Understanding the climate-related risks and opportunities of protected areas
CRiSTAL Parks (Community-Based Risk Screening Tool – Adaptation and Livelihoods) is a decision-support tool that aims to help conservationists and Protected Area (PA) managers plan for climate-compatible conservation. It helps users to identify and address the risks that climate variability and change (climate risks) pose to critical conservation values and the ecosystem services that support their livelihoods and productive activities. More specifically, it provides an analytical framework to help users:

1. Integrate climate risks into their conservation planning.
2. Support the development of tailored climate adaptation strategies.
3. Understand and harness the potential of PAs to help reduce climate risks and build adaptive capacity.

The tool helps users understand:

- How climate and non-climate hazards affect priority conservation values and their benefits and related ecosystem services.
- How people cope with the impacts of these hazards.
- Which conservation values and their ecosystem services are most affected by climate and non-climate hazards and which ones are most important for livelihoods and adaptation.
- How project or management plan activities affect these critical conservation values and whether these activities are feasible under changing climate conditions.
- What adjustments can be made to a project or management plan to increase support for these critical conservation values and their potential to support climate adaptation.
- What adaptation strategies are needed to respond to climate and non-climate impacts that harness the potential of PAs to reduce risks.

The tool targets conservation practitioners working within or around PAs, PA managers and PA authorities, including consultants in charge of drafting new or updating existing park management plans.

Background

Climate variability and change threaten biodiversity in the world’s PAs. Observed and expected impacts include: habitat loss and fragmentation; shifts in habitat ranges and altered migration patterns; drought and increased risk of fire; changed micro-climates and ecological processes; ocean acidification and the loss of coral reefs; and sea-level rise and increased coastal erosion. These impacts will have additional consequences for PA managers, as park resources are affected and changing local resource dynamics may affect relationships with park-adjacent communities. At the same time, PAs can play a role in reducing the impacts of climate change on ecosystem goods and services, such as through the provision of clean water or erosion control. Conservation practitioners must be better equipped to identify these climate-related risks and opportunities and integrate them into their activities.

Recognizing this need, the International Union for the Conservation of Nature (IUCN) and the International Institute for Sustainable Development (IISD) have partnered with the Mexican National Commission of Natural Protected Areas (CONANP) to develop the CRiSTAL Parks tool and, with the help of other partner organizations, to test and refine the tool.
Most information is gathered through multi-stakeholder meetings using participatory methods. Other data comes from a review of existing documentation. The tool allows users to summarize the gathered data and provides summary reports.

The tool itself runs on a desktop application compatible with Microsoft Windows 7 and newer operating systems. It is currently available in English and Spanish.

The tool guides users through a number of analytical steps, which are divided into the following three modules:

**A. Diagnosis: Understand the conservation, livelihoods & climate context**
- Describe Protected Area (PA), livelihoods and climate context
  - Describe PA characteristics
  - Describe development context of the PA
  - Describe livelihood activities and key actors
  - Identify conservation values and attributes
  - Document observed and projected climate changes in the focus area
  - Assess the current and potential future climate hazards and non-climate hazards
  - Assess the climate context implications on the current activities

**B. Addressing issues: Evaluate the implications for the project/management plan & design adaptation strategies**
- Identify benefits and analyse climate risk
  - Identify conservation values' benefits to livelihoods and related ecosystem services
  - Document the current and potential impacts of the climate and non-climate hazards, and the sensitivity of conservation values
  - Document stakeholders' responses to climate impacts

- Revise existing project/management plan activities
  - Assess impacts of project/management plan activities on priority conservation values
  - Revise project activities to support climate adaptation and ensure these are viable in the context of a changing climate
  - Assess the implications of climate risks on your zoning and revise accordingly
  - Identify opportunities and barriers to revised project/management plan implementation

- Design adaptation strategies
  - Propose new strategies to reduce climate risks identified in step 2
  - Identify criteria for evaluating proposed strategies
  - Prioritize and select proposed strategies based on evaluation criteria
  - Identify opportunities and barriers to strategy implementation
  - Design or update detailed action plans

**C. Monitoring progress: M&E**
- Identify key elements for your monitoring and evaluation framework and design a monitoring plan
  - Identify the changes in behavior or practice you want to see by the end of the project/management plan as a result of the implementation of adaptation strategies
  - Identify important contextual factors (climatic and non-climatic) that can influence the expected outcomes
  - Identify monitoring indicators
  - Implement the monitoring plan

**Outputs**
- List of priority conservation values that are currently and potentially most affected by climate and non-climate hazards and that hold the most important benefits for livelihood activities and for reducing climate risks
- Proposed adjustments to existing projects/Mgt plans
- Prioritized adaptation strategies
- A list of key opportunities and barriers to revised activities/adaptation strategies
- Detailed action plans
- List of desired adaptation outcomes and important influencing factors to be monitored through indicators
- Monitoring plan

**CRiSTAL Parks** was inspired by the CRiSTAL tool. CRiSTAL was developed by IUCN, IISD, the Stockholm Environment Institute and Helvetas Swiss Intercooperation. CRiSTAL has been applied in many contexts around the world since its launch in 2007. Furthermore, CRiSTAL training workshops have been offered in various countries.
FOR MORE INFORMATION:

VISIT www.iisd.org/cristaltool

For more information about CRiSTAL Parks and associated training opportunities, please contact:

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