EUROPEAN COMMISSION
DIRECTION GENERALE POUR L'AIDE HUMANITAIRE & LA PROTECTION CIVILE
Regional Support Office for East and Southern Africa (Nairobi)

RAPPORT DE MISSION

Subject: **Tanzania, cholera outbreak Dar Es Salaam WASH RSO Mission**
Auteur: **Jerome BURLOT (WASH Adviser/RSO Nairobi)**
Date: **From 11th to 13th October, 2015**

Main partners and visited sites list:

Dar Es Salaam:

- UNICEF: Kiwe Sebunya (Chief of WASH), Gilles Lebet (donors relation), Robert Carr (Emergency coordinator)
- WHO: Jorge Castilla (Emergency health specialist), Wilfred Ndegwa (WASH consultant)
- MoHW: Head of WASH unit and Epidemiological unit
- MSF Spain: Javiera Puentes (Team leader, health), Maite Guardiola (WASH), Jan Oosterloo (WASH)
- MSF Swiss: Anton XXX (Deputy HoM)
- CDC: Chris XXX (emergency specialist), Rapa Nura (epidemio), Sae-Rom (epidemio), Kathryn Curran (epidemio)
- German cooperation: Claudia Kraemer (project manager)
- DFID: Lisha Lala (health specialist)
- OFDA: Albert Reichner (WASH Expert)

Caution: This note has been produced after a 2 days mission during which MSF Spain and Swiss, WHO, UNICEF, CDC, MoHW, Tanzanian Red Cross, OFDA WASH Adviser have been meet, as well as DFID, German cooperation and colleague from the delegation (acting Head of Operation and HoD). Then, the information provided in this document has to be taken carefully taking into account the limitation of time and information to ensure relevancy of the statement presented.

REPORT SYNTHESIS - Executive Summary

Cholera trends and perspective:

- After a small decreasing of cases few weeks ago, the outbreak is spreading again.
- 4220 of cholera cases so far, within 3047 are located in DES and 67 deaths within 33 in DES.
- Between the October, 12th and the 13th, DES had provided 120 new cases.
- The coming rainy seasons (enhanced by El Nino phenomenon), as well as the coming national elections are factors which could make the situation must worst at short term in such urban setting.

WASH situation:

- The very limited access to safe water in the affected areas as well as the sanitary environment (mix of sewage and water sources…) jeopardizes the public health.
- Numerous water resources are in used by the population, so difficult to control the safe water access so what ?
- There is a very little level of awareness/information within the population.
- Whether the main problems are structural, the impact of the drought have drastically impact the power supply within the country and then impact the water supply.

WASH response:

- The data collection, management and dissemination are very weak. The information level remains very general and does not allow for appropriate targeting in terms of areas and activities. The political agenda affects drastically the broadcast of information about the outbreak (most of the death occurs in the community).
- The ongoing response is very slow, not very relevant and efficient. The partners are very limited. The level of proficiency/capacity of the WASH stakeholders on the ground is quite low in terms of cholera WASH response. Some of the activities implemented have been abandoned long time ago because of lack of efficiency and difficulties to control.
- MSF Spain and IFRC[1]/TRC envisage intervention and currently are doing their assessment.

Strategy/Principles for funding:

- Avoid contributing to remove all sense of responsibility from the local authority in the response implementation
- Ensure that the local authority put in basket all the capacity and means they have, and that the local authorities are put forward and empower in the implementation of the response.
- Ensure that there is no funding overlapping between capacity build by development fund and capacity provided by additional humanitarian fund. DG ECHO and the EU delegation should address the issue in a tied coordination.
- As much as possible try to work to improve adequately the existing service (water access) rather than creating a new service from which it will difficult or impossible to exit without being blame…
- With the support of the EU Delegation and other Member states, strongly advocate to the government to improve drastically the communication about the outbreak, as well as their response/involvement start asap.

Recommendation for funding:

Given the information provided in this note, funding should be considered but with clear limitation in time and budget.
The intervention which could be funded by DG ECHO should:

- Ensure from the beginning exit strategy for each activity implemented
- Focus on priority on water access, mass communication and given the level of awareness, doors by doors visit could be considered with time limitation. Technical assistance: chlorination and monitoring of the residual chlorine
- The action funded should focus on the most of the most risky and needed area
- Following the mission MSF Spain and potential deployment of WASH ERU by IFRC seems to be the most relevant actors for intervention in terms of proficiency, capacity and strategy.

