



**DISASTER MANAGEMENT REPORT**  
**REPORT ON IMPACT OF FLOODS DURING JANUARY 2011**  
**TILL FEBRUARY 2011**  
**KAI !GARIB MUNICIPALITY -**



## **BACKGROUND:**

The Northern Cape Province has in the past months experienced several distress calls about flooding which happened in various locations of the 4 districts in the Province. Due to heavy rainfall that occurred in the catchment area of the Vaal River in Gauteng-, Orange River in the Free State- and the Northern Cape Provinces, the inflow of run-off water feeding the Vaal-, Van Der Kloof- and Gariep Dams increased drastically.

## **LA'S / AREAS OF IMPACT:**

### **ISLANDS IN KEIMOES DISTRICT:**

Served via Air support

<b>BELLA VISTA ISLAND</b>	<b>GEORGE ISLAND</b>	<b>BO GEORGE ISLAND</b>	<b>FARMS ISLAND</b>
<b>VLAKWATER ISLAND</b>	<b>GRAS ISLAND</b>	<b>LANGKLAAS ISLAND</b>	<b>LANG ISLAND</b>
<b>SMIT ISLAND</b>	<b>VYEBOS ISLAND</b>	<b>PIETSMAL ISLAND</b>	<b>SKAAP ISLAND</b>
<b>BRAKBOS ISLAND</b>	<b>SKANSKOP ISLAND</b>	<b>RHIBBOK ISLAND</b>	<b>BRADWILL ISLAND</b>
<b>SAND ISLAND</b>			

### **KANONEILAND:**

Served via Air support

<b>AGTER ISLAND</b>	<b>BLAAUWSEKOP ISLAND</b>
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### **KAKAMAS:**

Served via Air support

<b>P/A WILLIE THERON</b>	<b>P/A VLOK HANEKOM</b>
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### **AUGRABIES:**

Served via Air support

<b>BLOUPUTS</b>	<b>WITKLIP</b>
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## **DESCRIPTION OF IMPACT:**

The increase in flow rate in both the Vaal- and Orange Rivers resulted in the lower-lying areas adjacent to the rivers to be flooded. Most of these areas are cultivated irrigated areas, where cash- and permanent crops were established. The flooding of these areas poses a problem for the following reasons.

- Most cash crops whose roots are submerged suffocated. Depending on the period the plant's roots have been submerged, the quality produced by the plants will be at a much lower grade, or the plants will die.
- Pump houses and other irrigation infrastructure are constructed alongside the river banks. Increased water levels forced land users to remove irrigation equipment (moveable assets i.e. pumps, dragline systems, etc.) to safeguard in no higher-lying crops in the area being irrigated and plants suffering heat stress.
- Unfortunately, also the electricity supply to these areas are cut off as a precautionary measure in order to protect the transformers from being damaged as well as the potential threat this has to human lives. This results in all crops, although not necessarily affected by flood waters but dependant on irrigation from the river, to suffer heat stress and produce sub-standard grades or ultimately perish.
- Many access roads to crops alongside the rivers are also flooded. Since these areas are now isolated or inaccessible, many crucial activities i.e. orchard maintenance, disease control, harvesting, etc. cannot take place and will have a devastating effect, especially on to wine and raisin industries.
- Many farm workers and their families had to be evacuated from low lying areas.
- Parts of affected areas is still inaccessible
- In total 16 schools have been affected in the Keimoes/Kakamas areas
- No report on damage schools received.
- Learners are currently accommodated in the nearest schools that are not affected.

The flood waters caused all the islands to be inaccessible for transport and were completely cut off. The only means of reaching the communities was via air support in cases of medical and trauma emergencies. Medical and trauma cases could not being easily attended by Ambulances, due to roads and bridges closed connecting islands and towns to each other. Diarrhea and cholera cases are monitored by EMS, Hospitals and PHC's in the Siyanda district. Preparations are made for medications of these cases. Boats could not being utilized because of the water levels and speed of the water side streams and back washes. The situation was life threatening. Communities on 28 x islands and a total of 995 households were affected in total 269 x Food parcels were issued by medical rescue teams to communities affected on the cut off Islands.

**2011-01-28**

**Langklaas**

A section of the low water bridge collapsed – evacuation was done via water (boat)

EMS Rescue personnel

Flood victims were evacuated by means of making use of rope rescue techniques by EMS rescue

EMS Rescue team had to walk +- 9 km to reach the flood victims.

