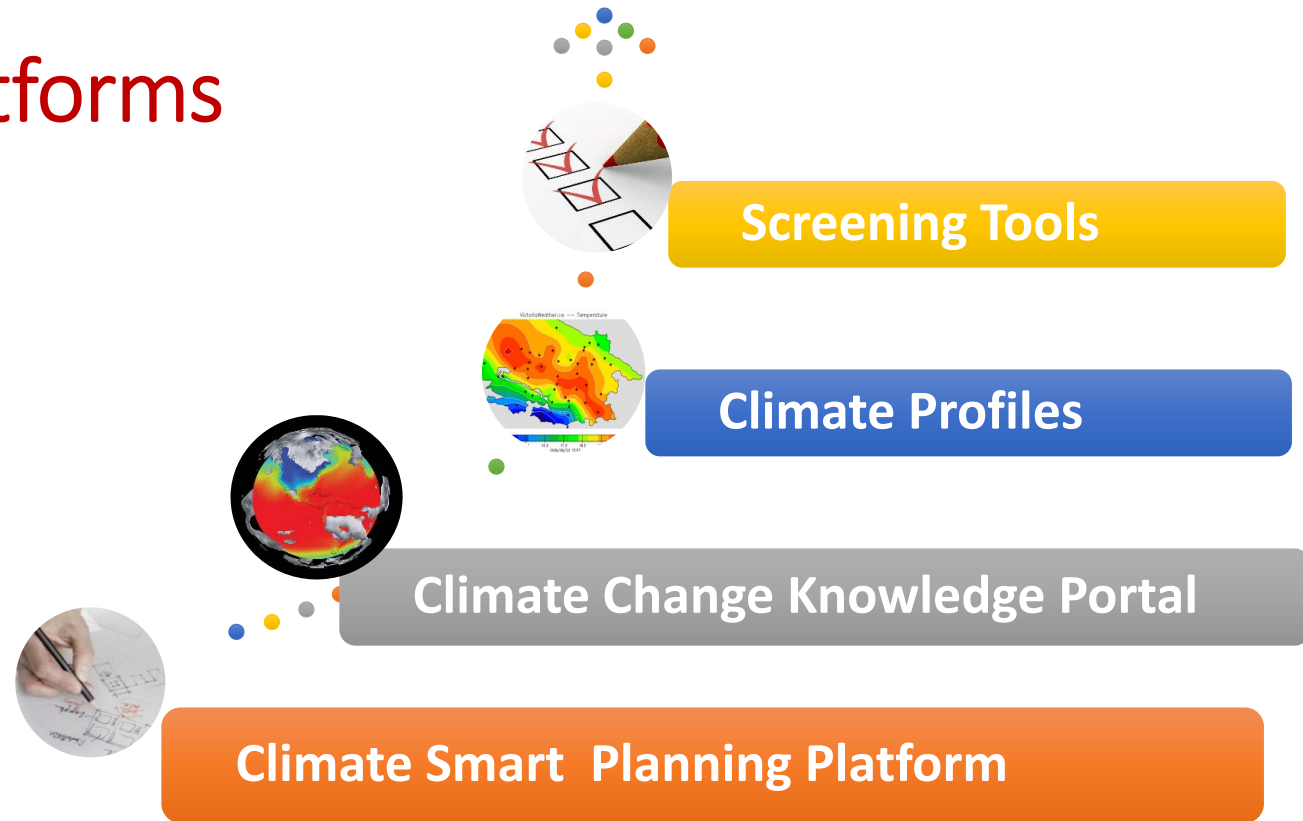




*Climate Resilience at the World Bank*  
*- Knowledge Platforms and Online Screening Tools*

# Climate Knowledge Platforms & Partnerships



# Combining Resources to develop better solutions

THE WORLD BANK GROUP  
Climate Change Knowledge Portal  
For Development Practitioners and Policy Makers

Search [ ] GO ▶

You Are Here: Home

Select a Country or Territory

The Climate Change Knowledge Portal (CCKP) Beta is a central hub of information, data and reports about climate change around the world. Here you can query, map, compare, chart and summarize key climate and climate-related information. [Read More](#)

Click on an area of the map to get started >

[Disclaimer](#)

## Platform for Climate-Smart Planning

- Home
- About Us
- Partners
- Join Us
- Tools
- Data
- Learning
- News

**DOWNSCALED CLIMATE DATA**

Learn More

Preview the downscaled data! The data enhances our information base for assessing and modeling changes in water availability, flood and drought stress, associated changes in agricultural productivity, and more. [www.worldbank.org/](http://www.worldbank.org/)

**WORLD BANK FINANCED ACTIVITIES**

Explore

Navigate and learn more about World Bank Financed Activities and Projects.

