
CRiSTAL

Community-based **Risk Screening Tool** – **Adaptation & Livelihoods**

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CRiSTAL: Introduction

Rationale

- Community-level projects may improve adaptive capacity or constrain it

Purpose

- Help users to systematically understand the links between livelihoods and climate
- Enable users to assess a project's impact on community-level adaptive capacity
- Assist users in making project adjustments to improve its impact on adaptive capacity



CRiSTAL: Who? How?



User

- Community-level project designers and managers

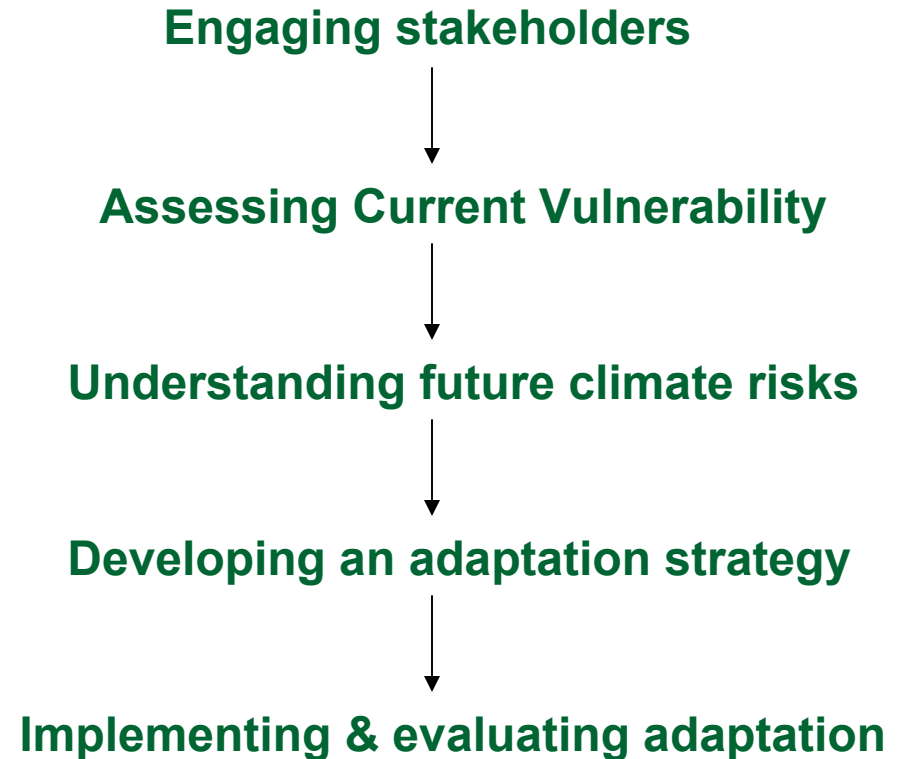
Approach

- Draw on Environmental Impact Assessment model
- Use SL Framework to focus on elements of coping / adaptive capacity at local level
- Logical, user-friendly process
- Offer in multiple formats and as part of a suite of tools

CRiSTAL: Assumptions



- Useful and usable **local** climate information not accessible / available
- Can use current climate situation as basis for analysis
- Users – i.e. project designers/managers – have adequate information on local climate and livelihood context to use tool quickly



Developing & Testing CRiSTAL

2002
4002

- Brainstorming: Designing structure, guiding questions
- Mock-up prepared; Presented to Task Force
- Hardcopy produced, elaborating questions & process

2002
5002

- Project Team review of elaborated tool
- Tool sent out to IUCN and IC field staff for review
- Feedback from field incorporated; Test sites selected
- Field tests in Mali, Bangladesh
- First computer mock-up prepared
- Internal Project Team meeting
- Tool revised

2002
6002
7002

- Field tests in Tanzania, Nicaragua & Sri Lanka
- Continued revisions to tool
- Final revisions
- User's Manual
- Capacity building
- Concrete applications (e.g. Zambia & Canada)
- Continuous outreaching and improvement

CRiSTAL's Structure

M1: Synthesizing info on climate and livelihoods

Q1: What is the climate context

- Impacts of climate change?
- Current hazards
- Impacts of hazards
- Coping strategies

Q2: What is livelihood context?

- Resources?
- How affected by hazards?
- How important to coping?

M2: Planning and managing projects for adaptation

Q3: What are impacts of project activities on livelihood resources that are...

- Vulnerable to climate risks?
- Important to coping?

Q4: How can project activities be adjusted to reduce vulnerability and enhance adaptive capacity?

