



World Food
Programme

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Climate Adaptation and Resilience Mozambique Country Office

Portfolio of work

March 2021



Key Messages

In **2019 Mozambique was world-wide the most affected country** by the impacts of extreme weather events (cyclones, storms, floods, drought, etc.), and **ranking #5 over the period 2000-2019**. (Global Climate Risk Index 2021).

Mozambique contributes 0.06% to global emissions. However, in terms of **vulnerability to climate change, Mozambique is the 38th most vulnerable and the 13th least ready country** – meaning that it is vulnerable to, yet unready to address the effects of climate change.

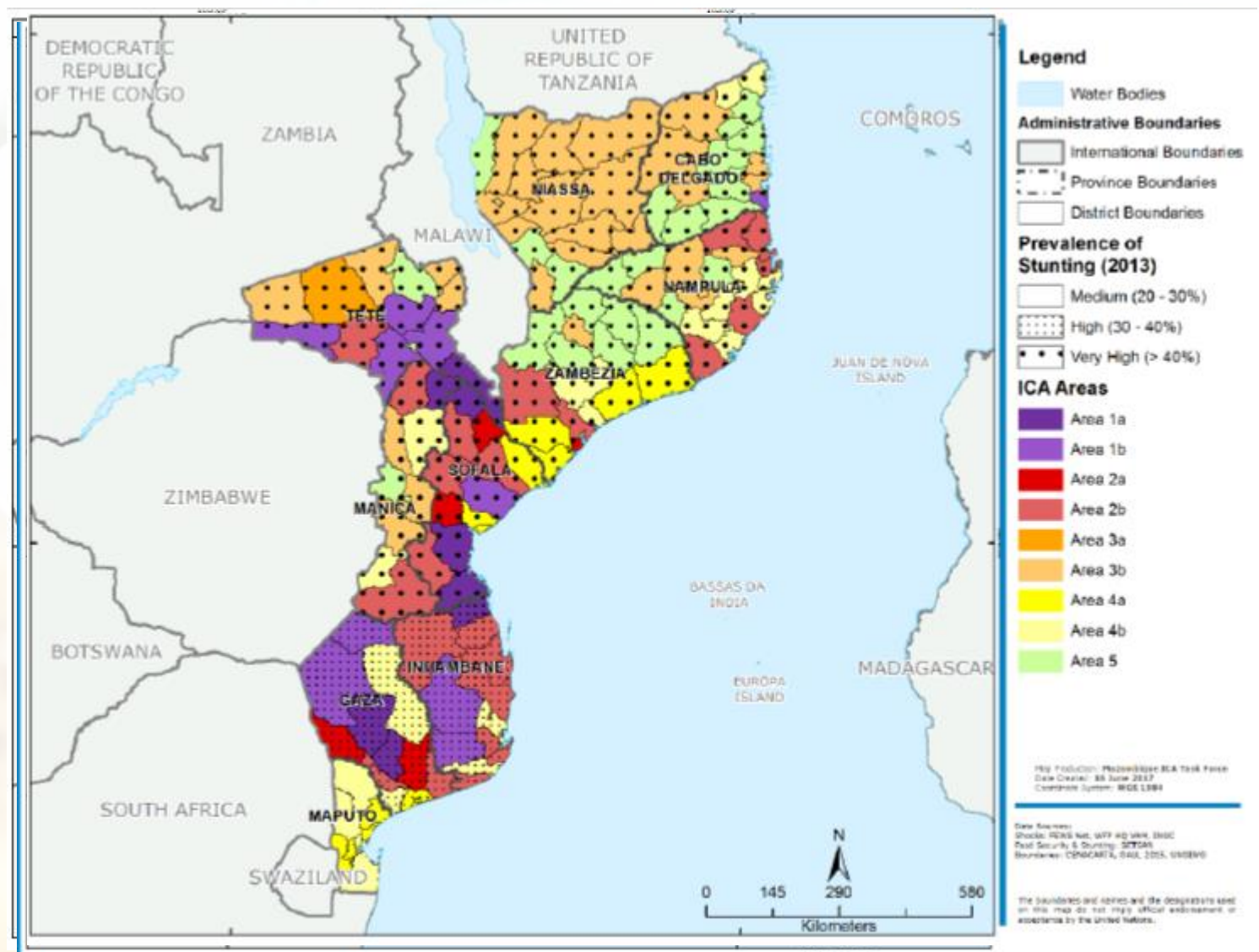
Agriculture accounts for a **quarter** of Gross Domestic Product (**GDP**) and the **income** of over **70 percent of the population** (WB, 2018).