**DEVELOPMENT CLIMATE IMPACT**

Explore and use a collection of tools to assess vulnerability, and impact and datasets.

**MULTI SECTOR**

Multi-sector tools are applicable to more than one sector. They provide a general evaluation of climate resilience and mitigation options, are easily adapted to numerous regions and situations, and are frequently used in conjunction with sector-specific tools to develop a comprehensive analysis. .... [View Tools](#)

**SECTOR SPECIFIC**

**PROJECT LEVEL**

**DATA VISUALIZATION**

**KNOWLEDGE SHARING**

Introduction to Tools

Enhance your climate-smart planning with:

**330** Tools  
Datasets  
Knowledge

**58** Organizations

The methodological steps for Low Carbon, and Climate Resilient development are used to help identify the tools and data that could be most useful depending on where you are in the process More...

**Start Here**  
Help to get started

**Planning Process**  
Step by step

**Join Us**  
Contribute and Share

**Search by**  
Keyword and text search for Tools, Data and Knowledge products on this platform

Search Contents

Find all >>

**Browse by**

Climate Resilient Development | **Low Carbon Development** | Screening, Monitoring & Evaluation

Product Type:

Scope / Extension:

Sector:

Planning Process Steps:

**GO**

**Tools** Climate-smart planning toolkits

Here you can discover and select established

**News** Latest news on this initiative

**Knowledge** Learning and Resources

**Data** Easy access to data

**Climate** Info & Screening tools

**Wiki** Information and updates from other users



Multi-stakeholder virtual gateway which provides a neutral forum that enables easy discovery of quality, trusted data sets, tools, and knowledge to support low-carbon and climate-resilient development, with built in peer to peer and expert support

<https://www.climatesmartplanning.org/>

# Climate-Smart Planning Platform

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## Objective

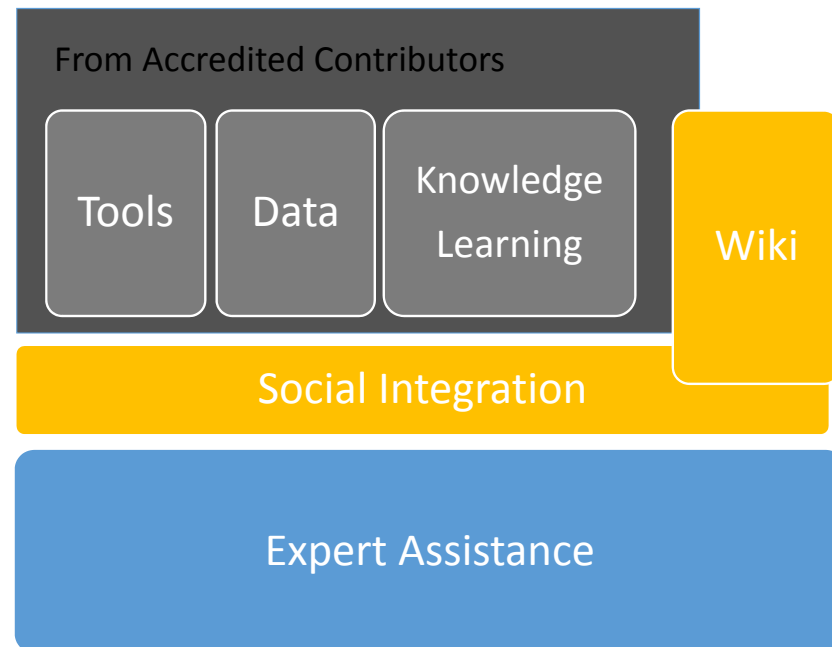
Strengthen the up-stream climate-smart planning process that leads to better Policy and Investment implementation

