

MAJOR INCIDENT REPORT FOR 2006



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1.0 MAJOR EARTHQUAKE SHOOK MOZAMBIQUE, ZIMBABWE AND SA

Remember Murphy's Law;

"Whatever can go wrong, will and at the worst possible time!"

This is what happened on Thursday 23rd February 2006 at around 12:19am when the biggest Southern African earthquake in decades struck the Save Valley in Mozambique .

The earthquake was reported to have shaken much of Mozambique and Zimbabwe and some parts of northeast South Africa.

The powerful earthquake resulted in people reacting in various ways with some thousands of panicking people particularly residents of high rise buildings fleeing from swaying buildings in both Mozambique and Zimbabwe.

The quake — measuring 7,5 on the Richter scale — was centred on the north bank of the Save River, very close to a national park in a sparsely-settled area. Mozambican and Zimbabwe authorities reported surprisingly little damage, apparently because the epicenter was in remote and sparsely populated farmlands near the border with Zimbabwe.

If the earthquake of the same magnitude had probably occurred in populated and built up areas, it would have probably caused quite considerable damage. Preliminary reports indicated that injuries and damages were minimal. Two people were reported to have died in Mozambique in a small settlement a few kilometres from the epicentre.

According to Goetz Observatory in Bulawayo, there have only been two quakes of 7 Richter or more over the past 35 years in Southern Africa, both near the equator. Tanzania recorded a 7 Richter quake in September 1992 near the eastern shore of Lake Tanganyika and the DRC was hit by a 7,2 Richter quake in December last year in the Lualaba valley

The largest earthquake centred in Zimbabwe was on September 23, 1963, in the Kariba area with a magnitude on the Richter scale of 6, 1. This was the biggest in a series of quakes and tremors induced by the huge weight of water placed very suddenly in geological time-scales on the surface of the earth as the dam filled. Espungabera in Mozambique, and Chipinge and Chimanimani in Zimbabwe — the nearest towns to the epicentre — were badly shaken but damage was negligible.

1.1 Damage caused

Little did we know that the impact of the earthquake had directly and indirectly caused damages closer to home until reports started to trickle in two weeks later. In Harare 9 student teachers at Belvedere Teachers College were injured when they panic and jumped through a window from the first floor of their hostel to the ground. Most of them

had their ankles damaged and they were admitted at Parirenyatwa Hospital where they were treated and discharged.

In some parts of Chipinge in Manicaland province, the earthquake left a trail of destruction to old buildings mainly schools infrastructure which could not withstand the vibrations. From a rapid assessment which was conducted at MT Selinda High school, some of the affected structures were reported to have been built way back in 1893 that is about 113 years ago.

The pictures below show some of the structures which succumbed to the earth quake



Most of the structures which include classroom blocks, administration blocks, toilets , and teachers houses developed cracks and some even collapsed. Some villagers also lost their dwelling units mainly huts.

1.2 Reaction by to the earthquake by the general people

Most people in the country were caught unawares as no one had anticipated the occurrence of an earthquake of such magnitude in the region. This resulted in various forms of reaction as people had mixed feelings about what had caused the shacking of their houses, furniture, beds, rattling of windows and doors.

Some quickly associated the event with goblins or other forms of witchcraft. Those who were guarding bodies of their beloved ones as they waited for burial orders took to their heels as they thought they were rising from the dead. Those who had berried their beloved ones on the previous day thought their spirits were coming back home. These stories were heard from oral discussions in most parts of the country.

1.3 Response by the Department of Civil Protection

The Department of Civil Protection dispatched a team of experts to assess the nature and extend of damage caused by the Earthquake in Chipinge District where damage had been reported through our provincial and district structures.

The team was comprised of technical experts who included a Seismologist from Met Office, Architects and Structural Engineers from Public works Department, and a Physical Planner. The team was also accompanied by a representative from the Office for the Coordination of Humanitarian Affairs (OCHA). The team was coordinated by one officer from the Department of Civil Protection.

According to the findings of the assessment, the damage that was caused by the earthquake included development of cracks on building walls, separation of walls at corners and T-junctions, separation of poorly constructed roof from walls, which could lead to the eventual collapse of roof and, disintegration of walls and eventual collapse or future possible collapse of the whole structure.

The assessment team noted that most of the dwelling units which succumbed to the earthquake were poorly built. A salient feature was the use of low cost construction methods and materials, which later failed under stress and age.

For the collapsed dwellings visited the following were some of the observations that were made:

- The masonry walls consisted of irregularly placed home-made clay bricks that were laid in cement sand, mud mortar or even dry in some cases.
- The firing of the bricks was poorly done.
- The quality of mortar and bricks used and the level of workmanship were very poor.
- No moisture barriers or reinforcement was provided. The most commonly used mortars consisted of very little cement (if any) to a very large proportion of sand.
- Cement was often substituted with clay in most mortar. The approximate crushing and shear strength of such mortar is very low

According to the building engineers, extreme weaknesses encountered included the following;

- Failing to tie in at corners which compromised on performance of the masonry.
- The rounded and smooth brick mould, in addition to the poor quality of mortar, rendered a very loose bond between the bricks, which made the structures extremely vulnerable to earthquake forces.
- There was strong evidence of lack of know-how of building safe structures and the concepts of why certain procedures were necessary in the construction process.
- Lack of horizontal bond beams (ring beams) provided at the levels of roof in many cases.
- Lintel beams were provided only above openings (doors and windows) and were not run continuously along the perimeter of the walls.

