

REPORT - HYDROMETEOROLOGICAL
TECHNICAL COMMITTEE

2013

INTRODUCTION

- The Hydrometeorological Disaster Department serves as the Secretariat for the National Technical Committee on Hydrometeorological Disasters.
- The department with its technical committee deals with issues pertaining to floods, tidal waves, wind/rain storms and drought in the country.

Contributory factors

A thorough study over the years on contributory factors to flood disasters in the country identified the following:

- 1) Climate Change
- 2) Rapidly changing land use pattern due to urbanization
- 3) Development of settlements in water courses and flood plains
- 4) Lack of drainage facilities

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- 5) Undersized hydraulic structures
- 6) Poor maintenance of drainage systems
- 7) Engineering design problems like inadequate computation and conveyance
- Poor waste management

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- 8) Poor town planning. Development being ahead of planning
- 9) Utility lines crossing drainage and irresponsible behavior of some residents who choke drains by dumping refuse in them
- 10) Dam spillage

Areas mostly affected

- low-lying areas that are usually affected seriously by floods-- southern sector of the Western, Central, Greater Accra and Volta Regions.
- Northern Ghana is flat and with several rivers and rivulets underlain mostly with clay which are heavily silted. Sparse vegetation cover and long period of dry seasons (which makes the soil bare) cause a lot of run-offs when it rains. The top soils are washed into the water channels to worsen the situation.

Affected areas cont'd

- At the peak of the rainy season the Burkinabe authorities are compelled to spill their two (2) major dams into the north of Northern Ghana on two (2) major river channels (Oti and White Volta
- Plains around these rivers get heavily flooded and destroy farms, stored food and settlements.

Pre-flood disaster preparedness measures

People living in flood prone areas:

- About one million, three hundred thousand (1,300,000) people in over one thousand, eight hundred (1,800) communities have been identified as vulnerable to flooding and likely to be displaced during the rainy season. These were therefore the target of the sensitization exercise.

Collaboration with stakeholders

NADMO in collaboration with the respective RCCs, MMDAs, MDA and Traditional Authorities as well as NGO's and DVG's mounted sustained public awareness programs for people in these communities and low-lying areas to move up to higher grounds.

Operational readiness

- Rapid Response Team (RRT) was also made operationally ready including a detachment of the 48 Engineer Regiment of the Ghana Armed Forces ready to move when the need arose.

FLOOD DISASTER IN THE NORTHERN REGION

- Northern region suffered a heavy downpour of rainfall from the 29th August, to the 5th September, 2013.
- Two districts; Bunkpurugu-Yunyo and East Mamprusi Districts were severely affected.
- Seven thousand one- hundred and twenty three (7,123) people were displaced in forty-four (44) communities. Thirty (30) communities in the Bunkpurugu-Yunyo District
- Fourteen (14) district in the East Mampurusi District.
- A total of two thousand, two hundred and one (2,201) acres of farmlands were destroyed.

Interventions by NADMO

- Victims were successfully relocated to safe Havens which had earlier been identified by the District Office of NADMO and earmarked for such emergencies.
- Relief was organized by our NADMO office and our collaborators from the victims locally and later augmented with Relief from NADMO HQ in Accra and this included tents.

Dredging in ADA WEST

- The dredging of a water channel that links big-Ada to Wasakuse has been completed. This water channel which hitherto was heavily silted had caused the lagoon at Wasakuse to dry-up.
- With the completion of this project, the whole Wasakuse community has been brought back to life as fishing activities in the lagoon is on-going.

Education and sensitization

- The Hydrometeorological Disasters Committee embarked on an educational and sensitization visit to selected flood prone areas in the Greater Accra Region.
- The aim was to see what can be done to mitigate and lessen the effect of flooding on those areas and was led by the National Co-ordinator of NADMO

Areas visited include

- a) Nungua Okpoi Gonno near Batsonaa.
- b) Achimota main drain
- c) Gbawe Volcano
- d) Gbawe Tenyayor
- e) Pambros
- f) Villaggio

RECOMMENDATIONS

- Removal of structures: Residents of these areas who have built either in the water-way or directly along the banks of the main drains.
- Construction of bridge: Lekma should construct a bridge to link Okpoi Gonno and Akwetey, Akueteman (Batsonaa).
- Lining of the drain: Lekma should as a matter of urgency line the dredged drain at Okpoi Gonno to prevent the dug-out drain from getting silted.

