



# Emergency Brief

## FAO Flood Update in Southern Africa Extent of Flooding and FAO's Response

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**FAO Sub-regional Emergency Office of Southern Africa (REOSA)**

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### A. Executive Summary

#### **Flood Situation**

- Expectations are high that the region could experience a large scale Humanitarian Disaster on a scale **comparable or exceeding the flood disaster in 2008** in which more than 70,000 people were affected in six countries.
- River levels in the region are exceptionally high; having already reached or exceeded alert levels while it is **still very early in the rainy season**, with heavy rainfall forecasted to continue through March.
- Damaging floods have already occurred in South Africa and Mozambique and all countries are on **high alert for disastrous flooding, with potential major impact particularly on agriculture and food security**.
- **Six countries** are on high alert for potentially disastrous flooding -- Botswana, Mozambique, Namibia, Zimbabwe, Lesotho, Zambia, and South Africa.
- **South Africa** has already declared a National State of Disaster in 33 municipalities in 8 provinces due to extensive floods that have killed 41 people, destroyed thousands of ha of crop land, and caused damages estimated in the millions of dollars. **Lesotho** is also experiencing heavy rains and flood damage.
- Floods in **Mozambique** have damaged 10,000 ha of crops and destroyed informal settlements along rivers. The Government has issued in the current week a Red Flood Alert due to high flooding risk in all major rivers in the South and Central regions of the country.

#### **FAO's Response**

- FAO Mozambique, as co-chair of Food Security Cluster, is supporting emergency coordination, has already participated in an inter-agency emergency flood impact assessment in Gaza, and is preparing for further emergency assessments.
- FAO Lesotho will participate in a national planning exercise to be led by the Disaster Management Authority 1-3 February 2011.
- FAO Malawi, as co-chair of Food Security Cluster, is preparing for emergency assessments.
- FAO Regional Office (REOSA) is supporting emergency preparedness activities of the regional inter-agency committee (RIACSO) including inputs to the weekly Southern Africa – Floods Situation Updates (#1 Issued 20 January 2011), joint production with WFP and FEWSNET of the Regional Food Security Update Matrix, support to an ongoing analysis of the flood impact, emergency fundraising and regional emergency surge capacity preparations.

## B. Regional Rainfall Situation

### Regional rainfall above average:

- Over the last month rainfall was above average across much of continental southern Africa.
- Localized exceptions of below-average rainfall occurred in central Madagascar, parts of northern Mozambique and Tanzania, as well as sections in northern Angola.

### NOAA<sup>1</sup> forecasts:

- **Rainfall to increase** from 25th to 31st January: there is a high chance for precipitation to exceed 50 mm over Madagascar, central Mozambique, Malawi, and northern Zimbabwe.
- **High rainfall becomes localized** from 1st to 7th February: the chance for precipitation to exceed 50 mm is confined to local areas in Madagascar, northern Mozambique, and Malawi.

### SARCOF forecasts:

- From January to March, the Southern African Regional Climate Outlook Forum (SARCOF) has forecasted normal to above-normal rainfall across the region, whilst northern Zimbabwe, central Zambia, southern Malawi, central Mozambique and most of Madagascar are expected to receive above-normal rainfall.

## C. Country Updates

### 1. Mozambique

#### Flood Situation

- **Mozambique on Red Alert due to high risk of flooding:** INGC (Mozambique's disaster management agency) has issued a Red Alert due to a high risk of flooding; all of the important river basins have passed their Alert levels (see table).
- **Rainfall well above normal:** Precipitation from the 11<sup>th</sup> to 20<sup>th</sup> January 2011 in the Central and Northern Regions of the country has all been well above average e.g. Maputo recorded around 150mm during this period with normal around 40mm, Tete recorded 110mm and normal is 60mm.
- **10,000 ha of crops damaged in Gaza Province:** According to the Humanitarian Country Team rapid assessment in Gaza Province. 10,000 ha crops (primarily rice) have been reported damaged. This is the Province through which the Limpopo River flows.
- **Flooding in Maputo and Xai-Xai:** In the Incomati and Maputo basins, localized inundations have occurred, damaging crops planted in the flood plains. Flooding has occurred in urban areas of Maputo and Xai-Xai, primarily in informal settlements close to river banks. (OCHA, Jan 2011)
- **Dams raise discharge levels:** Cahora Bassa dam on the Zambezi River has raised its discharge from 1,900 m<sup>3</sup>/s to 3,200 m<sup>3</sup>/s and Massingir dam on the Limpopo River raised its discharge from 1,200 m<sup>3</sup>/s to 1,500 m<sup>3</sup>/s. These trends are set to continue.
- **Flooding is a regular seasonal phenomenon** along the seven major rivers that cross Mozambique (Zambezi, Limpopo, Incomati, Licungo, Save, Buzi and Pungue). The extent of

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<sup>1</sup> NOAA website:

[http://www.cpc.ncep.noaa.gov/products/Global\\_Monsoons/African\\_Monsoons/precip\\_monitoring.shtml](http://www.cpc.ncep.noaa.gov/products/Global_Monsoons/African_Monsoons/precip_monitoring.shtml)

flooding depends not only on the amount of rainfall in Mozambique but also the amount of rainfall in neighboring countries where these rivers originate.