1.4 State of preparedness for earthquake hazards

The earthquake came at a time when the Civil Protection Organisation in Zimbabwe was not fully prepared for seismic hazards. Hazards related to seismology were however topical in Emergency Preparedness and Response workshops that were conducted

country wide. Nothing had had however been done in terms of raising awareness among the general population. However, one of the important lessons that was learnt from the experiences of the earth quake was to develop a strategy for earth quake awareness in Zimbabwe

2.0 ROAD TRAFFIC ACCIDENTS

A number of traffic accidents occurred in a single month of May 2006 in which a total of 57 lives were claimed in separate incidents and several others injured. On 5th May, a commuter Omnibus overturned in Mberengwa resulting in the death of 10 people and seven injuries. The accident occurred at the 23km peg along the Bulawayo/Zvishavane road. Due to poor or absence of mortuary facilities in Mberengwa some bodies were dispatched to the Shabani Mine hospital and the Zvishavane Doves mortuary. The Government through the Department of Civil Protection assisted the bereaved families with burial costs

On 13th May, another commuter Omnibus veered off the road along Simon Mazorodze Road in Harare killing 11 people who were going to their work places.

2.3 Barely two fortnights latter on 15th May there was a Nyamweda Gweru Bus Accident where 10 people were killed. The accident occurred at the 31,5 Km from Gweru along Bulawayo road. The accident occurred when the bus hit against a broken down truck which had been on the spot two 3 days later. It was learnt form the incident that broken down vehicles should be pulled off the road in order to avoid unnecessary and preventable disasters.

One day later, which is on 16th May 2006, 12 people were killed near Shangani at the 100km peg along Bulawayo –Gweru road. Eleven people died on the spot while the other died on arrival at the United Bulawayo Hospital. The accident happened when a Munenzva Bus Service believed to have been travelling at high speed from Bulawayo to Harare carrying an unspecified number of passengers collided with a lorry that had failed to give way. The bus resultantly hit the trailer and overturned landing on another lorry that was parked by the road side. Seven injured passengers were taken to Gweru Hospital while other six were taken to United Bulawayo Hospital.

Munhenzva Bus Company responded to the accident by:

- Providing coffins for all the deceased,
- Paying for the removal of the dead bodies from Bulawayo to Harare,
- Transportation of dead bodies to their final resting places,
- Attending to all other incidental costs

The accident was not declared a State of Disaster but however, the Minister in terms of the Civil Protection Act, Chapter 10.06 availed \$5m to each family of the deceased.

As if it was not enough, the same month of May was concluded by yet another fatal accident which occurred in Kwekwe on 28th May in which 14 innocent soles were lost and two others injured. The accident involved a bus owned by Musengi Bus Company

and a private Nissan Hard Body Twin Cab which collided on the 226,5km peg along Harare – Bulawayo road

The front tyre of Musengi bus burst resulting in the bus veering into the right lane. This resulted in head on collision with the Nissan Hard Body which was coming from the opposite direction. The 14 people who died were boarding the Nissan Hard body and were all related.

The Government through the Department of Civil Protection assisted the bereaved families with financial support to cushion the burial costs

On 6th June 2006, a lorry carrying about 60 mourners most of them police officers and their spouses overturned and killed 17 people on the spot. An additional 3 people died in hospital making a total of 20 deaths. The accident occurred on the 167 km peg along the Harare-Chirundu highway when the crew was traveling to Karoi to attend a funeral for their fellow officer.

About 10 of the dead were reported to be police officers and the rest were civilians. The injured and the dead were admitted at Chinhoyi and Karoi hospitals. About 3 critically injured were transferred to Harare and Parirenyatwa Hospitals.

The accident was declared State of Disaster and the Government through the National Civil Protection Fund provided coffins and blankets for 20 victims, bags of maize, chema and transport among other things.

On 7th August, a Garikai Bus which was on its way to Magunje from Harare burst its front tyre at 161 km peg along the Harare Chirundu road (**Chikuti River Bus Accident**) The bus veered off the road and plunged into Chikuti River and killed 33 people and injured 56 passengers. Of the injured, 12 were admitted at Karoi General Hospital and 44 were admitted at Chinhoyi Provincial Hospital.

Although the driver of the bus ascribed the accident to a burst tyre, the passengers who survived attributed the accident to speeding.

Efforts to undertake rescue operations was hampered by a swam of bees that happened to be disturbed by the accident. The Zimbabwe Republic Police also encountered problems in the identification of bodies as most of the victims had no identification particulars.