The majority of the sector is characterized as **small-scale, rainfed agriculture, practiced mainly for food and nutrition security**.

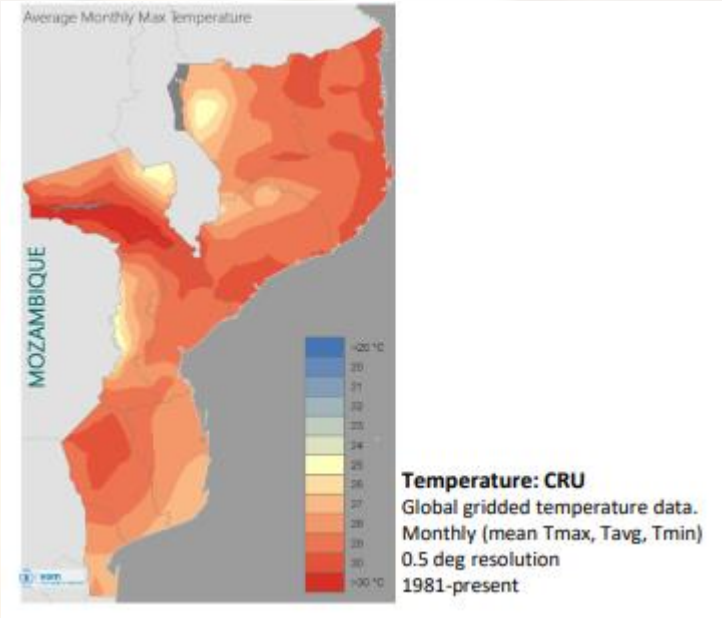
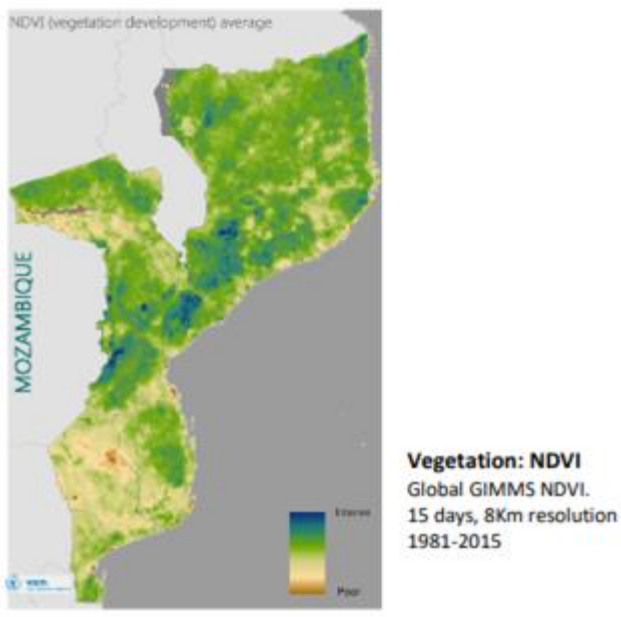
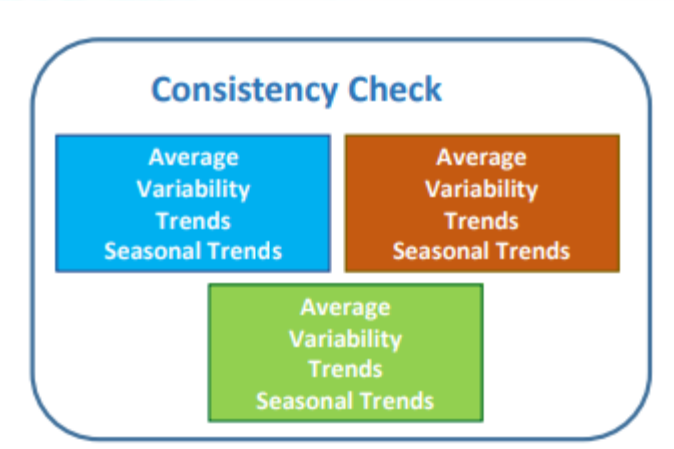
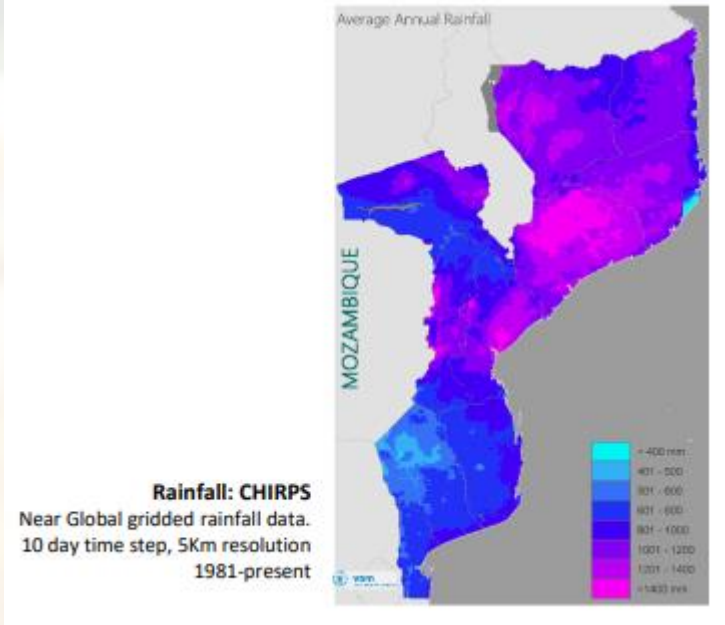
Recurring emergency needs have eroded national and local capacities to manage recurring shocks. PDNA following cyclones Idai and Kenneth cite a need of over 3 billion USD for recovery alone.