## Focus

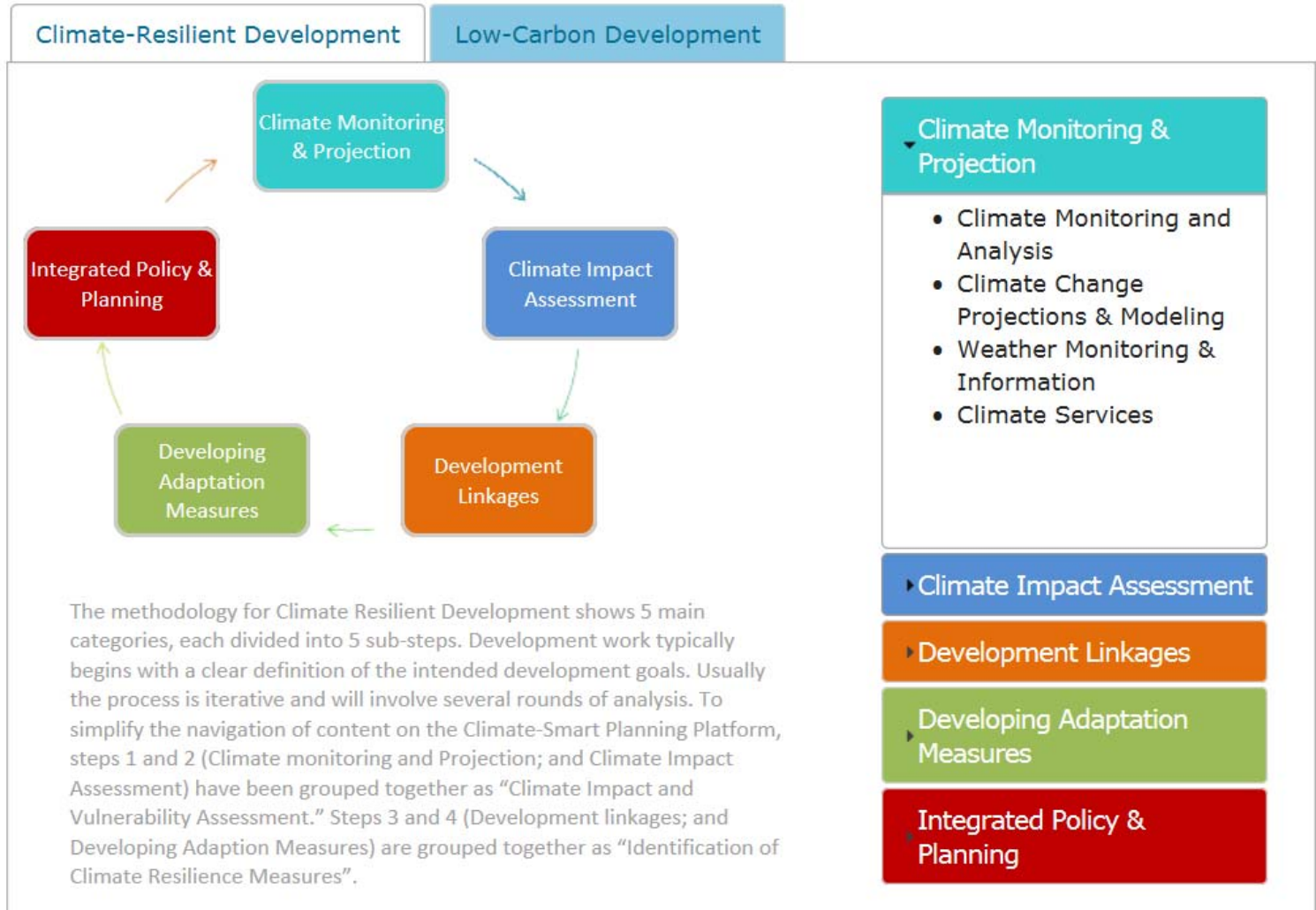
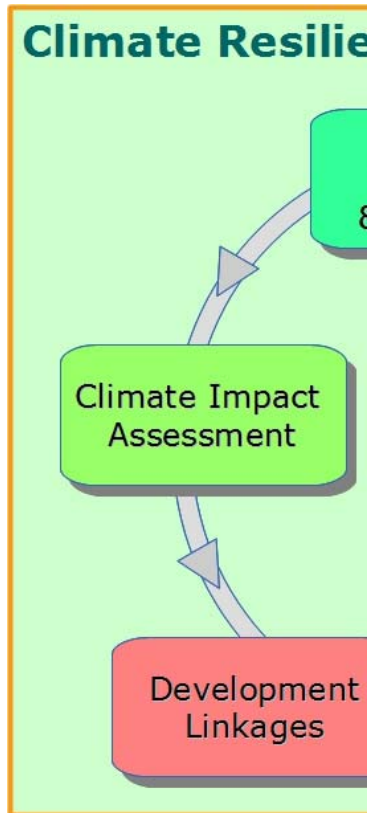
**Tools and Data** used in Climate-Smart Planning