**Farms eiland**

People were evacuated by means of making uses of 2 x 2.4 Truck Some were also transported out of the danger area by making use of a 4x4 Ambulance vehicle

**George eiland**

People were evacuated by means of making uses of 2 x 2.4 Truck Some were also transported out of the danger area by making use of a 4x4 Ambulance vehicle

Baklei eiland

Farms eiland

George eiland

Blaauwsekop

Sonland

Bo-eiland

Langklaas

Smit eiland

Meyers eiland

Skanskop eiland

Eksteenskuil

Klip eiland

Lang eiland

Belavista eiland

Bradville eiland

Melkboskop eiland

People were evacuated by means of making uses of 2 x 2.4 Truck Some were also transported out of the danger area by making use of a 4x4 Ambulance vehicle

Lennertsville are cut off from Keimoes due to over flooded bridges and also cut off from Upington due to inaccessible road.

Where Lennertsville are usually 21 km from Keimoes for emergency calls it is served over 234 km following alternative routes.

Intervention was done by placing an Ambulance in Lennertsville to serve the community.

**2011-01-31**

People were evacuated by means of making uses of 2 x 2.4 Truck Some were also transported out of the danger area by making use of a 4x4 Ambulance and rescue vehicles.

The islands evacuated were:

Ribbok eiland

**Rooikop eiland  
Vyebos eiland  
Pietsmal eiland  
Sand eiland  
Skanskop eiland**

**2011-02-01**

**The rescue team had to assist with 5 (five) vehicles that was trapped within the flood waters that is running over Kakamas bridge.**

**2 x minor kids with their parents were removed from Keimoes High School hostel premises for the use of narcotics substances and for sexually harassing young girls.**

**Evacuation Accommodations:**

**3(three) x facilities were utilized to accommodate families that were evacuated from the Islands.**

**Oranjezicht Hostel**

**Male - 89**

**Female - 82**

**Girls - 15**

**Boys - 15**

**Keimoes High Hostel**

**Boys - 50**

**Girls - 37**

**Blaauwsekop RC Mission Hall**

**3(three) households 19 people**

**Kanoneiland**

**Sonland Farm Store**

**Female - 11**

**Male - 10**

**Children - 10**

**Pokkieseiland**

**Between Upington ACSA and Old Drive Inn**

**25(twenty five) households 65 people**

**2011-02-02**

**Incidents**

**Ambulance got trapped in flood water running over Kakamas bridge occupying 2(two) ECO's, 4(four) patients and 1(one) escort. The driver of the Emergency vehicle crossed the closed bridge on own risk. 1(one) other vehicle overturned and a truck got trapped.**

Heavy hail, rain and wind break loose and reached Kanoneiland and Blaauwskop 8(eight) houses roofs were blown off and 8(eight) families were left homeless. Interventions by the Disaster management team 8(eight) tents were supplied.

### **2011-02-03**

#### **Incidents**

**Near Drowning:** - Person in alleged drowning as reported at 14:00 today was found alive at 14:20 hanging on a vineyard pole a distance from where he swam. He managed to reach the bank of the river without any injuries. The person was retrieved by the EMS rescue team. Person was found to be under the influence of alcohol.

The driver of a bakkie attempted to cross a low level bridge at Blaauwskop. He and his family got trapped inside the vehicle, by fast running flooding waters that was roof height of his vehicle. The person and his family was retrieved by the EMS rescue team.

### **NO OF INJURIES:**

#### **INCIDENTS:**

**These cases occurred during the flood and were attended by EMS and Air support By SANDF and SAPS and referred to Hospitals.**

#### **2011-01-10**

EVACUATIONS: 4  
Chronic patients

#### **2011-01-11**

PATIENTS MEDIVAC: 5  
1 x Overdose case  
1 x fever convulsions (peads)  
1 x asthmatic cases

#### **2011-01-12**

PATIENTS MEDIVAC: 3  
2 x diarrhea (peads)  
1 x asthmatic cases  
EVACUATIONS: 16

#### **2011-01-13**

PATIENTS MEDIVAC: 14  
1 x asthmatic cases  
5 x diarrhea (peads)  
4 x diarrhea (adults)  
2 x trauma (adult)  
1 x diabetes (adult)