***River Basins above alert level in Mozambique, as at 18 January 2011***

River Basin	Station	Water Level (m)	Alert Level (m)
Zambezi	Caia	5.00	5.00
	Marromeu	4.83	4.75
Púnguè	Púnguè Sul	6.73	6.5
	Inhazónia	6.84	5.5
Búzi	Dombe	5.64	5.5
Limpopo	Chókwè	5.98	5
Incomáti	Magude	5.98	5
Maputo	Madubula	4.16	3.5

Source: Mozambique National Water Directorate

**FAO's Present Actions:**

- FAO participated in the impact assessment in Gaza and is supporting the preparation of further assessments.
- Food Security Cluster meeting (co-chaired by FAO) on the 25<sup>th</sup> January to plan for further assessments and analyze present situation.

**2. South Africa**

**Flood Situation:**

- **8400 households have been displaced** or affected by flooding, and **41 people have been killed**.
- **Declaration of disaster areas:** On 17<sup>th</sup> January, 33 municipalities in 8 provinces affected were declared disaster areas in accordance with the Disaster Management Act. This will allow Government to mobilize resources quicker and put into place coordination mechanisms.
- **Storms and heavy rains have caused flooding** across South Africa. As of 20<sup>th</sup> January, dams were near capacity with Gariep and Vanderkloof Dams above capacity (see table below).
- **Provincial and National Disaster Joint Operations Centers have been activated** to help with coordination and streamlining communication.
- **Initial damage estimates in millions of dollars:** Provincial damage estimates are as follows: North West Province: USD 11.5 million, KwaZulu-Natal USD 42.9m, Northern Cape USD 7.1m, and Eastern Cape USD 21.4m.
- **424,150 ha of land have been affected:** The Department of Agriculture, Forestry and Fisheries (DAFF) has not yet made any assessments; however news reports quoting the Agriculture Minister state that **424,150 ha of land have been affected**.
- DAFF has issued a **precautionary alert to farmers** on the handling of the outbreak of vector borne livestock diseases, particularly **Rift Valley Fever**.

**South African Dam and River levels**

Dam name	Capacity (%) (as of 20.01.2011)	Capacity (%) (as of 17.01.2011)	Comments
Vaal Dam	96.5	99	-
Bloemhof Dam	86.3	98	-
Gariiep Dam	107.8	110	-
Vanderkloof Dam	107.6	109	-
LowerOrange River	-	-	Flood peak of 500 m <sup>3</sup> /s was expected on 20.01.11

Source: [www.dplg.gov.za](http://www.dplg.gov.za) (National Disaster Management Center).

**3. Lesotho****Flood Situation**

- **The country has received 159% more rainfall than normal.** The Lesotho Disaster Management Authority (DMA) reports that from December to January, the northern districts have received the equivalent of 6 months' rainfall.
- On average **27-41% of area planted to crops has been damaged** by excessive rainfall in the areas assessed to date by DMA. In those areas that the FAO team has visited, an estimated 60% of the 2010/2011 crop has been lost. Further rains will result in even more losses.
- **About 4,708 livestock (mostly sheep and goats) have died** largely as a result of the heavy rains and diseases. Outbreaks of mastitis, foot rot and anaplasmosis have been reported.
- **All areas of the country affected**, with all districts recording above-normal rainfall.
- **FAO team observes the situation has worsened** in the last three weeks due to the large amounts of rain being received.
- **Fields are waterlogged and in some cases crops are submerged** in northern lowlands of Berea, Leribe and Butha Buthe.
- **Crop fields next to streams and rivers have been severely eroded** and croplands in flat areas are severely waterlogged and heavily silted up.
- **Rain could impact food security by reducing already poor agricultural production.** Normally, the country produces only enough food for 3-4 months per year. At this time of year only 50% of arable land is planted, with yields tending to be low (ranging from 0.5 to 0.9 t/ha for maize).
- Due to the wet weather, further **yield reductions are expected** because of farmers failing to weed crops, leaching of nutrients and increase in crop disease infestation. Potatoes and beans have been affected by blight, pests such as moles are reported to be affecting bean crops, and leaching is becoming a problem.
- Roads have been damaged in some areas - which will impede relief and recovery efforts.

**FAO's Present Actions:**

- FAO is conducting a post-planting assessment under the EU Food Facility.
- In addition to information gathered through the DMA rapid assessment, an FAO team conducting routine post-planting crop assessments is providing updates of the situation in the areas they visit.
- FAO will participate in a national planning exercise under the leadership of the DMA is planned for 1st to 3rd February.