3.0 CHEMICAL INCIDENTS

The Directorate received reports of spillage of concentrated sulphuric acid from a South African registered tanker which was on its way to Zambia. The spillage occurred on Sunday night 12th March 2006 and the driver of the truck reported the matter to Z.R.P Murombedzi. The alert arose from both the District Administrator and the Provincial Administrators offices.

The picture below is tanker which lost sulphuric acid and members from Various organizations who responded to the scene to contain the spillage.



The tanker was parked about 12km away from Murombedzi Growth Point on the Chinhoyi/Chegutu highway. The tanker capacity is in excess of 27 000 litres although the leakage was not excessive. The vehicle was immobilised at the spot on the advice of the owners in South Africa to minimize the spread of the acid and to enhance the institution of intervention measures.

The District Civil Protection Committee members reported to the scene on 13th March 2006 and started mobilizing the requisite resources for the neutralization of the acid. A trench had been dug by locals who were promised payment by the owners of the tanker. The Directorate of Civil Protection and Permanent Secretary of Local Government visited the scene of the incident on 13th March to assess the situation on the ground and to offer logistical support.

The District Civil Protection Committee secured 3 tone of lime from Alaska Dolomite. ZIMPHOS offered manpower and technical assistance in the neutralization process and they also supplied lime.

ZINWA was also on site taking soil and water samples to monitor ground and surface water contamination. The monitoring process was to run up to three months. VARITEC brought a tanker to drain the remaining acid for temporal storage at ZIMPHOS. Chinhoi Municipality supplied fire tenders and water to neutralize the acid and casual labour was provided by Zvimba Rural District Council.

In addition to the neutralization of the acid, the following measures were instituted;

- the grounding of the tanker on site;
- the round – the – clock guarding of the tanker by ZRP;

- the scouting for lime or any other alkali recommended for neutralizing the acid;
- the conducting of public awareness in the locality and
- the continual chemical analysis of the water in and around the pollution site.

No injuries were caused by the incident but a few dogs and poultry were burnt by the acid.

Another chemical incident occurred along the Beitbridge- Masvingo road about 40 Km from Beitbridge Town. A truck belonging to DSRM from Pretoria carrying 29 tonnes of concentrated sulphuric acid (98%) burst its front tyre and overturned. The tanker was on transit to Zambia when the incident occurred.

This was a near disaster as villagers who were awakened by the crushing noise rushed with containers to collect the spilling substances which happened to be sulphuric acid. The villagers were saved by the early arrival of the police who scared them away.

Following this incident, the Department of Civil Protection conducted public awareness campaigns to raise awareness on the dangers and management of hazardous substances. The exercise was conducted to communities living along Beitbridge – Masvingo road covering the stretch of about 20 Km from Litumba along Masvingo road.

The team which conducted the awareness campaign recommended that more of such awareness campaigns should be done to all communities living along major highways and railway lines through which different sorts of hazardous substances are transported. According to the “Polluter Pays Principle,” as provided for in the Environmental Management Act (Chapter 20:27), all the operational expenses were covered by the South African Companies.

4.0 RAILWAY ACCIDENTS

On 27th August 2006, at around 0800 hrs. a Victoria Falls bound passenger train collided with a Spoornet goods train at Dibamombe junction. Both trains caught fire resulting in some bodies burnt beyond recognition. Six people were confirmed dead, 4 casualties were air lifted to United Bulawayo Hospital whilst about 154 were taken to Victoria Falls Municipality Hospital and Hwange Colliery Hospital where they were treated and discharged.

The accident was caused by lack of coordination in abiding to the signals. The passenger train had been alerted to stop at Dibamombe Junction until the Spoornet Goods train had passed. However, the train driver did not stop resulting in the collision.

Rescue teams who responded to the accident included Victoria Falls Fire and ambulance Services, MARS, Victoria Falls Hospital, Air Force of Zimbabwe from Thornhill Air Base, NRZ, Civil Aviation Authority, Zimbabwe power Company and the Hwange Colliery Company. The dead bodies were kept at Victoria Falls hospital mortuary .

Constrains

- Difficulties in accessing the scene of accident,
- Lack of some essential drugs in some hospitals where casualties were referred,
- High temperatures due to flames of fire.

The district recommended for the need to decentralise resources to district level

5.0 CHOLERA OUTBREAKS

A cholera outbreak was reported in Guruve – Mashonaland central province in May 2006. The first case was detected at Kachuta Clinic on 8th May 2006.

On 10th May 2006, the District Health Officers moved to the affected areas and confirmed 8 cases. On 11th May 2006, the Provincial health team also moved to Guruve district and 31 cases had been reported. A total of 42 cases were confirmed and 14 deaths were reported.

In Manicaland Province cholera outbreak was reported in Chipinge and Buhera Districts. Most cases were detected along Save River. A total of 83 sporadic cases and 5 deaths were reported in the district. Two treatment centres were established in Chipangayi. The District Civil Protection Committee managed to mobilise local resources which included transport, fuel, and manpower. They also managed to conduct health education. The Zimbabwe Red Cross Society helped with 4x8 men tents, 17 cartons of aqua tablets, jik and gloves.