- Synergies and barriers

CRiSTAL

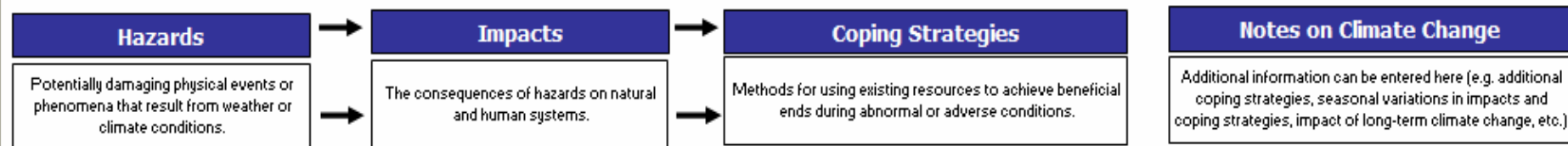
Setting the Climate Context

What are the climate-related hazards, impacts and coping strategies in your project area?

Please enter the main climate-related hazards that affect your project area, their associated impacts and the primary coping strategy for each impact.

You can use the examples provided in the lists below or enter your own hazard, impact, and coping strategy.

When you have finished entering the hazards please indicate so by checking the box at the bottom of the name



Hazard #1 Drought	Impact #1 Crop damage/loss	Coping Strategy #1 Charcoal making	Climate Notes #1 Also: Gathering and selling wild fruits; killing fish with poison to sell them; increasing business
	Impact #2 Income loss	Coping Strategy #2 Casual labour	Climate Notes #2 Also: Killing fish with poison to sell them; early marriage
	Impact #3 Disease (dia, sore eyes, jigas)	Coping Strategy #3 Use of medicinal herbs	Climate Notes #3 Also: Praying, boiling water and/or adding chlorine to water; going to hospital; letting people die

	Impact #1 Crop damage/loss	Coping Strategy #1 Same as for drought	Climate Notes #1
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Livelihood Resources

In this step, you are asked to identify the main resources that are important to peoples' livelihoods in the project area. Resources are divided into 5 categories, and you can enter up to three resources under each category. You can use the examples provided in the lists below or enter your own resources.

The resource categories are based on the Sustainable Livelihood Approach.

Definitions for each category are provided to the right.

When you have finished entering the livelihood resources, please indicate so by checking the box below.

Natural Resources

1. Trees
2. Bees
3. Mush rooms

Natural resources (NR):

The natural resource stock upon which people rely both directly (i.e. for income or medicine) or indirectly (i.e. flood control, protection from storms).

Examples: Trees, land, clean air, fish

Physical Resources

1. Roads
2. Bicycles
3. Agricultural implements

Physical resources (PR):

The basic infrastructure and productive capital for transport, buildings, water management, energy and communications

Examples: Roads, water tanks, tools, machines

Financial Resources

1. Liquid assets (livestock, etc.)
2. Remittances

Financial resources (FR):

The stocks and flows of money that allow people to achieve their livelihood objectives

Examples: Cash, savings, jewelry, pensions,

Influence of Hazards on Livelihood Resources

In this step, you are asked to evaluate the extent to which your selected climate hazards influence the livelihood resources identified in the previous step.

Please enter any notes on the relationship between the selected hazard and livelihood resources – i.e. seasonal differences, positive or negative nature of influence – in the 'Hazard Notes' boxes at the bottom of each column.

When you have finished evaluating the influence of each hazard on the livelihood resources, please check the box below.

Select a value denoting the extent to which the 3 hazards influence livelihood resources
(0= no influence, 5= full influence)

	Hazard 1	Hazard 2	Hazard 3
	Drought	Floods	Extreme heat

Natural Resources

	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
1. Trees	◀ [] ▶	◀ [] ▶	◀ [] ▶
2. Bees	◀ [] ▶	◀ [] ▶	◀ [] ▶
3. Mushrooms	◀ [] ▶	◀ [] ▶	◀ [] ▶

Physical Resources

	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
1. Roads	◀ [] ▶	◀ [] ▶	◀ [] ▶
2. Bicycles	◀ [] ▶	◀ [] ▶	◀ [] ▶
3. Agricultural implements	◀ [] ▶	◀ [] ▶	◀ [] ▶

Adaptation Management Planning

Project activities that were flagged as having a positive or negative impact on key livelihood resources should be adjusted so that positive impacts (i.e. adaptive capacity) are maximized and negative impacts (i.e. risks) are minimized.

Please enter an adjusted activity in the yellow boxes on the right.

Original Project Activity	Key Livelihood Resources	Impact of Activity on Resource		Modified Project Activity
		Positive	Negative	
Activity 1	Resources Most Influenced by Hazards			
Tree planting	Bees	X		Increase area planted from 50 ha to 100 ha; use species that good for bees, for livestock; use indigenous species; use a mix of species -- some catering for July harvest, some for Dec harvest
	Mushrooms	X		
	Liquid assets (livestock, etc.)	X		
	Charcoal making capability	X		
	Resources Which Most Influence Coping Strategy	Positive	Negative	
	Trees	X		
	Bees	X		
	Charcoal making capability	X		
	Business / selling capability	X		
	Beekeeper's Association	X		

