

**Example of best practices and available tools  
for the use of indigenous and traditional knowledge and practices for adaptation<sup>1</sup>**

**Inputs provided by:**

International Union for Nature Conservation

**Title of practice/tool**

CRiSTAL tool

**Description of practice/tool**

CRiSTAL is a **project-planning tool** that helps users design activities that support climate adaptation (i.e., adaptation to climate variability and change) at the community level. CRiSTAL stands for “**C**ommunity-based **R**isk **S**creening **T**ool – **A**daptation and **L**ivelihoods”.

- Community-based – CRiSTAL focuses on projects at the local community level.
- Risk Screening – CRiSTAL helps users to identify and prioritize climate risks that their projects might address.
- Adaptation and Livelihoods – CRiSTAL helps users to identify livelihood resources most important to climate adaptation (i.e., adaptation to climate variability and change) and uses these as a basis for designing adaptation strategies.

While climate variability and change may not always be the most important stresses affecting a specific community, they should always be considered when designing and implementing a development project, particularly in communities characterized by climate-sensitive and/or natural resource-dependent livelihoods.

Indeed, any activity that does not account for present and future potential climate risks may inadvertently increase a community’s exposure and vulnerability. For example, a food security project may encourage dependence on a particular agricultural technology or crop species that may be negatively affected by climate change, thereby increasing local vulnerability in the longer term.

CRiSTAL seeks to systematically assess the impacts of a project on some of the local determinants of vulnerability and exposure, so that project planners and managers can design activities that foster climate adaptation (source: <http://www.iisd.org/cristaltool/>)

**The Yorkín microbasin /application of CRiSTAL in Costa Rica**

The Yorkín microwatershed is located in the BriBri Indigenous Reserve of Costa Rica in the middle

<sup>1</sup> Please use this template for providing inputs related with one example. If you have more than one example, please provide them in separate files using this template.

part of the Sixaola River basin. The local livelihoods are the production of organic plantain, cocoa, and recently, ecotourism. The river is the only way of transportation to the communities in the shores. It has very interesting local governance mechanisms such as community-based organizations, most of them lead by women. With the collaboration of other stakeholders, these groups are promoting the trans-boundary cooperation with communities from Costa Rica and Panama.

The results from the application of the CRiSTAL tool showed, not only the high dependency of these local communities to nature and ecosystem services, but also that they are very vulnerable to climate change being the main impacts floods and flush floods but also climate variability. All these impacts are potentiated with unsustainable activities in the hills, such as deforestation of the forest for cattle.

Local livelihoods, directly linked to the cultural values and with nature, are affected by climate change. For instance in agriculture: the fungus *Monilia*, together with a lack of a proper management, causes a 80% loss in cocoa production.

But also, heavy rains affect the resources necessary to carry out agriculture and trade, such as the river for transportation. When the river brings accumulation of sediments, the river bed disrupts the water flow making it impossible to navigate and therefore to transport goods or people.

## Region

- Africa and the Arab States
- Asia-Pacific
- Caribbean and Central America

## Country

### America:

Costa Rica, Panamá, El Salvador, Guatemala, Nicaragua, México, Dominican Republic, Bolivia, Ecuador, Haiti, Honduras, Peru.

### Africa:

Ethiopia, Kenya, Mali, Niger, Tanzania, Uganda, Zambia.

### Asia:

Sri Lanka

## Sector

- Food security, agriculture and fisheries
- Human health
- Marine and coastal ecosystems

- Mountains
- Water resources

#### **Name of implementing institution/s**

Several in each country, especially local organizations, IUCN Secretariat, IUCN members, local and national governments, and others.

In El Salvador: UNES

In Guatemala: Sociedad de Historia Natural de Soconusco

In Costa Rica. Talamanca Caribbean Biological Corridor.

#### **Further information**

<http://www.iisd.org/cristaltool/>

<http://www.iisd.org/cristaltool/download.aspx>

[http://cmsdata.iucn.org/downloads/utilizacion de la herramienta cristal en mesoamerica version final 1 1.pdf](http://cmsdata.iucn.org/downloads/utilizacion%20de%20la%20herramienta%20cristal%20en%20mesoamerica%20version%20final%201%201.pdf)

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