The district however had the following constraints;

- Sources of drinking water were contaminated,
- Shortage of IV fluids and ORS sachets
- Very low water and sanitation coverage in the area,
- Low positive health and hygienic practices among communities of the affected area,
- Lack of epidemic control and preparedness plans at local level,

In Buhera District 110 cases and 8 deaths were recorded. The outbreak was concentrated in the north western parts of Buhera near Chikomba. The first case was reported to Murambinda Hospital on 19th December 2005 and the other cases intensified in January 2006. Treatment camps were set at Rambanapasi Clinic, Munyanyi Clinic, Chiwenga clinic, and Murambinda Mission Hospital.

The District got assistance from a number of organisations who assisted with drugs, motorised boreholes, cash, transport, food, water bowsers. The organisations included Civil Protection department, WHO, Dorowa Minerals, Buhera RDC, etc.

Other cholera cases were also reported in Epworth, Gokwe South and KweKwe Districts in which 29 cases and 7 deaths were recorded, 5 in Gokwe South and 2 in Kwekwe.

6.0 ANTHRAX OUTBREAK IN MASVINGO

Masvingo province experienced some outbreaks of anthrax in Gutu, Chivi, Bikita, Zaka, and Mwenezi in the month of December 2006. Cumulative reports of cattle deaths from January to December were given as follows;

Gutu	28
Bikita	2
Zaka	15
Mwenezi	35

Total 85

Some anthrax deaths remained unreported as affected communities wanted to eat the infected meat. There were also reports of human cases. The districts had constraints of vaccines and fuel.

7.0 HAILSTORM INCIDENT: MASHONALAND CENTRAL PROVINCE- MT DARWIN DISTRICT, MASVINGO PROVINCE- ZAKA DISTRICT MATEBELELAND NORTH PROVINCE- TSHOLOTSHO DISTRICT

Strong hailstorms caused extensive damages to institutions that include schools, clinics as well as homesteads and early planted crops mid November and early December last year 2006. The destruction and damages were reported in three districts which are Tsholotsho in Matabeleland North, Mount Darwin in Mashonaland Central and Zaka in Masvingo

7.1 Mt Darwin District

The storm was reported to have left a trail of destruction to dwelling units across villages of Chitse ward 16; Dito ward 9 and Shohwe ward 10. The storm racked havoc across a total of about 21 villages with about 316 households affected in different ways. The affected villagers were reported to have lost their dwelling units, early planted crops, food stocks and their inputs for the 2006-2007 rain fall season.

The picture below shows one of the house hold structures which was completely destroyed. Some of the family members are now living in a tent supplied by ZNA.



Response by the District Civil Protection Committee

The District Administrator's office received the information about the storm damage from the AREX Officer who stays in Mutsanura which is one of the most affected villages. The office was also alerted by other villagers from the same village. Upon receiving the information, the district Administrator informed other members of the District Civil Protection Committee before a visit was undertaken to selected areas to ascertain the extent of damage. The village heads of the affected communities were

tasked to take stock of the damage caused by the severe storm for submission to the District Administrator's office. The District Administrator Mrs. Wadzwanya dispatched some members of the district Civil Protection Committee to the affected communities to carry out an assessment of damage so as to come up with a report. The District Administrator reported the incident to the provincial Administrator.

Response by the Provincial Civil Protection Committee

When the Provincial Administrator received the message about the hail storm damage, he wrote to the Department of Civil Protection. The Director was invited to attend a Provincial Civil Protection Committee meeting held on 18th December 2006 where response strategies were discussed. A delegation from the provincial Civil Protection Committee visited Mt Darwin to assess the situation on the ground.

Response by the Department of Civil Protection

As mentioned above, the Director was invited to attend a Provincial Civil Protection Committee meeting which was held on 18th December. Following the provincial Civil Protection Committee meeting, the Director and one officer visited Mt Darwin district on 19th December 2006. The prime purpose of the visit was to assess the extent of the problem on the ground so as to come up with a plan of action.

Two representatives of the District Civil Protection Committee members accompanied the Director to some of the affected areas to examine the extent of damage. After the field visit by the Director, a meeting for the District Civil Protection Committee was convened at the District Administrator's office. It was during this meeting that some NGOs and some private companies pledged to assist the affected communities in kind. The District Administrator also updated the meeting on donations from well-wishers.

The District Civil Protection committee was advised to update the report on the damage caused by the hail storm and verify some figures.

The Directorate of Civil protection later dispatched the report on damages to prospective NGO and UN agencies requesting for their support. A meeting of interested stakeholders was convened by the Office of the Coordination of the Humanitarian Affairs to analyse the reports so as to map up the way forward. It was during this meeting that the stakeholders planned to conduct rapid assessments of the affected districts.

