

## Module 1a: Science and impacts National Climate Risk Assessment

March 2019



Relevant reading

### National Climate Risk Assessments

This note summarizes how a Red Cross Red Crescent National Society can get started with incorporating climate change concerns into its regular activities and meet the commitments made at the 2007 International Conference.

See more in the Climate Centre's *Climate Guide* and follow these links:

[http://www.climatecentre.org/downloads/File/reports/RCRC\\_ClimateG\\_GettingStarted.pdf](http://www.climatecentre.org/downloads/File/reports/RCRC_ClimateG_GettingStarted.pdf)

[http://www.climatecentre.org/downloads/File/Factsheets/factsheet\\_getting\\_started.pdf](http://www.climatecentre.org/downloads/File/Factsheets/factsheet_getting_started.pdf)

Conducting a national climate risk assessment is a great way for your National Society to take stock of current vulnerabilities and climate-related risks, and anticipate how those risks and impacts on vulnerable people may change due to climate variability and/or longer-term climate change.

Once you've done an assessment, you'll have identified climate-related impacts you may want and need to prioritize and address in programming. This is an essential first step, before going on to make an action plan for how you and your partners plan to address them.

### Purpose of National Climate Risk Assessments

Four objectives can be identified for the climate risk assessment. First of all, they can be a plea for the most vulnerable in policy dialogues: identify which needs of communities are reflected in the policies, and which recommendations you can make.

Secondly, the report can help you collect facts about climate change that can be used to raise awareness and communicate on the humanitarian consequences of climate change.

Also, the report can be used as an educational tool for staff on national and branch level.

Finally, the assessment can help you make a plan for further action.

### The National Climate Risk Assessment step by step

#### Step 1: Describe the current situation in your country

What is the geography and current climate of your country like?

What types of natural hazards currently are there?

In what ways are people vulnerable? What are the current challenges? For example, how do people make a living? Are there large populations and/or infrastructure located on the coast? What is the status of water availability, and food security? What are the main health concerns? Who are the most vulnerable? Use available country data (see below), your own knowledge of the local context, and involve communities to explore these questions.

Is your country affected by large natural climate variability? In other words, does rainfall vary from year to year or decade to decade – typically induced by impacts from El Niño/La Niña? Ask your meteorological service or the help desk at [ifrc@iri.columbia.edu](mailto:ifrc@iri.columbia.edu).

If you find out, for example, that long-term climate change projection is for drier or even drought conditions, but natural climate variability brings you wet years or decades, you'll want to know that so that you don't lose sight of near-term risks, which could be different or even the opposite of those projected over the longer term.

### General writing tips for the assessment

- It is important to include a reference for each and every source that you use. Any time you draw upon information from a given source, include a reference.
- Some of the text you read may be technical. Remember to describe elements accurately but in simple language, so that the document is understandable for a non-scientific audience.
- Ultimately, your document may be useful for a wide variety of audiences, for example: as a basis for conversations with partners, stakeholders, knowledge institutes, the media, staff and volunteers.

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## Step 2: Gather available INFORMATION ON climate change

There's no need to reinvent the wheel. Often the information you need is already out there. Below are a few sources to get you started.

Ask the Climate Centre if they've prepared any climate summaries for your country. Here are some key links:

- a) [National Communications to the UNFCCC](#)
- b) [World Bank Climate Change Knowledge Portal](#)
- c) [Climate Wizard](#)
- d) [Pacific Climate Change Data Portal](#) (Pacific only)
- e) [IFRC/IRI MapRoom](#)
- f) [IPCC \(2014\) regional analyses chapters](#)
- g) UNFCCC [National Adaptation Plans](#)

You'll notice that these sources offer regional and national climate information. Although we'd all like climate change projections to tell us exactly how and when specific communities will be affected by climate change, that simply isn't possible. Projections from downscaled climate models are not yet reliable.

This guide will help you take available regional or national climate change projections and think about them in the context of your country's vulnerabilities, to identify local impact areas of concern. For example, if the projection is for increased rainfall, it would make sense to prioritize work with communities that are already flood-prone/vulnerable, and enhance monitoring of forecasts across timescales to anticipate when and where severe rainfall might occur.

Be very cautious about website information in looking for local climate projections. Since weather and climate patterns are so complex, scientists can only provide long-term forecasts (months to decades) on a large scale – they cannot “zoom” to specific countries, let alone provinces or communities.

Many information documents contain information on such things as inventories of emissions of greenhouse gases and other discussions on mitigation. Focus on the sections that talk about climate change impacts, particularly keep an eye out for those impacts that could affect people, as well as discussion on climate change adaptation (CCA), including what to prepare for and how to minimize the severity of these impacts.

Note that climate change projections are not 100% certain. Use them to get a sense of the likely direction and magnitude of change. The science is evolving rapidly, and thus it is important to stay apprised of new reports and local sources of information for the most up-to-date knowledge about climate change and its impacts.

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## Step 3: Use information to answer questions or complete our TEMPLATE FOR THE ASSESSMENT OF Climate RISK

Have there been any observed long-term trends in your country? For example:

- An increase in the average annual temperature?
- More/less rainfall in certain seasons?
- Change in seasonality
- Changes in frequency and/or severity of extreme-weather events?

- Any impacts from sea level rise, such as increased erosion, increased coastal flooding events, and/or saltwater intrusion of soil or groundwater?

What are the projections for the future...

- For temperature?
- For rain/snowfall (precipitation)?
- For sea-level rise?
- For extreme-weather events?

Then ask your National Society, experts and partners (e.g. government authorities, NGOs, universities, meteorological services, health departments, water and sanitation departments, disaster management departments, agricultural and environment ministries). Given your country's vulnerabilities, how might these changes affect our country's...

- Water resources
- Livelihoods, agriculture and food security
- Health (vector-borne and/or water-borne diseases and other health impacts from higher temperatures)
- Frequency and severity of disasters
- Critical infrastructure

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#### **Step 4: Consider how the intersection of risks and vulnerabilities might affect NATIONAL SOCIETY services**

What programmes and services does your National Society currently offer? (Not only from your own department, but seek input from other departments.)

What programmes and services might your National Society need to offer in the future, given the analysis you've done here?

How functional are the country's or National Society's early-warning systems? Is there room for improvement or expansion?

Could your National Society benefit from advanced lead times to prepare for extreme events through an Early Warning, Early Action approach? (See Module 2B *Using forecast information* for more information on early warning early action.)

How does your National Society monitor climate and weather-related risks? Are you receiving and understanding forecast information? Do you have good contacts at/a relationship with your meteorological service so that you can ask about a forecast, or request certain types of information? Further descriptions and a good checklist is available:

<http://www.climatecentre.org/downloads/File/Stakeholders%20Analysis.pdf>

Is capacity sufficient? What areas might the National Society want to strengthen/prioritize?

Who does the National Society work with already? Are they aware of the information you've gathered? Is it possible they are already working to address some of the problems you've identified? Would they be willing to work with you to address some of them? What other institutions might be working on this/be interested in joining efforts with you? What expertise, resources, infrastructure, and/or networks could they bring to your efforts?

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#### **Step 5: Prioritize**

What risks identified here are of greatest concern?

How might you want to address them in National Society programming? Be creative and include your partners and communities in planning.

Who could you work with to address these risks?

When the assessment is completed, the next step is to set up an action plan to develop concrete programme activities and identify possible donors.