1 x allergic reactions

MEDICATION: 2

EVACUATIONS: 8

**2011-01-15**

PATIENTS MEDIVAC: 2

1 x general weakness

1 x diarrhea(adult)

MEDICATION: 3

EVACUATIONS : 10

**2011-01-16**

PATIENTS MEDIVAC: 8

1 x hypertension

1 x stroke

1 x malaria patient on treatment

2 x diarrhea (peads)

1 x fever

1 x diarrhea (adult)

1 x CA patient severe ill

**2011-01-17**

PATIENTS MEDIVAC: 14

1 x epileptic case

1 x respiratory problems

2 x stretcher patients by boat

2 x transfers from Kakamas to Kimberley

8 x patients for x rays from Kakamas to Gordonia

**2011-01-18**

PATIENTS MEDIVAC: 2

2 x respiratory problems

**2011-01-19**

PATIENS MEDIVAC : 4

1 x Fever

1 x trauma

1 x CA patient

1 x diabetes (adult)

**2011-01-20**

PATIENTS MEDIVAC: 4

1 x trauma

1 x fever

1 x diarrhea (peads)

1 x diarrhea cases(adult)

MEDICATION: 1

**2011-01-21**

PATIENTS MEDIVAC: 16  
10 x diarrhoea (peads)  
6 x diarrhoea cases(adult)

**2011-01-22**

PATIENTS MEDIVAC: 21  
1 x rescue from tree on island  
12 x diarrhoea (peads)  
8 x diarrhoea cases(adult)  
EVACUATIONS : 8

**2011-01-23**

PATIENTS MEDIVAC: 22  
14 x diarrhoea (peads)  
8 x diarrhoea cases(adult)

**2011-01-24**

PATIENTS MEDIVAC: 21  
10 x diarrhoea (peads)  
11 x diarrhoea cases(adult)

**2011-01-25**

PATIENTS MEDIVAC: 5  
**5 x diarrhoea cases** (peads)  
Kakamas - 3  
Keimoes - 2  
MEDICATION: 5  
EVACUATIONS: 5

**2011-01-26**

PATIENTS MEDIVAC: 7  
**3 x diarrhoea** (peads)  
Blouputs - 1  
Lennertsville - 2  
**5 x diarrhoea cases**(adult)  
Augrabies - 2  
Currieskamp - 2  
Kakamas - 1

**2011-01-27**

PATIENT MEDIVAC : 4  
**4 x diarrhoea** (paeds)  
Kanoneiland - 2  
Marchand - 2

**2011-01-28**

PATIENT MEDIVAC : 6  
**1**  
Bloukamp (Kakamas) - 1



Plakkerskamp (Ses Brugge) -	1
R C Mission (Keimoes) -	2
<b>2 x diarrhea (adult)</b>	
Keimoes -	2

**2011-01-29**

PATIENT MEDIVAC:	7
<b>14 x diarrhea (paeds)</b>	
Keimoes -	5
Kakamas -	2
<b>1 x diarrhea (adult)</b>	
Kanoneiland -	1

**2011-01-30**

PATIENT MEDIVAC :	12
<b>9 x diarrhea (paeds)</b>	
Lennertsville -	1
Keimoes (Oranjezicht hostel)	4
Keimoes	2
Augrabies	2
<b>8 x diarrhea (adult)</b>	
Keimoes	3
EVACUATIONS :	4

**2011-01-31**

PATIENT MEDIVAC :	14
<b>5 x diarrhea (paeds)</b>	
Keimoes	2
Augrabies	3
<b>9 x diarrhea (adult)</b>	
Keimoes	3
Foster eiland	1
Lennertsville	3
Kanoneiland	2
EVACUATIONS :	11

**2011-02-01**

PATIENT MEDIVAC :	18
<b>7 x diarrhea (paeds)</b>	
Keimoes	2
Augrabies	3
Kakamas	2
<b>11 x diarrhea (adult)</b>	
Keimoes	3
Foster eiland	1
Lennertsville	3

Kanoneiland	2
Kakamas	2
EVACUATIONS:	0

**2011-02-02**

PATIENT MEDIVAC : **8**  
**3 x diarrhea** (paeds)

Keimoes	2
Kakamas	1

**5 x diarrhea** (adult)

Keimoes	3
Curriescamp	2

MEDICATION : 5  
EVACUATIONS: 0

**2011-02-03**

PATIENT MEDIVAC : **11**  
**8 x diarrhea** (paeds)

Keimoes	3
Kakamas (Cillie)	5

**3 x diarrhea** (adult)

Keimoes	1
Curriescamp	2

MEDICATION : 2  
EVACUATIONS: 0

**NO OF DEATHS**

**DROWNINGS:**

These cases were attended by SAPS and EMS rescue divers.

