Rapid Geospatial Agriculture and Livelihood Impact Analysis of Moderate Tropical Storm Ana in Mozambique

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Key findings

In numbers

401 565 people affected in Nampula, Zambezia, Tete, Sofala and Manica[1]

- **372 560 ha** flooded land area[2]
- **42 406 ha** flooded cropland[3]

1 000 farmers reported livestock losses

USD 5.3 million needed to restore agriculture-based activities

Early vegetative stage of the maize crop (staple food), with the bulk of plantings completed in December 2021

Livelihoods affected include crop production, fishing, livestock production

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[1] Population affected by flooding means number of persons exposed or living close to the flooded areas by district or traditional authority area after TS Ana (22/01/2022)

[2] FAO Geospatial Analysis on flooded areas after tropical storm Ana, 24-28 January 2022

[3] FAO Geospatial Analysis on flooded areas after tropical storm Ana, 24-28 January 2022

SITUATION OVERVIEW

In Mozambique, **tropical storm Ana made landfall** in Nampula province on 24 January 2022, **affecting the provinces of Nampula, Zambezia, Tete, and parts of Niassa, Manica, and Sofala** (OCHA, 2022). Over 100 millimetres of rainfall fell in a 24-hour period, resulting in **widespread flooding in central provinces**, while there were winds of 100-130 km/h that caused further damage. **According to** the preliminary assessments undertaken by **the National Institute for Disaster Management and Risk Reduction** (INGD), **141 483 people were affected by the floods**.

Assessments led by INGD, in coordination with the Provincial Directorate of Agriculture and Fisheries (DPAPs) of the provinces of Zambezia, Nampula, Manica, and Sofala, **indicate that tropical storm Ana affected 40 169 households corresponding to 195 471 people**, injured 207 people, and killed at least 38 people, mostly in Zambezia, Nampula, and Tete provinces.

Figure 1. Main flood affected provinces, 24-28 January 2022

The Food and Agriculture Organization of the United Nations (FAO) Geospatial Unit (NSL) and the Needs Assessment team (OER), with support from the FAO Resilience hub for Southern Africa (REOSA), Global Information and Early Warning System (GIEWS) and the Mozambique country office, **conducted a rapid post-disaster impact analysis to understand the implications of the tropical moderate tropical storm Ana in the most affected areas across the country and to inform emergency response planning.**
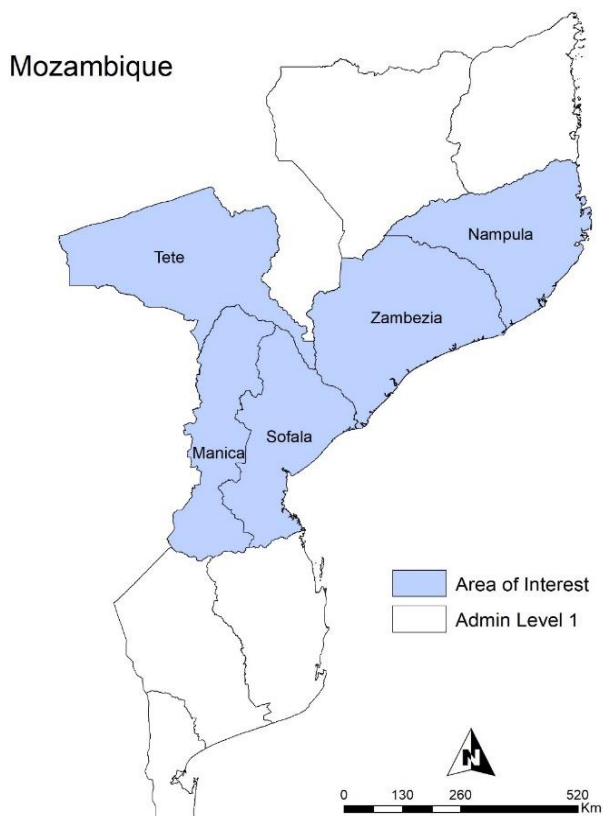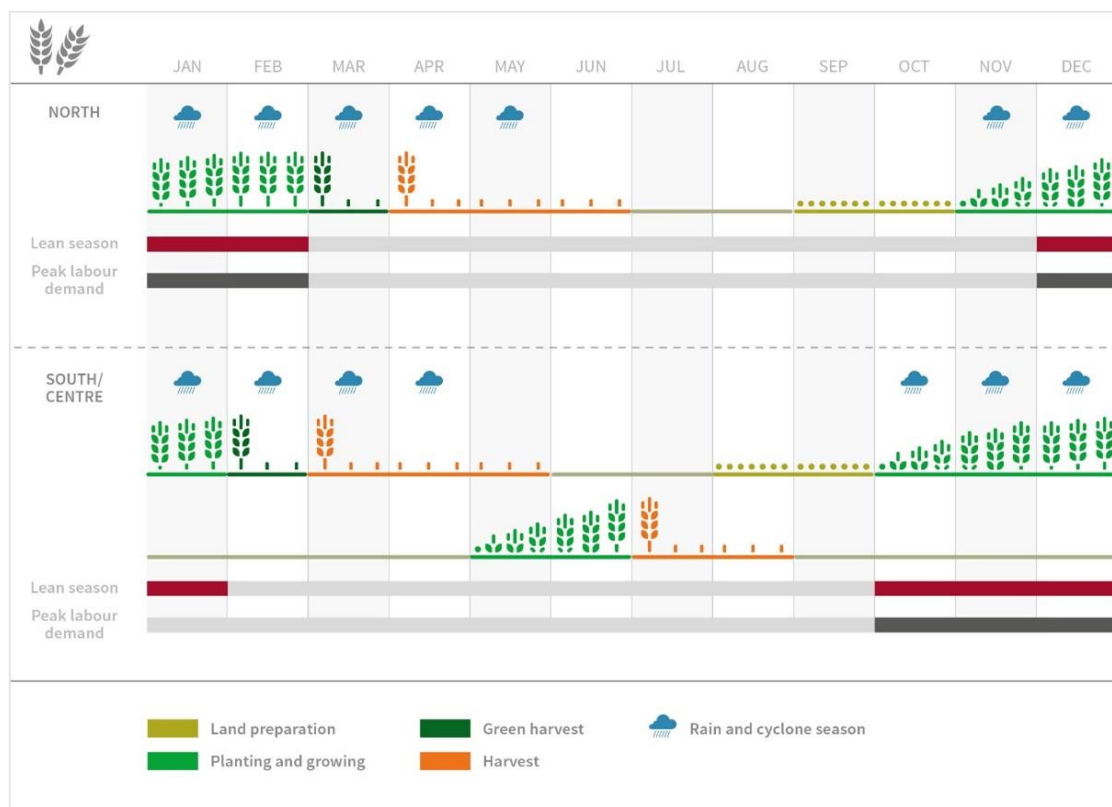
IMPACT ON AGRICULTURE, LIVELIHOOD AND FOOD SECURITY