## Target Audience

Developing country practitioners, analysts and decision-makers



# Climate-Smart planning combines low-carbon



# Current Partners

## 60 and Growing Fast



## Rapid Risk Screening

Climate Change Knowledge Portal  
For Development Practitioners and Policy Makers

CLIMATE IMPACTS VULNERABILITY'S COUNTRY ADAPTATION PROFILE

HISTORICAL FUTURE GCM DOWNSCALED COMPARISONS HISTORICAL VARIABILITY TOOL

Choose your variable: Temperature & Rainfall  
Choose your time period: 1960-1990

AVERAGE MONTHLY RAINFALL AND TEMPERATURE FOR ETHIOPIA AT LOCATION (9.71,38.42)/FROM 1960-1990

- Multiples Sources of Information
- Historical Variability and Future potential Projections
- Development and Vulnerability Information

## Country Profiles

Mozambique Dashboard

Climate Data Impacts & Vulnerability Adaptation

Recent Trends: Mean annual 2.8 months, Mean temperature 13.6 C, Total days per year 23, Total days per year 18.04 days per year

Legend: Major Cities, Major Rivers

Aggregated land (% of land area)

1980 1985 1990 1995 2000 2005 2010 2015

GFDRR Climate Resilience Tools SDG 13

- The country profiles and country-applications allow for a more in-depth lens on specific sectors and country issues –

## Custom Analysis Site

Climate Change Knowledge Portal  
Climate Analysis Tool - Powered by Climate Wizard

Download Map Image with Data Downloadable Downloadable

General: Emission Model: Emission's Average, Emission Scenario: High (A2), Time Period: Annual

- Global Downscaled data extracted by user-determined areas
- Access to several derivative statistics

## Download Site

Climate Change Knowledge Portal  
For Development Practitioners and Policy Makers

Download Data Download

Year	Variable	Action
1982	yearly average	Download
1983	yearly average	Download
1984	yearly average	Download
1985	yearly average	Download
1986	yearly average	Download
1987	yearly average	Download
1988	yearly average	Download
1989	yearly average	Download
1990	yearly average	Download

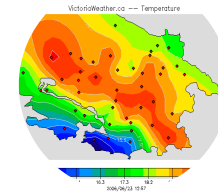
1991 yearly average Download

*Levels of Access, variables, time periods, scale, accuracy and interpretation needs vary across applications....*



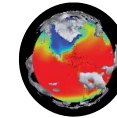
# Climate Risk and Adaptation Country Profiles

Select a Country



Screening Tools

**Climate Profiles**



Climate Change Knowledge Portal



Climate Smart Planning Platform

<https://www.climateadaptationprofiles.gfdr.org>

# Mozambique Dashboard

Risk Screening Overview

Mozambique

- Overview
- Risk Screening Overview
- Climate Baseline
- Natural Hazards
- Climate Future
- Impacts & Vulnerabilities
- Adaptation
- Print
- References