**2011-01-10 Smits Eiland**  
**3 year old**

**2011-01-15 Rooikop Eiland**  
**Adult**  
**Blaauwsekop**  
**Adult**

**2011-01-16 Blaauwsekop**

**Adult**

**2011-01-21 Keimoes bridge  
(Adult)**

**2011-01-22 Postmasburg Groenwater (Adult)**

**2011-01-22 Skanskopeiland  
2 year old**

**NATURAL CAUSES:  
Patient died due to medical condition**

### **DEPARTMENT OF AGRICULTURE:**

Losses suffered to agricultural infrastructure in the Lower-Orange River are much greater than the Vaal- and Middle Orange Rivers due to the nature of farming practices and different crops being cultivated in this region. Firstly, the majority of the irrigation area bordering the Orange River is protected by flood diversion walls. The flood diversion walls keep the Orange River from flooding the adjacent lower-lying irrigation areas. Secondly, the cultivation of grapes in the area is a common practice and infrastructure related to grape production is very costly.

The flood diversion walls suffered great damage and in many cases failed to keep the lower-lying areas from flooding. Some diversion walls failed due to the lack of maintenance and because of the exceptional high level of the Orange River. The peak level of the Orange River was almost equivalent to the level it reached during the previous flood in 1988.



### **SOCIO-ECONOMIC IMPACT:**

The Lower-Orange River is unique due to the fact that a network of 121 islands can be found from Upington to Augrabies. These islands are occupied and irrigation farming takes place on all. These islands are prone to being flooded due to their unique location and access roads are easily flooded. Many residents and farmers were evacuated.

80% of the grape harvest cannot be reached. The harvesting of wine- and raisin grapes cannot continue. Departmental officials in collaboration with farmers and Organized Agriculture have identified and prioritized emergency repair works that can be conducted in order to gain access to 2 255 ha of vineyard.

Farmers will not harvest grapes this season, the appointment of temporary (seasonal) workers is severely affected. In this area a total of 55 605 seasonal workers will not be appointed. This total is of great concern to this department. The socio-economic impact should not be under-estimated in this region. In many cases the seasonal workers rely on the income as this is their only source of income and they have to take care of an entire household.



### **SECONDARY IMPACTS:**

Due to the climatic conditions favoring the outbreak of zoonotic- and vector born diseases, warnings have been issued and Veterinary officials have been put on standby.

Flood damage in many cases also includes the contamination of the drinking water supply. This poses a greater threat because this may result in diseases i.e. acute Diarrhea, cholera etc.

The flood will also have an impact on the economic growth and sustainability of businesses in the affected towns. Due to the fact that many temporary jobs will be lost, as well as the losses farmers suffered as a result of crops that will not be harvested, the inflow of currency will be restricted. This could result in small businesses closing down due to insufficient cash flow.



### **CHALLENGES:**

- The following challenge needs to be noted:
- Severe challenges of the floods of the overall infrastructure of the province
- In accessibility of the vineyards and roads due to the high levels of water
- Budgetary constraint in order to address the current demands
- The continued displacement of families and individuals
- Risk of spreading of communicable diseases
- Accessibility to purified water
- Education is disrupted

### **Dam levels are as follows: Wednesday 02 March 2011**

- |                 |        |
|-----------------|--------|
| • Vaaldam       | 100.4% |
| • Bloemhof      | 101.2% |
| • Van Der Kloof | 105.6% |
| • Gariep        | 103.7% |

### **Lower Orange River**

- Flows in the Lower Orange River are:
- Current flow at Prieska of 1344.21m<sup>3</sup>/s.
- Current flow at Upington of 1530.99m<sup>3</sup>/s
- Current flow at Brand Karos (near Orange River mouth) of 1530.99m<sup>3</sup>/s