<<Highly vulnerable and exposed to shocks, but with limited resources and capacities to adapt and better manage emerging risk>>

1. Integrated Climate Analysis



2. Climate Analysis



3. Climate Model Projections

Scenario 1: hotter and drier

- Daily maximum temperatures increased by around 3°C on average
 - **Heatwaves more common**
 - **Crop thresholds exceeded**
 - **Evaporation rate increased**
- Less rain on average – mainly during DJF
 - Increased evaporation puts **more stress on water availability during drier months**
 - **Droughts** more frequent and intense

Scenario 2: warmer with more extreme rainfall

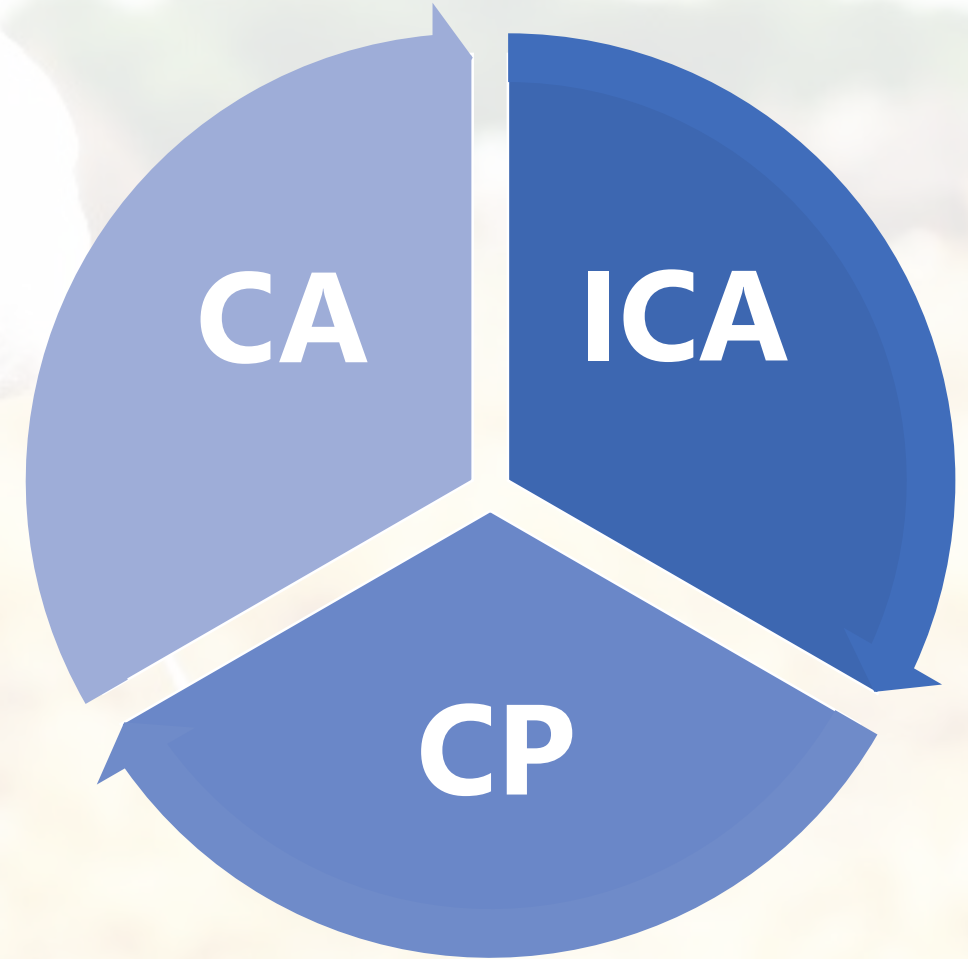
- Daily maximum temperatures increased by around 1.5°C on average
 - **Heatwaves more common**
 - **Evaporation rate increased**
- Slight increase in rainfall during rainy season
 - Increases likely to be offset by increased evaporation meaning **continued issues with water availability**
 - More frequent and intense **flood** events

