



Food and Agriculture  
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# ISSUE 01

# AGRICULTURE WORKING GROUP (AWG)

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The seventh AWG meeting was held on 31 January 2022, co-chaired by the Ministry of Agriculture and Rural Development (MADER) and the Food and Agriculture Organization of the United Nations (FAO). MADER was represented by the Provincial Directorate of Agriculture and Fisheries (DPAP).

In total, 39 people participated including nine government officers (MADER, SPAE, IIAM, INAM, ARA-Norte and SDAE), 11 from UN agencies (FAO, WFP, OCHA), 17 from national and international NGOs (ICRC, AjudaEnAccion, TechnoServe, UPC, ACF, IIAM, NPA, ADRA, SEPPA, iDE, WILFSWERK, ASAC, UNIAC, Caritas and Dorcas) and two private sector companies linked to the agriculture value chain in Mozambique (Plexus and Kickstart).

During the meeting, three topics were presented as follows:

- I. Priorities of the Agricultural Sector in 2022 for the Cabo Delgado Province;
- II. Climatic Conditions and Implications on Agriculture:
  - The first trimester agrometeorological forecast; and
  - State of hydrographic watershed and its implications on agriculture;
- III. Rainy Season Contingency Plan.

## Key Highlights:

Adopting a more diversified and competitive economy, intensifying the productive sectors with the potential to increase income generation and create job opportunities, especially for young people.

DPAP with FAO and other key stakeholders in the agriculture sector need to carry out a comprehensive survey of the available land for agriculture purposes, including new openings for IDP populations.

Small underground and sustainable dams contribute to improved water management of excessive rains. This is crucial to have sufficient water reserves during times of water shortages. Partners were encouraged to factor this aspect in the design of projects and programmes to contribute to better use of other related interventions for agricultural production and development, including mechanization and improved seed access and availability.

# 1. Main points discussed and recommendations

## 1.1. Priorities of the agricultural sector in 2022 for the Cabo Delgado Province

The agriculture sector presented the main priorities for the current agricultural season, based on the Government of Mozambique's 2020–2024 Five-Year Plan, intending to adopt a more diversified and competitive economy, intensifying the productive sectors with the potential to increase income generation and create job opportunities, especially for young people.

It was recognized that climate change brings greater challenges and threats to the economic sectors in ensuring the availability of food and improving the population's levels of food security and nutrition.

For 2022, the priorities of the agriculture sector in the province are presented, as summarized below:

### 1. REVITALIZE IRRIGATION AND DRAINAGE SYSTEMS

- Construction/rehabilitation of reservoirs, tanks, dikes, weirs and dams;
- Implementation of small drip irrigation systems for the production of vegetables using solar powered systems;
- Empower producers with motor pumps for permanent food production.

### 2. INCREASE AGRICULTURAL PRODUCTION

- Boost agricultural mechanization through the provision of tractors and agricultural implements.
- Opening of *machamba's* (farming fields) blocks for easy access to inputs and technical assistance;
- Stimulate and encourage the production of cash crops;
- Provision of subsidized packages of agricultural inputs;
- Facilitation of credit for agriculture, livestock, and fisheries.

### 3. INCREASE LIVESTOCK AND FISHERIES PRODUCTION

- Raise levels of livestock production;
- Stimulate the implementation of slaughterhouses, aviaries, incubators and feed factories;
- Implementation of an aquapark and aquaculture production infrastructure (production of fingerlings and feed);
- Implementation of naval carpentry and improvement of working methods (vessels and fishing gear);

### AWG recommendations:

- Coordination and information mechanisms, such as the AWG, play a critical role in guaranteeing that interventions are in alignment with government priorities.
- DPAP with FAO and other key stakeholders in the agriculture sector need to carry out a comprehensive survey of the available land for agriculture purposes, including new openings for IDP populations.
- The districts of Meluco, Palma and Ancuabe have agri-input deficits, especially seed, for the current agricultural season, requiring urgent Agriculture Livelihoods support.
- Revitalization of the irrigation system would guarantee the availability of water for a good agricultural season, which in turn, could result in food security and nutrition for the displaced, as well as host families.
- Investment in sustainable fish production is of capital importance as it allows families to have an alternative means of income to complement the fishing season.
- FAW is a general concern in Cabo Delgado Province and across northern Mozambique owing to its devastating effects on farmers' fields. Partners should coordinate with DPAP/SPAE to monitor Fall Armyworm, including training and field days for learning purposes and experience exchange, while considering COVID-19 measures.





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## 2. Weather conditions and their implications on agriculture

The meeting focused on two thematic areas i) agrometeorological forecast for the first trimester; and the state of watershed levels and their implications on agriculture.