Response By Un Agencies And Ngos Damage Assessments

An interagency damage assessment was conducted by UN agencies and NGOs coordinated by Civil Protection Department. The organizations which participated were Office for the Coordination of Humanitarian Affairs (OCHA), United Nations Children Education Fund (UNICEF), and International Office for Migration (IOM), and World Food Program (WFP). The purpose of the exercise was to verify figures and facts reported by the affected districts. The findings by the teams complemented the preliminary reports that were received from the affected districts

7.2 Findings of the assessment in Masvingo Province- Zaka District

Damages on Education Institutions

Damages were mostly caused by strong wind storms accompanied by little rainfall, thunder and lightning. The storms broke trees and carried damaged roofing sheets fragments for distances of more than 100 metres in areas such as Muzondidya and Gachiti villages of Ward 30. Damages were more pronounced at education institutions particularly very old structures some constructed in the 1950s. In some cases, roofs were completely blown off, window panes broken by flying pieces of roofing material and teaching and learning material that included text and exercise books were soaked by the rains that immediately followed the wind storms, printed charts.

Damages on health institutions were mostly on roofing material and it was not as pronounced as on schools. Of the seven reported schools, 5 had roofs completely blown off from more than 8 classroom blocks directly affecting not less than 150 pupils in each case. More than 600 text books were lost in three schools and some of the text books had been donated by organisations such as UNICEF.

Very little furniture which included desks and benches were destroyed in schools such as Muzondidya while no much destruction was reported in some schools since pupils had no furniture to use. There was also pronounced damages on teachers' houses with 3 teachers reporting having lost house hold goods which included radios, television sets.

Table 1

Damages to schools

Name of school	Total enrolment	Number of pupils directly affected	Nature of damage	Response
Muzondidya	783	783	<ul style="list-style-type: none"> - Roofs blown off 5 classroom blocks - Text books and exercise books damaged - Charts completely destroyed - Roof for 9 teachers' houses damaged - Tables and benches damaged - Toilet destroyed 	Communities assisted in minor repairs on one classroom block.
Sazaume	302	184	<ul style="list-style-type: none"> - roof blown off 3 classroom blocks - 2 blocks roof partially damaged 	None

			<ul style="list-style-type: none"> - Window panes broken - Benches and tables damaged - Charts damaged 	
Bota	785	240	<ul style="list-style-type: none"> - roof blown off 3 classroom blocks - text books for grades 3 to 5 destroyed - roof for blair toilet damaged 	None
Rhudhanda High School	1005	90	<ul style="list-style-type: none"> - laboratory partially damaged - two classroom blocks partially damaged 	None
Mushayi	590	282	<ul style="list-style-type: none"> - roof damaged - doors, window panes damaged - Text books and exercise books damaged 	None
Mudavanhu	645	180	<ul style="list-style-type: none"> - roofs on classroom blocks partially damaged - Damage on teachers' houses - Blair toilets roof damaged 	None

Source: survey data as provided by School heads and observations

The main problems identified and highlighted by school heads include lack of teaching learning material since most parents can not afford to buy textbooks. The books destroyed by the storms though they were not adequate were very useful in facilitating effective teaching and learning. Pupils also become overcrowded in the classroom blocks that were not damaged particularly when it begins to rain and this disrupts the teaching and learning process. Some are conducting lessons under trees while some schools such as Bota were planning to introduce hot sitting. Some of the repaired roofs at teachers' houses are leaking and every time it begins to rain, teachers have to rush back to check on the safety of their property and this disturbs the learning process.

The main challenges in the health sector relate to lack of emergency preparedness and training by the health personnel at some of the institutions visited. While a number of drugs for emergency cases such as malaria and cholera were available in varying

quantities, all the health centres visited reported challenges of transport and communication particularly to transfer patients to large hospitals if need be.

Damages to homes

Houses had roofs blown off with a few reported and confirmed cases of collapsed structures. There were no reported cases of injuries. Two deaths which according to community representatives were due to lightning were reported in Muzondidya and Semende villages. Table 2 below gives a snapshot view of damages reported during focused group discussions and some confirmed by house to house surveys and observations. It was however not easy to accurately determine whether all damages were due to the storms particularly on houses where repair work had been carried out.

Table 2: Reported storm damages on households in Ward 30 of Zaka district

Village Name	Affected HH	Injuries	Deaths	Damaged houses/huts	Damaged toilets	Estimated Average Quantity of damaged
Muzondidya	8	2	1	8	1	0
Gachiti	12	0	0	12	3	100
Semende	3	0	1	3	0	0
Manyetu	4	0	0	4	0	500
Maranele	6	0	0	6	0	0
Njovo	4	0	0	4	0	0
Dzamwaraka	1	0	0	1	0	300
Total	38	0	2	38	4	900

Very few traditional huts were affected by the storms and out of the 38 reported damaged houses, only 4 were huts. Some affected households had repaired the damaged structures while about 40% indicated that they did not have adequate resources to repair the damaged houses. The wind storm did not damage any water facilities and only four toilets in ward 30 had their roofs blown off. Some of the more vulnerable groups affected by the storms included orphans, child headed households and the elderly as shown on table 3 below.