In all future scenarios:

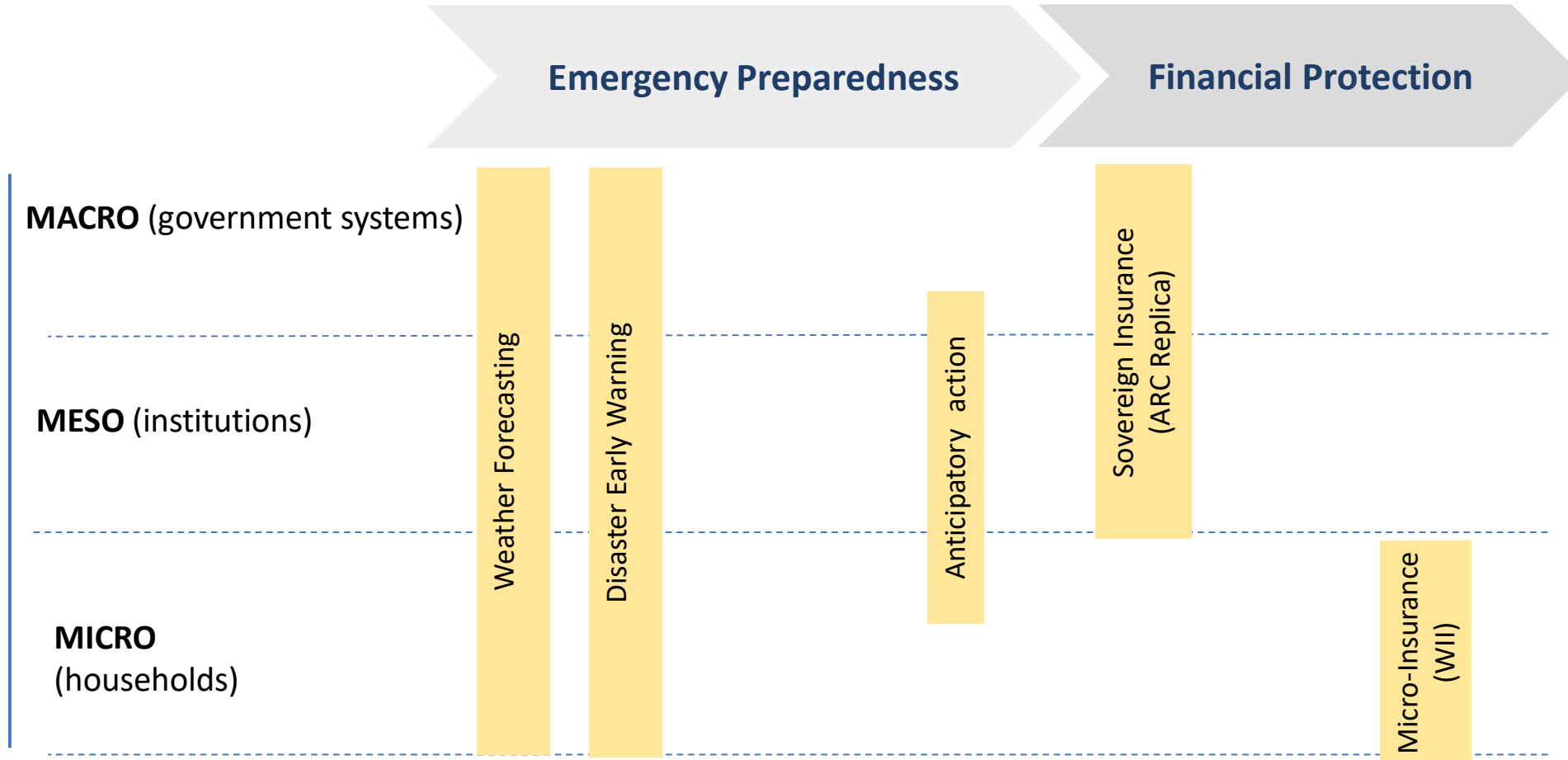
- Wetter, drier, hotter, cooler years will still occur as part of natural variability
- Sea levels will rise
- Tropical cyclones will continue and will be more intense