### 2.1 Seasonal precipitation forecast for the period January to March 2022

Higher probability of occurrence of:

- Normal rainfall with a tendency to be above normal in southern and southwestern parts of Niassa, southern Cabo Delgado and a large extension of Nampula.
- Normal rainfall for districts along the coastal strip of Nampula, some districts of Niassa, the central part of Cabo Delgado.
- Normal rainfall with a tendency to be below normal for the districts to the north and northeast (coastal strip) of Cabo Delgado.

### 2.2 Seasonal temperature forecast for the period January to March 2022

Higher probability of occurrence of:

- Normal temperatures with a tendency to be above normal in the southwest districts of Niassa.
- Normal temperature in the central and southern districts of Cabo Delgado, northern and southeastern Niassa and most districts in Nampula Province.
- Normal temperatures with a tendency to be below normal in north of Cabo Delgado Province and northeast of Nampula.

### 2.3 Interpretation of the 2021/22 rainy season forecast in agriculture

- For the provinces of Niassa, Cabo Delgado and Nampula, a High Water Needs Satisfaction Index (ISNA) is expected (85 to 100 percent).
- A good agricultural season is expected in the north region, considering the levels of water satisfaction of the crops during the analysis period.
- Regarding sowing, in the north region, normal and staggered sowings with short and medium cycle varieties are recommended.



2.4 Water balance forecast by province and district

Knowledge on the amount of water available in the soil favours agricultural planning and the establishment and management of crops in a given area. Water balance is, therefore, an important tool in terms of identifying the periods when water is available for irrigation, periods of shortage, as well as those periods when there is surplus water. Knowledge of the water balance in a given production zone enables the identification of the best periods for sowing, irrigation as well as improving soil management and the ability to estimate the evapotranspiration in a given region can be identified.

**Table 1** presents the projections of water availability from January to March 2022 in the main basins of Cabo Delgado, Niassa and Nampula Provinces, where it is explicit that the basins of Nangade, Muidumbe, Palma, Mocimboa da Praia, Quissanga and Macomia in Cabo Delgado Province present serious problems of water availability for agricultural purposes. In cases where there is water surplus, as is the case in Balama, Namuno and Chiure basins, studies can be undertaken to determine the need for underground water storage used in times of water scarcity, as well as good planning to guarantee agricultural production throughout the season.

**TABLE 1** Annual water balance averages of districts in Cabo Delgado, Nampula and Niassa

YEAR 2022			
PROVINCE	WATER BALANCE (>75% OF ANNUAL PRECIPITATION)	WATER BALANCE (>50-75% OF ANNUAL PRECIPITATION)	WATER BALANCE (<50% OF ANNUAL PRECIPITATION)
Cabo Delgado	Balama, Namuno, Chiure	Mueda, Montepuez, Meluco, Ancuabe, Metuge, Mecufi and west side of Chiure	Nangade, Muidumbe, Palma, Mocimboa, Quissanga e Macomia
Nampula	Malema, Lalaua, Ribaue, Mecuburi, Erati, Murrupula, Mogovolas, norte de Moma	Nacarroa, Nordeste de Erati, Muecate, Meconta, Rapale, Nampula, Memba, Nacala-a-velha, Nacala Porto, Mossuril, Ilha de Mocambique, Mogincual, Liupo, Angoche, Large, sul de Moma	
Niassa	Lichinga, Chimbunila, sul de Majune, Ngauma, Mandimba, Mecanhelas, Cuamba, Maua, Nipepe, Metarica	Lago, Sanga, Muembe, norte de Majune, Mavago, Mecula, Marrupa	

Source: IIAM.





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## AWG recommendations:

- There is a need for the continuous dissemination of hydrological information, the status of hydrographic basins and rainfall through the competent authorities, including INAM, IIAM, ARA Norte, among others. Hydrological (including rainfall), agrometeorological information must be used effectively by members of the AWG, so that the planning of sustainable and resilient agricultural activities has maximum benefits for farmers – the main beneficiaries of interventions in the area.
- Availability of forecast information at least once a month while recognizing that three months forecast would be the most adequate for agricultural planning.
- The planning of the agricultural campaign should consider short-cycle and drought-tolerant crop varieties including those for home gardening using alternative irrigation means, such as hand watering cans.
- There is a great concern for districts with a water balance above 75 percent since a large part of the water is under-utilized and ends up being naturally drained into the sea or lost by evaporation. The AWG and its members should continue to look for techniques that promote underground rainwater storage for later use in times of scarcity. Small underground and sustainable dams contribute to improved water management of excessive rains. This is crucial to have sufficient water reserves during times of water shortages. Partners were encouraged to factor this aspect in the design of projects and programmes to contribute to better use of other related interventions for agricultural production and development, including mechanization and improved seed access and availability.