Table 3: Affected vulnerable groups from selected villages WARD 30

Village Name	Affected orphans	Child headed HH	Widows	Children <5 years	Elderly 59+ yrs
Njovo	4	1	2	8	3
Muzondidya	4 (23)	2 -	1 (5)	4 (23)	13
Semende	1 (11)	0 (4)	1 (2)	5 (18)	0 (6)
Gachiti	8 (17)	0 (0)	4 (10)	12 (32)	7 (14)

Source: village registers

Figure in brackets shows total in the village.

4.1.3 Damage on crops and food stocks

Less than 5% of the households interviewed indicated that they lost food stocks due to the storms. This was after the house roofs were blown off and the food that was stored in the house got soaked by rains. Some indicated that they dried the soaked grain and used it as food while only one household reported that the damaged food stock could not be used for human consumption. The storms occurred at the beginning of the rainy season and most people had not started planting so very isolated cases reported minimal damage to the early planted crop which included as groundnuts and maize. One household reported damage to fertilizer that was kept in the house after the roof was blown off. The rains were also not very heavy, and the damage was due to the hail storms that accompanied the wind in some villages that include Muzondidya.

Prioritization of Needs

The priority needs as identified by communities and heads of institutions as well as local authorities can be grouped as immediate (short term) needs and long-term interventions.

Immediate needs for education and health institutions- emergency relief

- Temporary shelter to be used as classroom blocks
- Text and exercise books to replace those damaged.
- Removing partially damaged roofs that still pose a risk to pupils
- Repairs on damaged toilets

Long term needs- recovery (rehabilitation and reconstruction)

- Roofing material for classroom blocks affected
- Building material which include cement, window panes, trusses to repair damaged classroom blocks and teachers' houses.
- Some classroom blocks need total reconstruction since they are very old and repairing the damaged roofs may just be a temporary measure since the blocks may collapse in case of heavy storms
- Training on basic emergency preparedness for teachers and pupils and staff at health institutions
- Improving water and sanitation facilities for most schools to mitigate possible outbreak of diseases such as cholera

Community needs

- Socio-psycho support for affected children who are now traumatized
- Building material for some of the most vulnerable particularly widows and elderly members of the community
- Sanitation facilities are very limited in most of the villages posing risk of diseases

- Improving livelihoods to facilitate generation of income for both emergency preparedness and or response
- Community training on basic emergency preparedness e.g. dangers of lightning and what to do.

7.2 Findings of the Damage assessment in Mount Darwin

Summary of Findings

Damage to institutions

- The damages ranged from few pieces of roofing sheets and ridges having been lost at any one school and widening of existing cracks on the walls.
- No school had completely blown out roof of classroom, staff house or health facilities.
- None of the institutions needed temporary shelter to carry out activities.
- No learning materials, drugs or equipment was lost or damaged
- Service delivery will continue, however in some cases disturbances of rains may force children to move out of the leaking classrooms. Some structures in some visited schools are a pending hazard as the widening cracks may give-in and the whole structure may collapse. The lives of children and teachers are at risk because of the weak structures of the classrooms and staff houses.
- The Institutions may not be able to mobilize adequate resources to repair the damages and this poses a risk of continuous damage to fittings, equipment and materials. Some structures need attention beyond the damage caused by storms.
- Institutions had not yet received assistance to make temporary repairs (Chihoko had been partially supported).

Damages to Homes

- Some villages suffered extensive damages with some families having to live in tents in the upper wards (9, 10 and 16).
- Some affected villagers had received assistance of asbestos sheets, household goods and food.
- Some structures need attention before putting up the roofs again.

Assistance Received

- Some local business community members, Agencies and NGOs had already responded to the appeal from the District Civil Protection Committee and communities.
- Some of the humanitarian aid had by-passed District Administrator's office so information was still being sort from the relevant donors.

- A detailed report of the type of assistance and names of donors was still being compiled

Table 6. Statistics Of Affected Households -

WARD	VILLAGE	H/HO LDS	DEPENDA NTS	INJUR IES	SHELTE R DAMAG ED	SHELTE R REMAIN	FOOD DAMAG ED	FERTILISE R DAMAGED	SEEDS DAMAGED	ASBESO S SHEETS DAMAG ED	NEED SHELT ER	NEED FOOD
WARD 1 KAITANO	CHIMBUWE	2	3	-	2	2	2X50KG	-	-	-	-	-
“	CHIDA	1	2	-	2	0	5X50KG	-	10KG MAIZE	-	1	1
“	CHIMBANGU	7	27	-	9	21	35X50KG	-	70KG MAIZE 45KG COTTON 10KG G\NUTS	21	-	1
“	KACHUWAIRE	9	35	-	9	20	18X50KG	-	25KG MAIZE 95KG COTTON	16	2	-
“	KAITANO	9	22	-	8	18	-	-	-	24	-	-
“	KATANHA	1	4	-	1	6	-	-	-	-	-	-
“	KAPORA	2	8	-	3	6	12X50KG	-	-	-	1	-
“	KUMANJA	1	5	-	2	1	6X50KG	-	-	-	1	1
“	CHATAIKA	1	4	-	1	1	12X50KG	-	-	-	1	1
WARD 2 MUKUMB URA	MUTYORAMWE NDO	6	24	-	6	6	24X50KG	-	1X50KG MAIZE	11	2	5
WARD 2	MUNEZI	1	5	-	1	2	5X50KG	-	2X10KG MAIZE	1 SHEET	-	1
WARD 2	CHIHOKO	1	5	-	1	1	5X50KG	-	1X20KG MAIZE	8	1	1
WARD 4 CHISWITI	MUTEMAMOMB E ‘B’	1	6	-	1	4	3X50KG	-	-	6	-	1
WARD 4	MUTAPE	4	15	-	4	20	-	-	-	-	4	4
WARD 4	CHIMUSISI	1	3	-	1	1	-	-	-	-	1	-
“	KACHIDZA	25	128	-	30	46	-	-	-	-	-	-
WARD 6 MUTASA	MUTASA	5	14	-	4	10	32X50KG	-	-	-	-	-
DOTITO WARD 9	KAMUNDARIRA	7	30	-	8	7	10X50KG	-	65KG MAIZE 50KG COTTON	35	2	-
“	MAZWI\BUNGU	8	58	-	9	11	13X50KG	17X50KG	55KG MAIZE 157KG COTTON	39	4	2