Putting It All Together

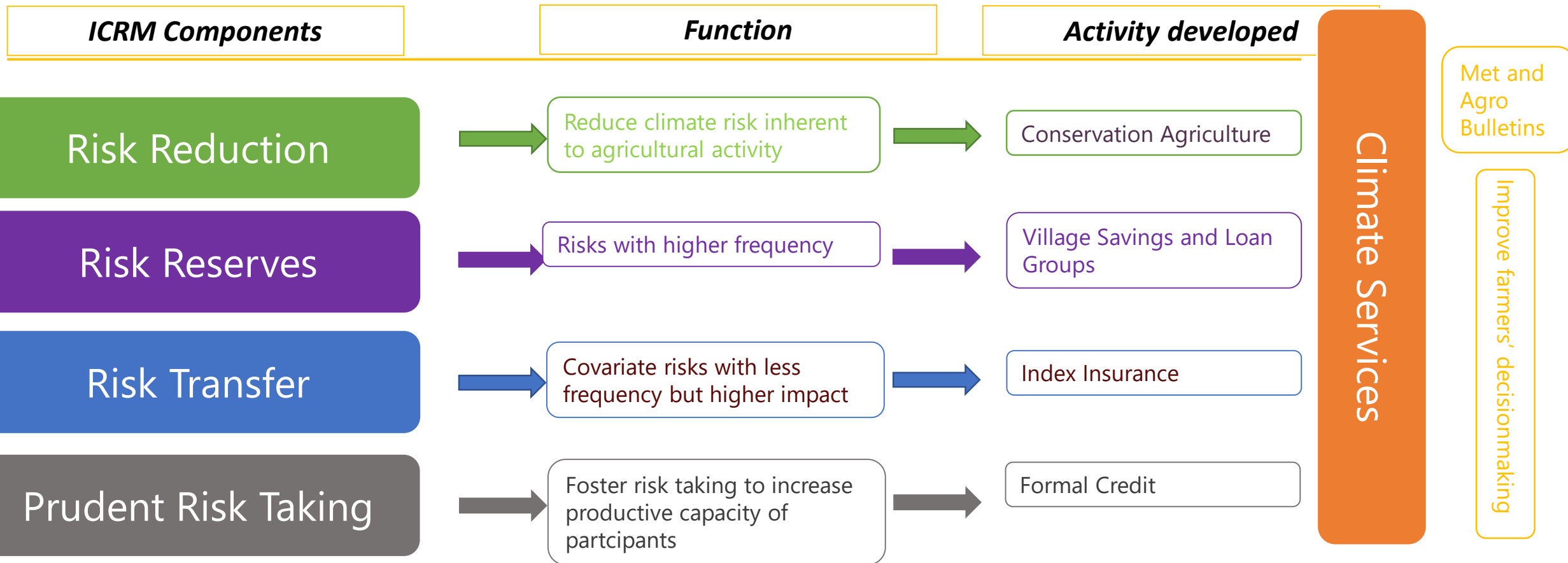
1. **Understand the country's** experienced **climate and weather**;
2. **Identify** the prevailing **vulnerabilities**;
3. **Recognize the key hazards** (& their relationship to vulnerabilities);
4. **Projection** of these complex relationships into the future;
5. **Support prioritization** of action, incl. livelihoods, geographies, hazards, etc;