THIS INFORMATION USED IN CLIMATE & DISASTER RISK SCREENING TOOLS

## Historical Climate Variability and Change

- Historical Climate Trends
- Historical Climate Data

## Disaster Risk Impacts and Vulnerabilities

- Mozambique faces an array of natural hazards, the most prominent being flooding, droughts, and cyclones.
- With more than 2,700 kilometers (km) of coastline, nine international river basins, a high dependence on agricultural yields, a high level of poverty, and an inadequate infrastructure, Mozambique is extremely sensitive to such exogenous shocks.
- With most Mozambicans living along the low-lying coast, facing chronic poverty, inadequate health services, and heavy reliance on subsistence agriculture (80%), any changes to the nation's ecosystems have an immediate impact on its population.
- There is a high risk of increased-intensity storm surges along soft coastlines, which are already vulnerable to coastal erosion.
- The duration and timing of the rainy season are expected to change. It would start earlier over most of the country, though it is also expected to end earlier in the south and later in the far north, leading to longer rainy seasons in the north as well as southern regions near the coast. There could be, however, decreases in seasonal rainfall duration over the central regions and Zambezi valley, which could have major implications for agriculture.
- Hydrological modeling indicates that some areas in the north will experience floods more frequently.
- The central region requires greater monitoring for all types of natural hazards, and weather-related parameters in this region need to be extended and improved as a matter of urgency as climate change intensifies.

Click on the map to view climate charts for your location of interest.

### Future Climate Projections

#### Future Climate Changes

Temperature	Mean annual temperature	▲ 1.1 to 3.5°C by 2060
Rainfall	Mean annual precipitation	▼ 17% by 2050
Extreme	'hot' days and nights expected to increase	

Click on the map to view climate charts for your location of interest.

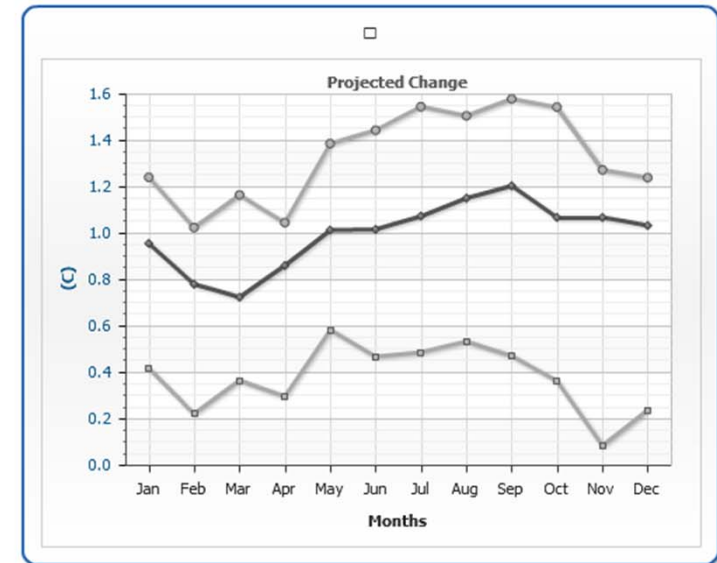
Choose your variable: **Temperature** | Choose your time period: **Future 2020-2039** | View mean or change: **Change** | **GRAPH IT**

### Future (2020-2039) Temperature change Projections

Show Legend

#### Future Trends

- Increased temperatures and evapotranspiration coupled with declining and increasingly erratic rainfall may lead to increased drought conditions.
- Reduced agricultural yields and crop failures from longer drought periods.
- Lower mountain snowfall and, consequently, increased stream flow variability.
- Changes to the Canary Current potentially threatens fisheries
- Coastal erosion from sea level rise.
- Decreasing resilience of forest resources, leading to habitat fragmentation and threats to endemic biodiversity.



## Climate & Disaster Risk Screening Tools

- Home
- About the Tools
- Start Screening
- Training
- Support and Resources
- Frequently Asked Questions
- Help Desk
- Climate Change News



### Enabling Resilient Growth

Climate change and disasters pose a growing threat to development progress. We have tools to help you screen for climate and disaster risks at early stages of project design and planning processes. [Read More >](#)

#### SCREENING TOOLS

#### Recognize the Risks

Use the tools below to work toward a resilient future. Identify risks to national plans and project investments.