### 3. Contingency planning for the rainy season

According to DPAP, Cabo Delgado Province is in a region threatened cyclically by extreme natural events (floods, tropical cyclones, and epidemics) that predominate between the months of October to March of each year, coinciding with the rainy season.

The population at risk, key areas of support required, and materials and financial resources required are outlined below.

#### 3.1 Population at risk

According to DPAP, 32 220 people are at risk, 3 720 from flooding in urban areas and 28 500 from heavy winds and rains. For details see **Table 2**.

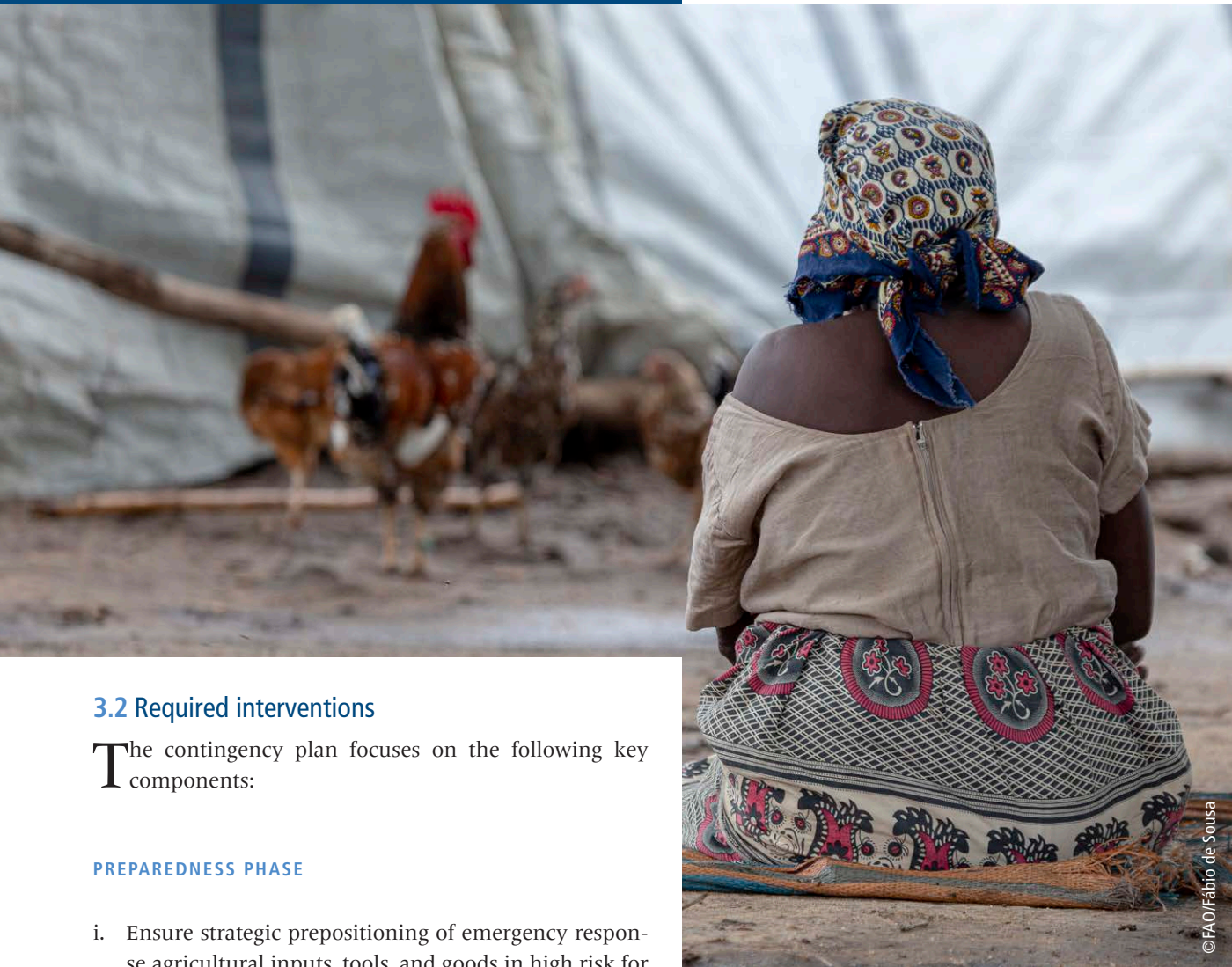


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**TABLE 2** Population at risk by district