COs Integrated Programs- Implemented tools



R4- Overview of Integrated Climate Risk Management (ICRM) Components



Overview of Risk Transfer Component within ICRM

- **Gaza (Chibuto and Chokwe) and Tete (Changara)**

- 2,403 registered farmers out of 2,600 participants;
- KYC requirements = Cooperating partners as policyholder;

- **Weather Index Insurance Structure**

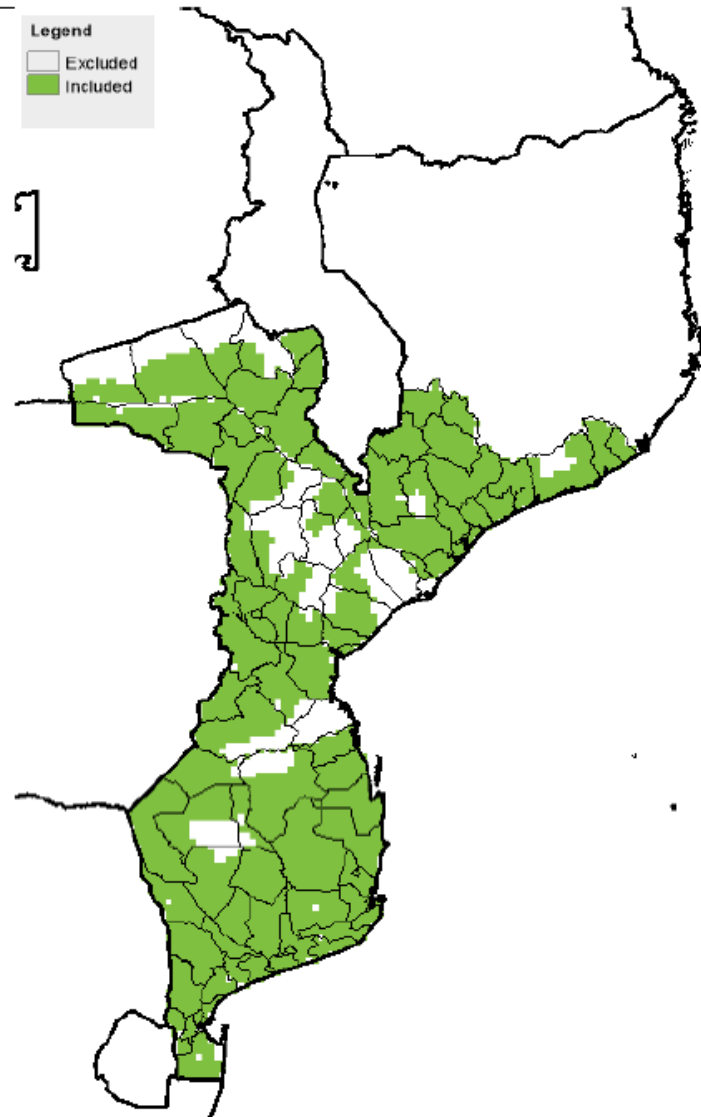
- Human Centered Design led by IRI Columbia University;
- Hollard Mozambique as underwriter;
- Rainfall index with 3 protection windows throughout main season (Nov to Mar);

Overview of WII- Gaza and Tete

Locations	Number of Registered Farmers	Premium per Farmer (USD)	Sum Insured per Farmer (USD)	Total Gross Premium of Scheme (USD)	Total Sum Insured (USD)
Changara	985	15	96	14,775	94,560
Chibuto	651	15	102	9,765	66,402
Chokwe	767	15	116	11,505	88,972
Total	2,403			36,045	249,934