- [Select the Right Tool](#)
- [Browse the Tools and Sample Reports](#)
- [Meeting Climate Change Commitments](#)



National/Policy



Agriculture



Coastal Flood Protection



General



Energy



Health



Roads



Water



#### Why Screen?

Every year, floods, earthquakes and droughts set back development progress. The World Bank's high level climate and disaster risk screening tools will help increase the effectiveness and longevity of your investments.

**Screening Tools**

Climate Profiles

Climate Change Knowledge Portal

Climate Smart Planning Platform

*Tools to screen policies/ investments and recognize risks*

<http://climatescreeningtools.worldbank.org/>

# High-level screening approach for risks from climate and geophysical hazards at an early stage of project development across various sectors



National/Policy

## National/Policy Tool:

Help screen national strategies and diagnostics, sector wide strategies, and development policy reforms



Agriculture



Coastal Flood Protection



Health



Energy



Health



General



Roads



Water

## Project-Level Tools:

Help identify risks to key project components/ activities at early stage of project preparation. Sectors covered include agriculture, coastal flood protection, energy, health, roads, and water

# SCREENING APPROACH

## User Input



**Subject Matter Expertise**

**Understanding of  
Development Context**



## Screening Tool



**Logic draws on IPCC  
exposure-sensitivity-adaptive  
capacity framework**

**Information on Climate and  
Geophysical Hazards**

**Sector Specific Guidance**



## Output

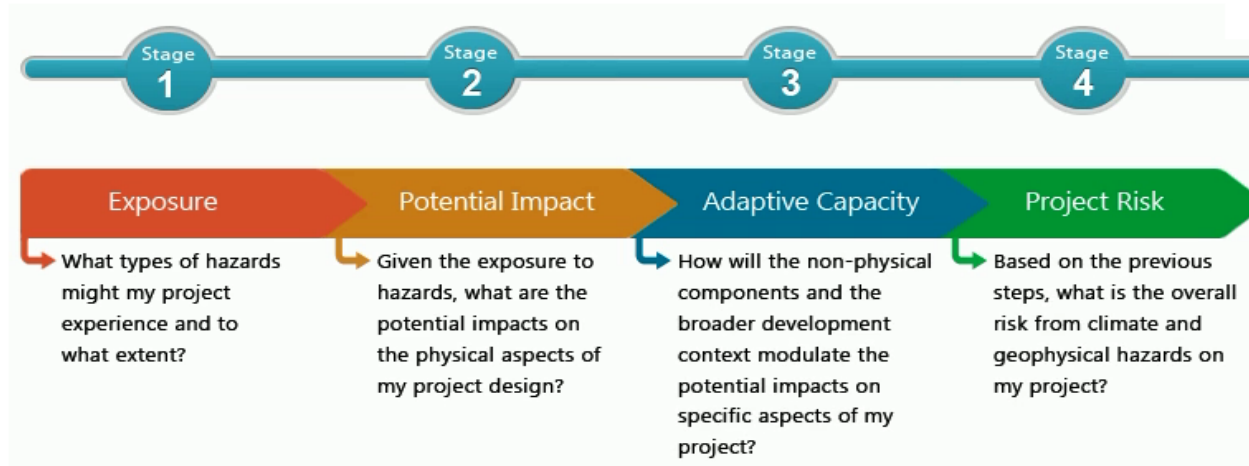


**Identification of Risks at  
early stage of  
program/project design**

**Facilitates discussion  
on resilience measures  
and/or in-depth  
assessments**

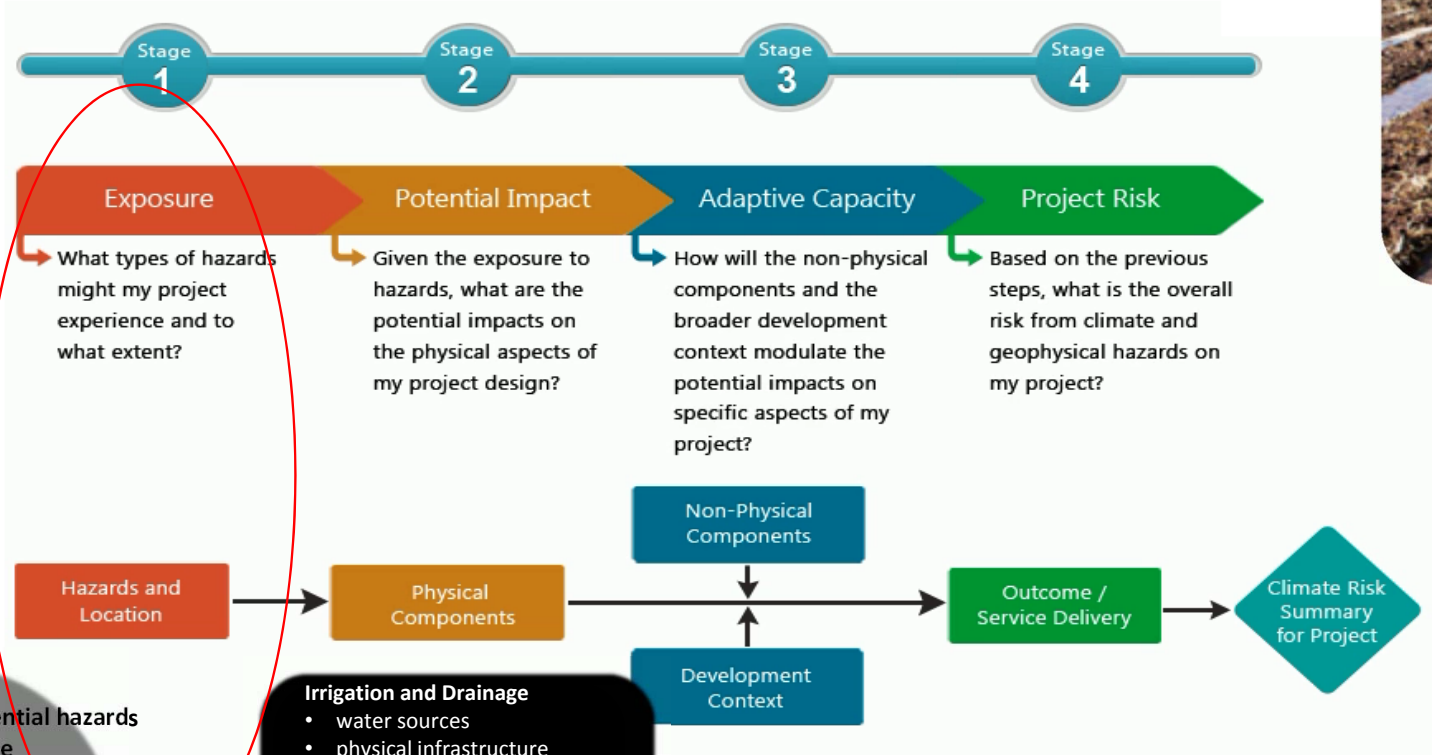
## EXAMPLE: AGRICULTURE SECTOR SCREENING APPROACH

### Four Screening Stages



# EXAMPLE: AGRICULTURE SECTOR SCREENING APPROACH

## Four Screening Stages



**Stage 1: Exposure**  
 What types of hazards might my project experience and to what extent?