DISTRICT	No. PEOPLE AT RISK OF FLOODS IN URBAN AREAS	No. PEOPLE AT RISK OF HEAVY WINDS/RAIN	TOTAL PEOPLE AT RISK (FLOODS/HEAVY WINDS/RAINS)	DROUGHT	TOTAL No. PEOPLE AT RISK
Ancuabe		2 400	2 400	0	2 400
Balama		2 000	2 000	0	2 000
Chiure		3 000	3 000	0	3 000
Ibo		1 000	1 000	0	1 000
Moc. Praia		600	600	0	600
Macomia		2 000	2 000	0	2 000
Mecufi		1 500	1 500	0	1 500
Meluco		900	900	0	900
Montepuez	500	3 200	3 700	0	3 700
Mueda		1 800	1 800	0	1 800
Muidumbe		1 200	1 200	0	1 200
Namuno		1 700	1 700	0	1 700
Nangade		800	800	0	800
Pemba	3 220	2 000	5 220	0	5 220
Metuge		2 700	2 700	0	2 700
Palma		800	800	0	800
Quissanga		900	900	0	900
Total	3 720	28 500	28 500	0	32 220





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### 3.2 Required interventions

The contingency plan focuses on the following key components:

#### PREPAREDNESS PHASE

- i. Ensure strategic prepositioning of emergency response agricultural inputs, tools, and goods in high risk for cyclone, flood prone areas;
- ii. Vigilant surveillance and monitoring of potential disasters;
- iii. Vigilant surveillance and monitoring of crop and animal pests and diseases;
- iv. Promote coordination between DPAP, SPAE, INGD (government) and stakeholder partners;
- v. Vigilant surveillance and monitoring of climatic factors and risks;
- vi. Support capacities to mitigate various cyclones, flood risks to crop and animal loss as well as disease and pest outbreak risks during the emergency.

#### RESPONSE PHASE

- i. Provide timely and targeted critical assistance to cyclone, flood affected households (seeds, tools and technical assistance);
- ii. Coordinate inclusive response coordination and monitoring;
- iii. Support capacities to mitigate various cyclones, flood effects to crop and animal loss as well as disease and pest outbreak during the emergency;
- iv. Reconstruction and rehabilitation post cyclone and flood event.





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### 3.3 Required materials and resources

**TABLE 3** indicates the required inputs for Cabo Delgado Province:

INPUT	QUANTITY	COVERING	DEFICIT	UNIT COST (METICAL)	TOTAL COST (METICAL)
Maize seed (kg)	36 000	1 800 ha	36 000	145	5 220 000
Beans seed (kg)	1 0800	540 ha	10 800	150	1 620 000
Vegetable seed (kg)	370	1 110 ha	370	8 580	3 174 600
<b>Subtotal seed</b>					<b>10 014 600</b>
Hoes	500	500 families	500	350	175 000
Machetes	500	500 families	500	380	190 000
Axes	500	500 families	500	390	195 000
<b>Subtotal equipment</b>					<b>560 000</b>
rodenticides (kg)	120	120 ha	120	1 500	180 000
Pesticides (L) (500L Belt e 370 Emamectin Benzoate)	890	1740 ha	870	4 750	4 132 500
Pulveriser	17		17	3 500	59 500
<b>Subtotal material (pulveriser, pesticides, and rodenticides)</b>					<b>4 372 000</b>
<b>Grand total</b>					<b>14 946 600</b>

#### AWG recommendations:

- The implementation of the contingency plan is possible with the involvement and support of all agriculture sector actors.
- Financial investment in Agriculture is fundamental for the implementation of the floods contingency plan.
- Partners implementing Agriculture Livelihoods interventions will share information on the type of ongoing activities in support of the current agricultural season by district, including information on the type of seed under distribution, and where possible – amounts for consolidation and presentation at the government balance meeting.
- Joint monitoring among AWG partners is encouraged to draw lessons learned that could inform future programming and planning. All partners, when possible, should include the government counterparts in field visits or monitoring activities.



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## Acronyms

<b>ACF</b>	Action Against Hunger
<b>ADRA</b>	Adventist Development and Relief Agency
<b>ARA</b>	Norte Water National Administration - North
<b>ASAC</b>	Associação Social de Apoio Comunitário
<b>DPAP</b>	Provincial Directorate of Agriculture and Fisheries
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>ICRC</b>	International Committee of the Red Cross
<b>IIAM</b>	National Institute for Agrarian Research of Mozambique
<b>INAM</b>	National Institute of Meteorology
<b>MADER</b>	Ministry of Agriculture and Rural Development
<b>NPA</b>	Norwegian Peoples Aid
<b>OCHA</b>	United Nations Office for Coordination of Humanitarian Affairs
<b>SEPPA</b>	Economic Society of Agricultural Producers and Processors
<b>SDAE</b>	District Services of Economic Activities
<b>SPAE</b>	Provincial Services of Economics Activities
<b>UNIAC</b>	Alberto Chipande University
<b>UPC</b>	Peasants Provincial Union
<b>WFP</b>	United Nations World Food Programme

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