ARC Replica

ARC Drought Calculation Mask



- The drought model for Mozambique uses **the Rainfall Estimation Algorithm version 2.0 (RFE2)** satellite rainfall estimates → analysis comparing ground station rainfall data obtained from Mozambique National Meteorology Institute (INAM) with satellite datasets in *Africa RiskView*;
- The calculation mask for Mozambique covers parts relatively **higher inter-annual rainfall variability** and coincides with greater parts of the arid and semi-arid zone (with the calculation mask at district level) → more granular view of **localized droughts**;

October-April as coverage period for proposed Drought policy;

Maize as reference crop for calculation parameters;

ARC Operational Plan has been approved by GoM and will be valid until 2022;

- WFP, with consultations with ARC and GoM, will decide which policy (drought vs. tropical cyclone) to purchase via **ARC Replica Programme**;

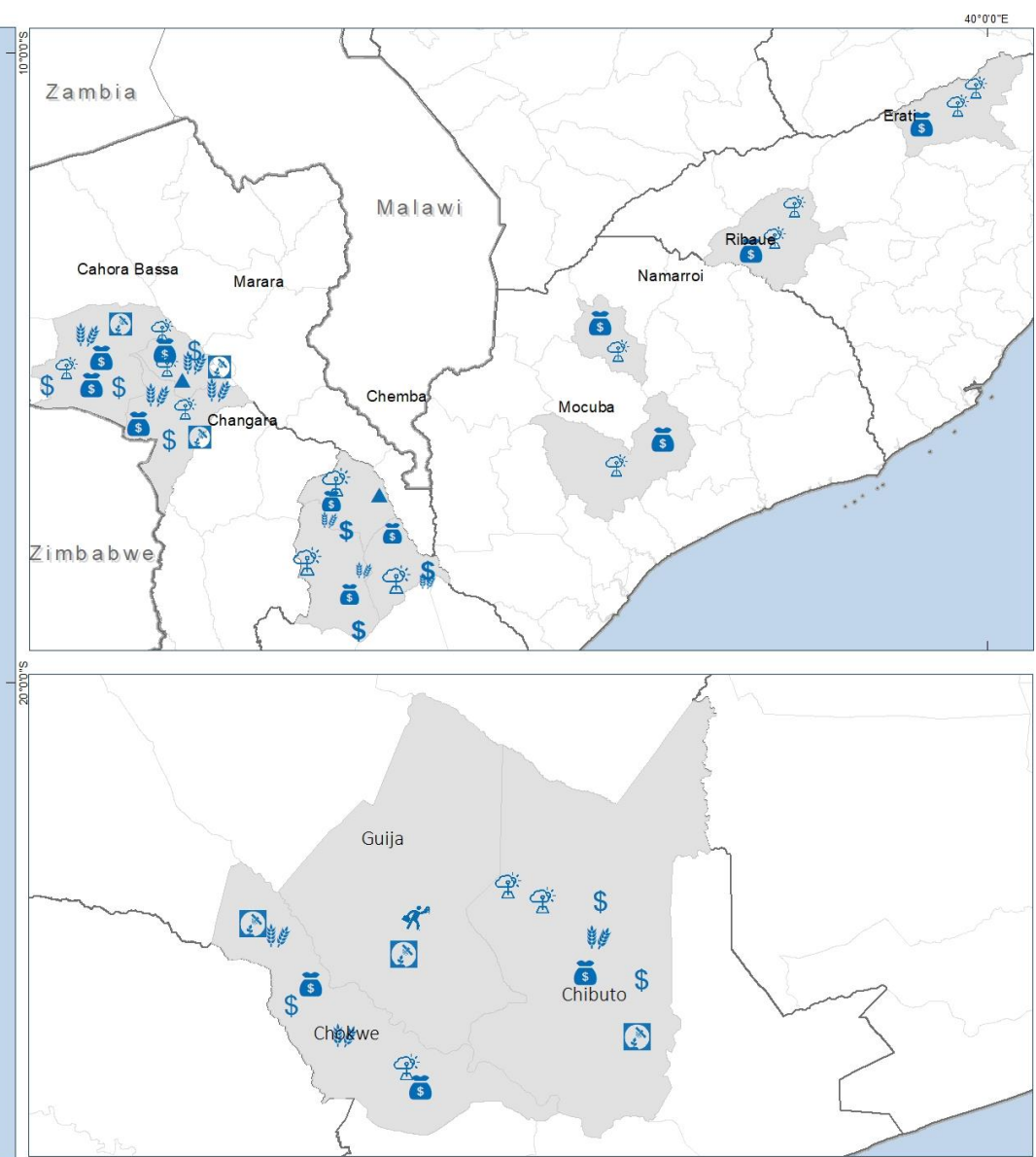
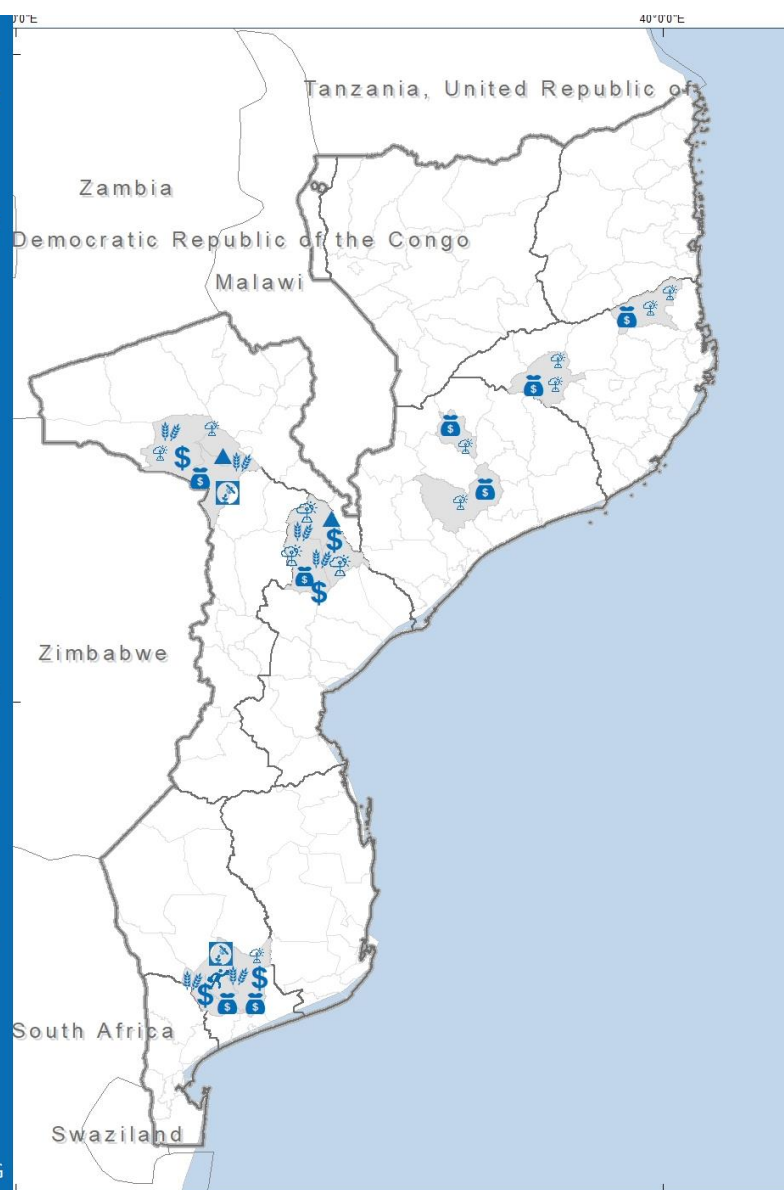
<<For 2021-2022, WFP has secured funds to purchase ARC Replica>>

Overview of Target Areas

Mozambique

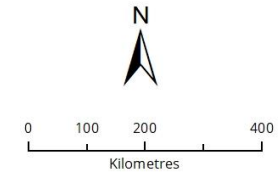
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Legend

- ▲ FFA
- Crop Monitoring
- Anticipatory Action
- Conservation Agriculture
- Climate Services
- Saving and Credits
- Weather Insurance



Date Created: 11 Feb 2021
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Map Reference:
MOZ_map3_marker_

Data sources:
WFP Activities: WFP -
Boundaries: OCHA
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