**Stage 2: Potential Impact**  
 Given the exposure to hazards, what are the potential impacts on the physical aspects of my project design?

**Stage 3: Adaptive Capacity**  
 How will the non-physical components and the broader development context modulate the potential impacts on specific aspects of my project?

**Stage 4: Project Risk**  
 Based on the previous steps, what is the overall risk from climate and geophysical hazards on my project?



- Exposure to potential hazards**
- Temperature
  - Precipitation
  - Drought
  - Sea level rise
  - Storm surge
  - Strong winds
  - Landslides

- Irrigation and Drainage**
  - water sources
  - physical infrastructure
  - water demand
- Crops and Land Management**
  - soil/land management
  - seeds and crops
- Livestock, Rural Transport, and Storage & processing**
  - single rating



PDF output report

# CCKP DATA SUPPORTS SCREENING

## Mozambique Dashboard

### Risk Screening Overview

Overview | Risk Screening Overview | Climate Baseline | Natural Hazards | Climate Fu

### Historical Climate Variability and Change

Historical Climate Trends	
Mean rainfall	2.5 mm/mo ▼
Mean temperature	0.6 °C ▲
'Hot' days per year	25 days ▲
Heavy rainfall events	25 days ▲

### Key Precipitation Trends

- Some unusually high rainfalls have occurred in the dry season in recent years (2000-2006), but this has not been part of a consistent trend.
- Sahelian rainfall is characterized by high variability on inter-annual and inter-decadal timescales, which can make long-term trends difficult to identify. A period of particularly high rainfall occurred in the early 1960s, while the early 1980s were particularly dry. Statistically significant decreases of around 10 to 15 mm per decade have, however, been observed between 1960 and 2006 in the southern regions of Senegal (during the wet season of June through September).