According to the FAO's preliminary geospatial analysis, a total of 372 560 hectares of land were flooded in the provinces of Manica (6 267 ha), Nampula (61 403 ha), Sofala (74 809 ha), Tete (74 539 ha), and Zambezia (155 542 ha). **A total of 42 406 ha of cropland was also inundated with flood water.** At provincial level, Zambezia (22 065 ha) was most affected followed by Sofala (10 629 ha), Tete (8 292 ha), Manica (741 ha), and Nampula (679 ha). The worst affected districts were Mutarara (6 233 ha), Morrumbala (5 374 ha) and Gorongosa (3 871 ha) in Tete, Zambezia and Sofala provinces respectively.
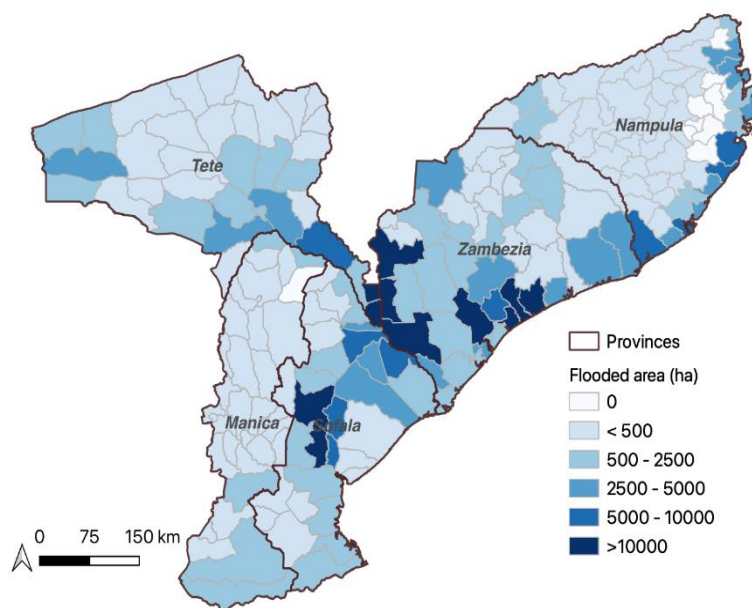