“	MUKOMBWE	3	15	-	4	15	20X50KG	13X50KG	20KG MAIZE	15	1	1
“	CHIHOKO	28	111	-	30	34	67X50KG	8X50KG	200KG MAIZE 100KG COTTON	110	8	15
“	CHAREHWA	22	89	1	26	31	13X50KG	19X50KG	200KG MAIZE 100KG COTTON	96	11	13
“	KAMBAZA	9	63	1	9	11	15x55KG	-	455KG MAIZE 40KG SUNFLOOR 30KG G/NUTS 56KG COTTON 20KG BEANS	49	3	14
“	KANDIGI	9	47	-	4	17	-	-	-	28	4	-
“	KAMUPENI	26	105	-	25	29	4X50KG	-	250KG MAIZE 130KG COTTON	85	1	-
“	CHAFURAMA	1	3	2	1	1	-	-	-	-	1	-
“	MANYIKA	4	15	-	-	-	-	-	-	11	-	-
“	MUTYAMBIZI	12	40	-	-	-	13X50KG	13X50KG	205KG MAIZE 36KG COTTON	50	9	8
“	MADZIVANZIR A	17	100	-	22	16	25X50KG	44X50KG	362KG MAIZE 240KG COTTON	37	38	10
WARD 9	CHIRAMWA	5	25	-	5	8	16X50KG	-	-	-	-	7
WARD 9	MANJORO	9	37	-	25	17	25X50KG	-	-	-	-	9
WARD 10 SOHWE	NYAMHANDU	1	3	-	1	6	3X50KG	2X50KG	100KG MAIZE	5	-	1
CHITSE/W ARD 16	DOKO	24	110	-	17	41	28X50KG	5X50KG	300KG MAIZE 150KG COTTON	19	5	44
“	MUTSANHURA	31	184	-	20	63	189X50K G	10X50KG	90KG MAIZE	201	38	20
“	KARIMA	27	128	1	15	23	89X50KG	15X50KG	240KG MAIZE 110KG COTTON	65	6	2
“	SOSERA	4	20	-	4	-	-	-	190KG MAIZE	25	-	3
“	SEKETANI/HOT ERA	6	8	-	6	-	3X50KG	2X50KG	120KG MAIZE	1	-	1
“	NYAMANJA	3	20	-	3	10	3X50KG	-	150KG MAIZE 100KG COTTON	-	1	8
“	MUSIYAKUVI	23	184	-	14	20	8X50KG	-	690KG MAIZE	-	20	-
“	MUTEVERA	5	22	-	5	9	-	-	310KG MAIZE	-	-	1
TOTAL 7 wards	40	361	1727	9	338	471	27 500kgs	1 337kgs	Refer To Crop Budget Attached	958	166	173

RECOMMENDATIONS

- Local leadership need to be trained in Emergency Preparedness and Response Planning and tasked to take the lead in steps to be taken and coordination in case of disasters at community level. Initial reporting of damages should imamate from the villagers.
- Agencies need to be prompt in assisting the affected districts in carrying out assessments.
- There is need to come up with a low cost plan of a dwelling unit to enable the poor house holds to start building as donated material is still being piled waiting for further assistance
- Humanitarian assistance from all Agencies and NGOs to be channeled and coordinated through the authorized structures such as the District Civil Protection Committee.
- Support with transport to affected areas to be treated as a priority to enable efficiency in carrying out assessments and delivery of humanitarian aid in future responses. .
- There is need to regularize inspection of buildings in public institutions so that the loss of buildings to storms and strong winds can be minimised.
- Construction Engineers should provide advice on recommended structures in disaster prone areas. For example in Mt. Darwin the same areas are known to have been hit by storms in the past and even some homesteads built on high grounds have been struck by lightning several times but the owners continue to live in the same places without taking precautions such as installing lightning conductors.