### Key Temperature Trends

- Mean annual temperature has increased by 0.9°C since 1960, an average rate of 0.20°C per decade. Of that region and season) increased by 25 in the last 40 years, and much of this has occurred during the southern hemisphere autumn. This corresponds to the first harvest cycle of many major grains across the country, with significant implications for agricultural pests and yields.

THE WORLD BANK GROUP

## Climate and Disaster Risk Screening Tool - Roads Projects

Welcome John Smith | Save & Exit  
Project: Mozambique Roads Catherine

Overview | Project Information | Hazards and Location | Hard Components | Soft Components | Development Context | Outcome | Results Summary

Project Location | Introduction | Extreme Temperature | Extreme Precipitation and Flooding | Sea Level Rise | Storm Surge | Strong Winds | Other Natural Hazards | Summary

### Location - Extreme Temperature

To what extent is the project location subject to Extreme Temperature?

**Guiding Information**

**Historical/Current** -Based on the information provided in the "Risk Screening Overview" describe the nature of the hazard in your project location

- What trends in annual and seasonal temperatures have been observed?
- What trends in the frequency and intensity of extreme temperatures have been observed?
- Does the project location include areas that have been subjected to extreme temperatures in the past?

Rate the extent to which your project location contributes to risk from extreme temperature . Select No Risk only if you are certain that your location is not subject to extreme temperature.

**Future** -Based on the information provided in the "Risk Screening Overview" of your country in the CCKP, describe future projections of extreme temperature.

- How are annual and seasonal temperatures projected to change?
- How are the frequency and intensity of extreme temperatures projected to change?
- In light of your Historical/Current rating, do projections increase or decrease the extent to which your location contributes to risk from extreme temperature?

Rate the extent to which your project location contributes to risk from extreme temperature If projections are uncertain, the default risk rating should be the Historical/Current rating.

#### Rating Guide

CLIMATE HAZARD	TIME FRAME	HAZARD DESCRIPTION	LOCATION
EXTREME TEMPERATURE	HISTORICAL / CURRENT S	The highest monthly average maximum daily temperature is 33 C. The number of 'hot days' per year, defined as the upper	Moderately Exposed ▼
	FUTURE S	Annual average temperature is expected to increase by 1°C to 2.8°C by 2060 relative to current conditions. The number of	Highly Exposed ▼

Insufficient understanding	Not Exposed	Slightly Exposed	Moderately Exposed	Highly Exposed
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## SAMPLE OUTPUTS FROM THE SCREENING

**Table 3b Subsector: Irrigation and Drainage**

Time Frame	Water Sources		Built Infrastructure	Water Demand	Overall
	Quantity	Quality			
Historical/Current Ⓢ					Moderate Potential Impact <input type="button" value="v"/>
Future Ⓢ					Moderate Potential Impact <input type="button" value="v"/>
Insufficient Understanding	No Potential Impact	Low Potential Impact	Moderate Potential Impact	High Potential Impact	

**Table 3c Subsector: Crop and Soil Management**

Time Frame	Soil And Land Management	Seeds And Crops	Overall	
				Historical/Current Ⓢ
Future Ⓢ			High Potential Impact <input type="button" value="v"/>	
Insufficient Understanding	No Potential Impact	Low Potential Impact	Moderate Potential Impact	High Potential Impact

**Table 3d Subsector: Livestock**

Time Frame	Precipitation & Flooding	Temperature	Drought	Livestock
Future Ⓢ				High Potential Impact <input type="button" value="v"/>
Insufficient Understanding	No Potential Impact	Low Potential Impact	Moderate Potential Impact	High Potential Impact

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