), as well as in the precipitation cycle (RTU Volcán Turrialba).

CHART A: QUESTIONNAIRE RESULTS IN COSTA RICA BY RISK DRIVER



## RISK DRIVER 2: Socioeconomic Conditions

In the three RTUs, poverty and unemployment are highlighted as the most important conditions that hinder DRR. Other socioeconomic conditions highlighted are the environmental insalubrities (RTU Río Burio-Quebrada Seca, and RTU Liberia-Carrillo) and the limited access to health services (RTU

Volcán Turrialba). Moreover, the deficiency and lack of road infrastructure in the three RTUs is not only identified as a serious problem for economic and social development, it also hinders successful risk management by, for example, making it more difficult to communicate risk.

## RISK DRIVER 3: Territorial Organisation

There are large differences between urban and rural areas within the three RTUs and numerous problems related to the location and function of infrastructure, which affect risk reduction in the RTUs. In the RTU Río Burio-Quebrada Seca, land occupation in unsafe or fragile areas and the inappropriate location and poor construction of housing and vital infrastructure

are identified as major problems; in the RTU Liberia-Carrillo, the main problems identified are inappropriate location and poor quality housing as well as land occupation in unsafe areas; and, in the Turrialba Volcano RTU, land occupation in unsafe areas and the infringement of construction codes are the main challenges.

## RISK DRIVER 4: Governance

In all three RTUs, high levels of bureaucracy and the lack of coordination among government authorities (national and local/ subnational) are the aspects of governance that most hinder DRR. There is a

lack of knowledge in all three RTUs of participatory mechanisms for risk management and a lack of transparency in existing legal mechanisms to control and reduce risk.



Workers building an irrigation canal.  
Source: USAID/  
Herve Jean-Charles

# ACCELERATED URBAN GROWTH, DEMOGRAPHIC PRESSURE ON ALREADY LIMITED NATURAL RESOURCES, AND THE REPRODUCTION OF UNSUSTAINABLE ECONOMIC DEVELOPMENT ARE CREATING NUMEROUS RISK ENVIRONMENTS

## 5.1.3 SUMMARY

The questionnaire results in the three RTUs reveal that there are many conditions and capacities in all four risk drivers constraining efforts to reduce disaster risk in Costa Rica. However, governance is identified as being the most influential driver because the lack of coordination among different levels of government has direct implications for other issues relevant to risk management, including the implementation of land use plans and deficiencies in environmental management.

In the workshop held in Costa Rica, the participants made the following recommendations for effective DRR in all three RTUs:

- Education: the promotion of risk reduction should focus on educating and training the population in order to be able to undertake effective and efficient risk management activities.
- Territorial organisation: highlight the importance of using land-use regulations in development planning.
- Legislation: create laws and regulations on DRR and ensure authorities comply with existing legislation.

With regards to coordination among different levels of government, the workshop identified the following actions:

- The National Emergency Commission must present the new Emergency Plan to local groups (development associations, churches, schools, etc.) and include civil society in the National Forum to be held each year.
- Municipalities must ensure compliance with regulations, and also ensure that communities participate in decision-making.
- Government interventions aimed at risk reduction should be adjusted to each situation and not adopt one-size-fits-all measures; each agency must assume tasks to deal with the problem according to their specific role and must find synergies with other agencies; decisions must be based on technical and scientifically rigorous criteria.