Other broad Humanitarian Observations and Recommendations

Communities indicated during focused group discussions that damages to houses caused a lot of inconveniences with some affected families living in overcrowded conditions as they share the remaining rooms that were not affected. In some cases parents share same rooms with grown up children which was not the case before the damage. Communities are living in fear since they are not sure of the stability of remaining structures in case of another gale. Some of the structures developed cracks, but communities still leave in them since options are limited. There were no reports of families sleeping outside as a result of the damage, but some children were temporarily moved to stay with neighbours and relatives soon after the damage. Some families have put large rocks on their houses hoping to stabilize the roof while others have pieces of wire around the roof tied to rocks around the house. Some of the rocks on the roofs are a hazard and pose a risk to members of the households.

Of great concern are reported cases of psychological trauma being experienced by children whenever it begins to rain and the rains are accompanied by thunder and lightning. Community indicated during focused group discussion that children now become restless showing signs of hysteria which is different from what communities

are used to. This was reported in three villages of Muzondidya, Gachiti and Semende all in WARD 30 of Zaka district.

The reconstruction of damaged houses has caused another burden to already vulnerable communities who lack financial resources to buy food, pay school fees and meet other basic family needs. Affected families have now to divide the limited labour between working in the field since it is in the middle of a busy cropping season and reconstruction of damaged structures. Families with destroyed food stocks indicated that this has caused great strain on available resources since they now have to purchase food for the family.

Some of the education institutions are generally in a dilapidated state with building too old to be repaired since they are likely to be damaged further if another severe storm occurs. There is need for school heads to clear some of the rubble still dangerously hanging on some classroom blocks since these are a risk to pupils. Education institutions need basic training in emergency preparedness while school heads need to be proactive in case of emergency and timely report to authorities. While efforts are being pursued to come up with lasting and sustainable interventions, there is an urgent need to facilitate basic teaching and learning in a number of affected schools by providing adequate shelter to avoid disruption of lessons as pupils crowd in the few remaining classroom blocks.

7.3 Findings on Damage assessment in Tsholotsho

A storm hit some parts of Tsholotsho on 16th December 2006. Mvundlana village was most hard hit. The hailstorm was characterized by very strong winds and heavy rainfall. The storm left a trail of destruction to infrastructure of one primary school, homesteads, vegetation ZESA and TelOne infrastructure and road signs.

Action by the District Civil Protection Committee

The District Civil Protection Committee convened a meeting on 18th December 2006 to deliberate on the emergency. The committee visited the affected areas to conducted damage assessment following which a report was compiled and submitted to the Department of Civil Protection. The District Civil Protection Committee also went on to appeal for assistance from well-wishers and local donor agencies and NGOs. There was however no immediate fulfillment of pledges which were made by well-wishers and NGOs.

Action by the Department of Civil Protection

When the Department of Civil Protection received a report on the damages caused by the hail storm, an appeal was made to Save the Children UK who donated 30 emergency kits for distribution to the affected communities. An exercise was undertaken to deliver the emergency kits to affected households.

The Department also coordinated a rapid damage assessment conducted by IOM on 5th January 2007 to verify the nature and extent of damage

Summary of findings of the assessment

It was noted that 55 homesteads were damaged in Mvundlana village and one person was reported to have died of the hailstorm and three people were injured. A salient feature which was observed in Mvundlana village was the use of low cost building material which cannot withstand heavy rains and strong winds. The following was observed;

- The firing of bricks was of poor quality,
- The quality of mortar and bricks used and workmanship was very poor,
- Clay was used as a binding material for construction.

Damage to infrastructure

Five classroom block of Mvundlana Primary school had their roofs blown off and asbestos sheets crumbled. Window panes were shattered, learning and teaching material and furniture was damaged. Electric cables and telephone lines were broken.

The school has an enrolment of 721 pupils out of which 600 pupils were affected as their classrooms were damaged. The affected were grades 1,2,3,4, and 7. Six teachers' houses were affected with their roofs blown off and one of them had collapsed walls. Two of the houses developed cracks which rendered them inhabitable

The picture below show a classroom block and a teacher's house that were damaged by the storm.



Recommendations

- Local leadership to be trained on Emergency Preparedness Plans and tasked to take the lead in steps to be taken and coordination in case of disasters at community level.
- Initial reporting of damages should imamate from the villagers.
- Agencies need to be prompt in assisting the affected districts in carrying out assessments.

- Humanitarian assistance from all Agencies and NGOs to be channeled and coordinated through the authorized structures such as the District Civil Protection Committee.
- Support with transport to affected areas to be treated as a priority to enable efficiency in carrying out assessments and delivery of humanitarian aid in future responses.
- There is need to have regular inspections to buildings particularly in public institutions,
- Regular maintenance of buildings is needed,
- Construction Engineers need to provide advice on recommended structures in disaster prone areas.
- Need to incorporate Ministry of Rural Housing and Social amenities in Disaster preparedness planning,
- There is need to come up with a low cost housing plans to enable the poor house holds to start building as donated material is still being piled waiting for further assistance
- Communities should consider planting trees which will act as wind break,
- The area of sanitation need to be addressed in Mt Darwin as a few households own functional toilets.