#### 4. Namibia and Botswana

##### Flood Situation:

- **High flood wave reported:** Reports of a very high flood wave have been recorded in the lower Orange River but river levels subsiding. 12,000 people affected and in need of clean drinking water; Namibian Red Cross Society is responding.
- **Widespread rainfall could cause flash flooding:** Namibian Metrological Service has issued a warning for widespread rain in northern and central Namibia that could cause flash floods.
- The Okavango River is at 7.37m, much higher than the average of 4.68m.

#### 5. Madagascar

##### Flood Situation:

- **Heavy rainfall** was reported in Tulear in southern Madagascar on 6th January.
- Prediction warns of an **active cyclone season**.

##### FAO's present actions:

- FAO is also co-chairing the Food Security Cluster
- Implementation of the ECHO FS/DRR project to reduce the risk of food insecurity caused by flooding and cyclone.

#### 6. Malawi

##### Flood Situation:

- FAO team and OCHA report **heavy rainstorms, hailstorms and strong** winds damaging property and affecting 3,640 households.
- There has been **above average rainfall** in the North, with the rest of the country receiving normal rainfall.
- Malawi Department of Climate Change & Meteorological Services reports "good rainfall distribution replenishing soil moisture reserves and supporting growth and development of crops" (18th January)
- Malawi is likely to experience normal to above normal rainfall for the rest of the rainfall season.

##### FAO's present actions:

- Co-chair of the Food Security Cluster with the Ministry of Agriculture, and ongoing preparations for emergency assessments
- Supporting the contingency planning process

#### 7. Zambia and Zimbabwe

##### Flood Situation

- **No reports of flooding** in Zambia or Zimbabwe
- There has been **persistent rainfall** in the Zambezi River Basin catchments areas with Lake Kariba being particularly high for this time of year. Present level is at 484.8m with the normal maximum level for this time of year being 485m.

- The Zambian Government has **issued flood warning** to districts adjacent to the lower Zambezi River.
- Critical flood period is mid-January to end-February.

**FAO's present actions:**

- Working with partners on the Zimbabwe 2011 CAP.
- In Zambia the UN Humanitarian Coordination Committee is meeting to review the situation.
- In Zambia an action plans is being put into place to assess operational areas in case of flooding. The main areas to be targeted are Northwestern, Central and Southern parts of the country.

**D. Regional Interagency Activities****Regional Inter-Agency Coordination Support Office (RIACSO):**

- RIACSO agreed that OCHA should begin issuing an official emergency ***Southern Africa – Floods Situation Update (# 1 Issued 20 January 2011)***, to be updated weekly, posted globally and circulated widely to decision makers, donors and member states.
- RIACSO members are preparing to supply emergency surge capacity as needed upon request by countries; teleconferences are ongoing with country RC in the region to identify needs
- RIACSO *Flood Analysis Working Group* is monitoring the progress of rainfall and flooding, and analyzing impacts. There is an agreed upon rapid emergency assessment tool available to countries, with RIACSO members preparing to support training and assessment field work as required.
- Regional Emergency Appeal is already being discussed as possibility, if the situation deteriorates significantly across the region.

**FAO REOSA Present Actions:**

- FAO REOSA is an active member of RIACSO, supporting in all ongoing emergency preparedness activities, and will provide surge coordination support in case of major humanitarian disaster
- FAO is working with WFP and OCHA within the *Flood Analysis WG* to analyze the impact of the floods, specifically contributing on the impacts on the agriculture, livelihoods and food security situation. Inputs are included in the ***Southern Africa – Floods Situation Updates***.
- FAO with WFP and FEWSNet is highlighting flood impacts within the regularly prepared regional food security matrix.
- FAO will participate in the upcoming telephone conferences with Resident Coordinators to identify needs.
- FAO is freeing up resources to be able to provide surge capacity and technical inputs to rapid assessments and emergency response, where needed.
- FAO participated in SADC regional preparedness meeting in September in Botswana

**E. Potential role for FAO in preparation, response and recovery**

- **Animal health:** FAO in countries has a role in supporting government and partners with technical advice and resources to respond to any disease outbreak due to flooding, including Rift Valley Fever and Newcastle's disease. Mozambique, Madagascar, Lesotho, and Zambia are amongst many countries who include this in their contingency plans.
  
- **Innovative responses:** FAO in the region is not only looking to support the recovery of agricultural production after a disaster by distributing seeds, but to identify, document, and promote more creative responses to disasters such as reducing the impact of the disaster by using short-cycle seed varieties before or after the main disaster periods, helping reduce losses. Also in Mozambique, FAO is proposing to repair damaged irrigation canals after flooding.
  
- **Advocacy:** FAO in the region is advocating for Disaster Risk Management principals to be incorporated within agricultural and food security policies as part of the ECHO FS/DRR programme. In Lesotho, there is need for advocacy initiatives to promote conservation works and better land use practices to prevent excessive erosion.