RECOMMENDATIONS CONT'D

- **Reinforcement of the railway line:**The slope along the railway line at Okpoi Gonno should be re-inforced with boulders to prevent erosion.
- **v. Replacement of loose slabs:**The Hydrological Services Department of the Ministry of Water Resources, works and housing has been be informed of the state of the Achimota main drain i.e. the falling slabs in the main drain.
- **vi. Support from MMDA's:** Municipal Assembly should encourage the various communities in these areas to support the NADMO excavator to map out and dredge the drains in their areas. (by providing fuel)
- **vii.** A meeting was held between NADMO and Villaggio to straighten up the original agreement between them and NADMO concerning the continuation and maintenance of the drain behind them.
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GA SOUTH MUNICIPAL ASSEMBLY

- The committee also visited the Ga South Municipal Assembly which has consistently been experiencing flooding over the years, primarily due to its low lying nature and secondly, the Weija Dam which has to be spilled every year as a result of heavy rainfall.
- The drainage systems especially in New Weija have not been mapped out.

AREAS VISITED

- a. Ga South Municipal Assembly
- b. Weija Treatment Plant
- c. Adakope
- d. Oblogo
- e. New Weija
- f. Dunkunaa/Shoprite/G.cel
- g. Machingani near Barrier (Quarry Site)
- h. Tetegu

OBSERVATION AND RECOMMENDATIONS

- The assessment team noticed the need for the excavator to continue the good work it is doing in areas like new Weija, Dunkunaa and Old Tettegu since these areas have not got their drainage systems clearly mapped out and properly done.
- It is hoped that these drains after getting mapped out and properly done will eventually be lined.

Observation recom' cont'd

- NADMO should be supported to engage residents who farm along the banks of the Densu River and fish in it to undertake alternate projects.
- Ghana Water Company as a matter of urgency mends its fence to prevent the school children and residents from using the Dam Site as a walkway.
- The miners of stones at Akoaso in Machingani must be stopped before any further havoc is caused.

FAMILIARIZATION VISITS

- Following the 2010 rains that caused massive flooding in the city of Accra and Tema, the Hydrometeorological and Relief/Reconstruction Technical Committees undertook several visits to the affected areas and made recommendations to correct the anomalies that create the flooding situations in the area

Familiarisation visits cont'd

NADMO in collaboration with its Technical Committees and the media visited the Tema Metropolitan Assembly area to observe at first hand, works that have so far been done to mitigate the flooding in the area.

THE AREAS VISITED

- i. Abattoir Wetlands Area
- ii. Sakumo Ramsar Site, Klagon
- iii. Lashibi Shallom Spot Area
- iv. Ashaiman Under-Pass Dredging
- v. Tema Community Seven (7) Drains
- vi. Tema Community Six (6) Drains
- vii. Tema Community Five (5) – Sakumo Lagon
- viii. Tema New Town Area

OBSERVATION AND RECOMMENDATIONS

- Tema as an Assembly has done so well in especially Community Seven (7) drains. It is hoped that the Community Six (6) drains would also be lined.
- A meeting should be held with the industries that work along the Tema New Town drain (Chemu Lagoon) on the need to treat waste water before discharging them into the drain. Their attention must also be drawn to contributing towards the desilting of the drain in question.

Observation cont'd

- NADMO should call a meeting between all stakeholders in relation to the Tema lands (TDC, TMA, chiefs etc) to design appropriate ways of managing the area in order to avoid flood disasters (especially in the acquisition of lands for residential purposes and the granting of building permits) .
- Educational programmes to sensitize the general public on the dangers of haphazard disposal of refuse especially into the drains.
- Structures built in waterways near the Abattior wetlands areas and the Ramsar site at Klajon should be demolished.

WAY FORWARD

- The department suggests structural interventions such as the construction of storm drains and the deepening / widening of earth channels in affected areas to increase the drainage carriage capacities.
- Periodically drainage structures must be maintained. As much as possible throwing of garbage in to the drains must as matter of necessity be discouraged.
- Channelization and retention of flood waters in reservoirs must be combined. Retained flood waters in dams etc can be used during times of drought.
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WAY FORWARD CONT'D

- Rainwater harvesting in all residential developments, must be encouraged and metropolitan/Municipal/District Assemblies must be seen to be enforcing their by-laws and legal instruments in order to remove structures on waterways as well as sanctioning garbage throwers into the drains.
- Non-structural interventions such as a more vigorous public education campaign on discouraging people throwing garbage into drains etc as well as the establishment of safe heavens.
- NADMO must pursue the enactment of its law on building regulations etc.

DISASTER DATA SHEET
FLOODS/WIND/RAINSTORMS
DATA SUMMARY AS AT 6TH MAY 2013

- TOTAL NO. OF AFFECTED PERSONS == 12,390

- TOTAL NO. OF DEAD==60

- TOTAL NO. OF HOUSES AFFECTED==1938

- ESTIMATED COST ==Ghc 605,188

THANK YOU