Testing & Using CRiSTAL

- Tests
 - September 2005 – July 2006
 - Mali, Bangladesh, Tanzania, Nicaragua, Sri Lanka

- Process:
 - Preparation
 - Field visits / consultations
 - Staff in capital & field site
 - Partner organisations
 - Academics / researchers
 - Government representatives
 - Visit project site
 - Community stakeholder meetings
 - Initial results presented
 - Wrap-up, reporting



CRiSTAL Consultations



- Local visits & consultations key
- 2 General Approaches
 - Consultations feed into tool
 - Go through tool with community
- Consultation formats
 - Informal discussions
 - Organised workshops
 - Something in between...
 - Multiple consultations – focus on different social groups
- Consultations involve:
 - Introductory discussion on climate change
 - Current climate stresses
 - Livelihoods → impacts, coping strategies

Findings & Lessons

- CRiSTAL provides a framework for understanding the links between climate change, people's livelihoods and potential impacts of project activities on adaptive capacities
- But it is really only a framework – it won't do the analysis for you. CRiSTAL organises information, offers definitions, tries to demonstrate links, and provides **prompts** for analysis
- CRiSTAL framework is adaptable – can be used at different levels (household, policy), as often and for as many different social groups as desired (women, men, fishermen, etc.)
- Testing / application process in itself was a useful awareness-raising exercise, both for project staff and local communities
- Can also be a validation process – validating local observations; existing project strategies
- Adjustments are often small, not asking project managers to do anything drastically different – showing them how strengthening certain activities can contribute to climate change adaptation
- Participatory testing / application is time-consuming but essential

CRiSTAL can complement other tools on the 'market'

Potential adjustments / additions to CRiSTAL

Software

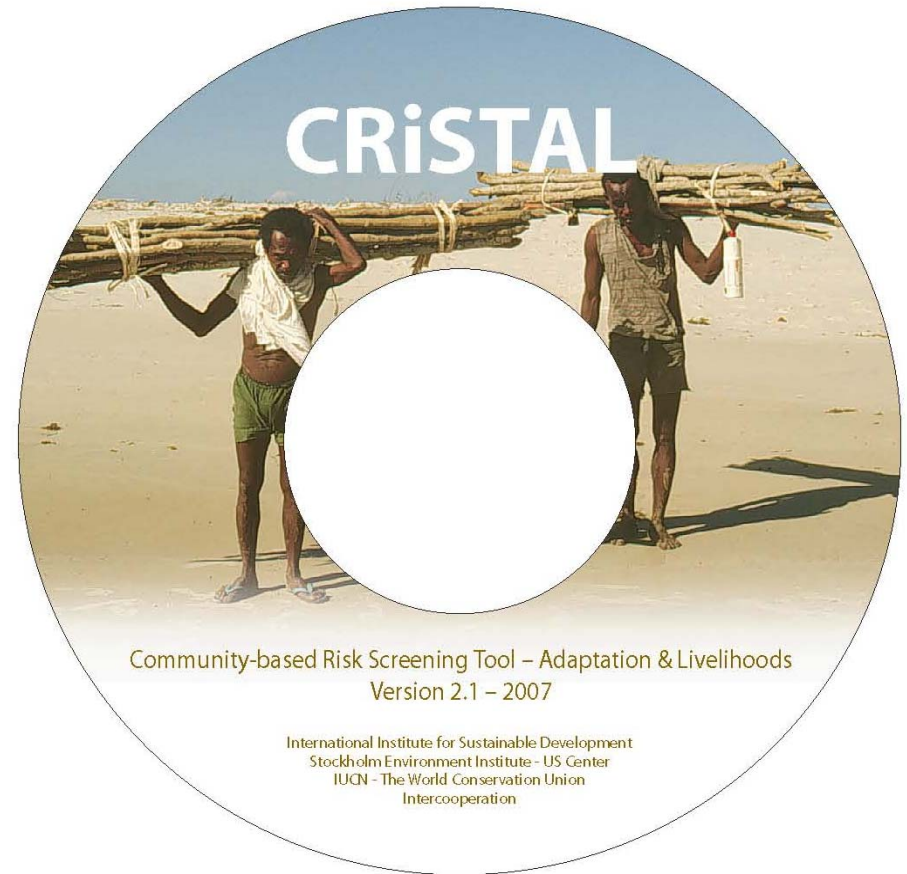
- Current programming not ideal – clunky from turning spreadsheet into desktop application
 - Rewritten as executable file
 - Redone as web application
 - Rewritten as Excel template (no programming other than formulas)

Structure

- Weighting responses
- Sequencing:
 - Start with livelihood context?
 - Bring climate change in at the end

Enhancements

- Translation
- User's Manual with more content / ideas on consultation process
- Accompanying workbook



Next steps / adaptations of CRiSTAL



- IUCN Zambia
- Training
 - Eastern and Southern Africa
 - West Africa
- Application in Canadian Prairies
- Working with others – CARE?