Figure 2. Extent of flooded area by postos (HDX level 3) in five provinces of Mozambique, 24-28 January 2022
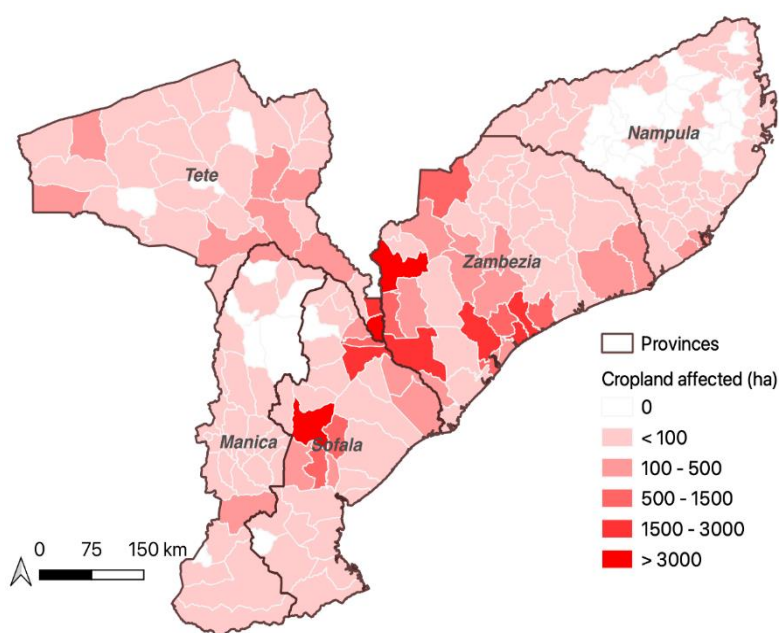

Figure 3. Flood extent in affected croplands by province, 24-28 January 2022

The main livelihoods in the affected provinces include crop production, fishing, livestock production as well as non-agricultural labour. The main crops grown are maize, cassava, and rice, which is particularly important in Sofala and Zambezia. **Localized crop losses of maize, rice, beans, groundnuts and cassava are expected due to flood.** In addition, where crop losses were not recorded, but flood water remained for several days, yield reductions are likely. A comprehensive **livestock assessment** conducted in 18 districts of Tete province alone, **reported that nearly 1 000 farmers recorded livestock losses.**
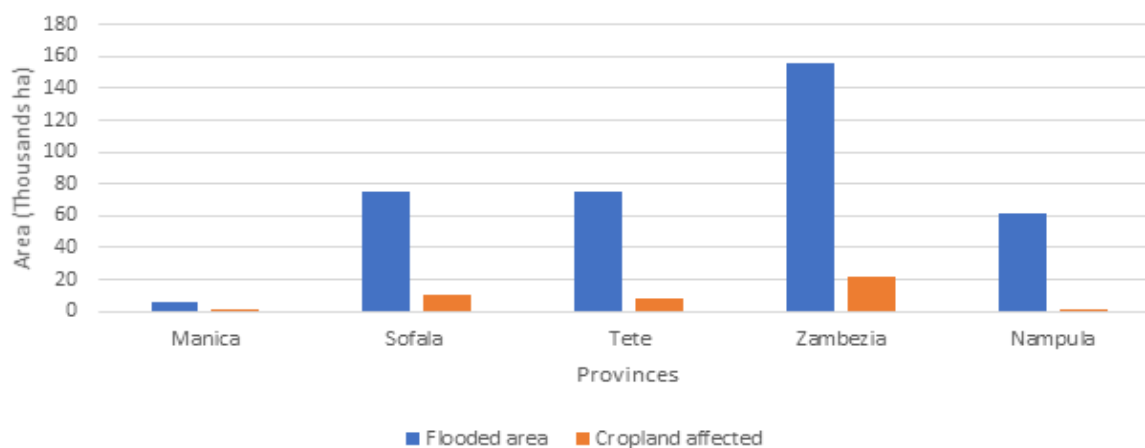
Figure 4. Flooded cropland areas in all affected province

Recent **IPC analysis indicates that** until March 2022, **1.9 million people or 13 percent of the population analyzed are facing crisis levels of food insecurity (IPC Phase 3+). The impact of the flood is likely to cause a worsening of food insecurity conditions,** mostly owing to **expected crop losses** and possible **impact on households' incomes.** According to preliminary results from the assessment conducted by the Provincial Directorates of Agriculture and Fisheries (DPAPs) of Nampula, Sofala, Zambezia, and Tete provinces, an estimated **USD 5.3 million is needed to restore agriculture-based activities.**

RECOMMENDATIONS

To support recovery and rehabilitation of the agriculture sector the following interventions are recommended:

Short-term (next 3 months)
- **Provision of agricultural inputs** (seeds, planting material, fertilizers, hand tools, and empty bags among other material) in all affected areas with special attention for those areas starting winter cropping.
- **Provision of emergency fingerlings and fishing gears** (nets, hooks, lines, etc.).
- **Follow-up more in-depth agriculture damage and loss, and food security assessment** to estimate more accurately the impact of the cyclone and inform recovery, resilience, and development interventions.

Medium-term (up to six months)
- **Provision of reconstruction material** (i.e., animal staple, processing and storing facilities, etc.).
- **Restocking of lost livestock:** small-scale livestock (poultry and small mammals).
- **Provision of additional fishing equipment** (scales, cleaning trays, knives, etc.).
- **Provision of equipment** such as solar pumps, treadle pumps, and watering cans together with irrigation material.
- **Promotion of agriculture livelihood restoration activities and income generation** using good agriculture practices.
- **Follow-up more in-depth agriculture damage and loss, and food security assessment** to estimate more accurately the impact of the cyclone and inform recovery, resilience, and development interventions.