



FORM 2

ASSESSING CLIMATE RISKS

Use this form to collect the information needed to assess the climate risk at each site and to prepare an impact chain (if you choose to do so). This form is to collect standard information needed to strategize and justify implementing the EbA measures proposed.

Site name:	
Form completed by:	
Date form completed:	

SECTION I: Description of the site's local climate and climate hazards

To fill in the following section use secondary and participatory research (community observations). If available include historical timelines and hazard maps.



Key questions	Information collected
Describe the seasons in the study area, including high and low temperatures and average precipitation.	
Describe the projected trends in rainfall, temperature and climate hazards. What do the most recent IPCC Assessment Reports state on predicted climate change in the region of the target site?	
Which extreme weather events have occurred in the past 25 years?	
Are there maps identifying climate-related hazard zones? Is there data on the frequency and intensity of hazards and their impacts?	
Are there local climate change models available?	
Are there any basic risk profiles of vulnerable actors, assets and land uses of interest for the EbA intervention?	

SECTION II: Climate risk assessment



Key questions	Information collected
<p>Identify climate impacts and risks</p> <p><i>The first and most crucial step in developing an impact chain is identifying major climate impacts and risks (e.g. 'water scarcity' or 'risk of water scarcity for smallholder farmers') to your socio-ecological system. If your risk assessment covers more than one topic (addressing the sectors agriculture and health, for instance) you will need to develop discrete impact chains for each topic, which can later be combined and interlinked. Identifying major climate impacts and risks starts with a broad view, including a review and brainstorming process of climate impacts and risks. Subsequently you can cluster them and narrow your choice down to one or more risks according to the focus of your assessment.</i></p>	





Which major climate impacts and risks affect the system of concern?

How have climate variability and extreme climate events impacted the system of concern in the past?

What are the socio-economic implications of the climate impacts (e.g. loss in yields, increase in disease, etc.)?

DETERMINE HAZARDS AND INTERMEDIATE IMPACTS

Hazard refers to the potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources. In the IPCC report, the term hazard usually refers to climate-related physical events or trends or their physical impacts.

A hazard may be an event (e.g. a heavy rain event), but it can also be a direct physical impact. A hazard is not necessarily an extreme weather event (e.g. tropical storm, flooding), but can also be a slow onset trend (e.g. less water from snow melt, increase in average temperature, sea-level rise, salinity intrusion, etc.). If possible, the probability of a specific hazardous event or trend should be estimated. This can be done by defining hazards as critical events or critical physical impacts (e.g. 'heavy rain events' instead of 'rain' or 'heat days' instead of 'temperature').

In the context of a climate risk assessment, it is assumed that a hazard represents an external climate signal, which does not depend on exposure or vulnerability and can per se not be influenced by adaptation or other measures seeking to deal with climate-related loss and damage.

Which climate-related hazards pose a risk to the socio-ecological system of concern?

Which intermediate impacts link the hazard and the risk?

DETERMINE VULNERABILITY

Vulnerability refers to the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt. Vulnerability has two relevant elements:

1. **Sensitivity** is determined by those factors that directly affect the consequences of a hazard. Sensitivity may include physical attributes of a system (e.g. building material of houses, type of soil on agriculture fields), social, economic and cultural attributes (e.g. age structure, income structure). Thus, the understanding of sensitivity largely remains unchanged from the AR4 concept.
2. **Capacity** in the context of climate risk assessments refers to the ability of societies and communities to prepare for and respond to current and future climate impacts. It comprises:
 - a. **Coping capacity:** The ability of people, institutions, organizations, and systems, using available skills, values, beliefs, resources, and opportunities, to address, manage, and overcome adverse conditions in the short to medium term (e.g. early warning systems in place).
 - b. **Adaptive capacity:** The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences (e.g. knowledge to introduce new farming methods). This type of capacity has already been applied in the AR4 concept and is thus described in the Vulnerability Sourcebook.





Vulnerability:	
What are the main societal and ecological drivers of vulnerability of the system?	
Sensitivity:	
Which attributes make the system vulnerable to potential negative impacts of the hazard(s) under consideration?	
Capacity:	
Which abilities of the societal system are in place or missing to reduce the risk of concern now and in the future?	
Consider among others:	
Is there knowledge or expertise available or missing which might aid adaptation?	
Are there technical options available or missing which could enhance capacity?	
How does the institutional environment contribute to capacity?	
Which economic and financial resources are available or missing for enhancing capacity or implementing adaptation measures?	
<p>DETERMINE EXPOSURE</p> <p><i>Exposure is the presence of people, livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected. Exposure is related to specific exposed elements (or elements at risk), e.g. people, infrastructure, ecosystems. The degree of exposure can be expressed by absolute numbers, densities or proportions of the elements at risk (e.g. population density in an area affected by drought). A change in exposure over time (e.g. change of number of people living in drought-prone areas) can significantly increase or decrease risk.</i></p>	
Which factors determine exposure?	
Include any photos or other visual renderings of the climate risk assessment which have been produced.	<i>Insert photo or URL here.</i>





SECTION III: Impacts of climate change and other stressors on ecosystems and implications for livelihoods

To fill in the following section use secondary research and participatory research.



Key questions	Information Collected
What are the non-climatic stressors that affect ecosystems? And how can they affect livelihoods?	
How climate-related hazards may affect resource availability, sectors and livelihoods?	
Which social groups are particularly vulnerable to the impacts? Why?	