MISSION DETAILED FINDINGS

Cholera trends:

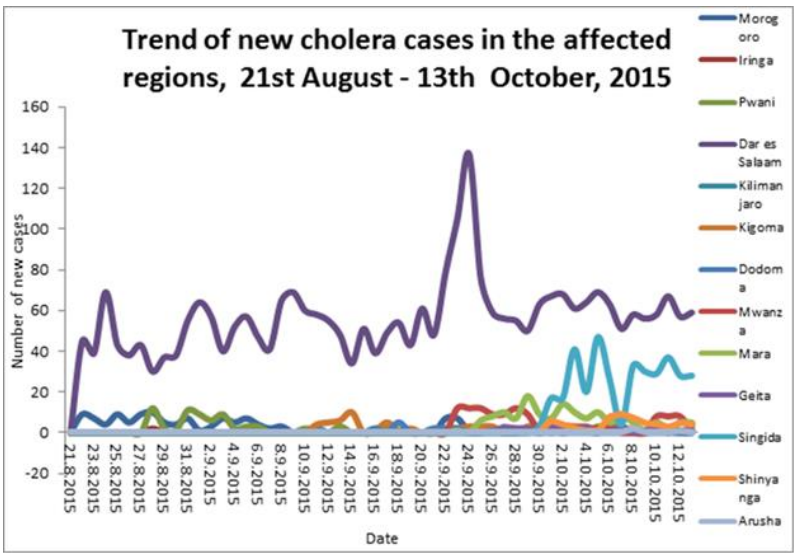
At the date of the 12-10-2015, the total number of cholera cases was 4096 people, with 62 deaths, 33 occurred in DES. At the date of the 13-10-2015 the number of cases in DES rise up to 4220, so 124 new cases in a day.

30%--40% of the Municipality/District whole population are in a potential cholera affected area, meaning close to 2M people.

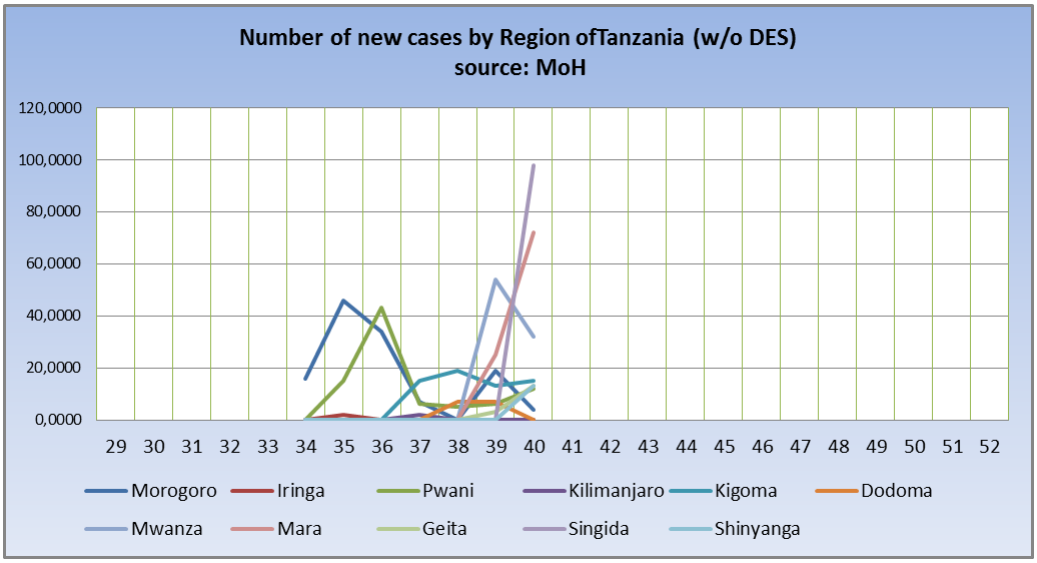
75% of the cases are from DES. The new cases for the date of 11-10-2015 are 57 for DES and 115 in total, so DES provide about 50% of the new cases, no death in DES for the date of 11-10-2015. When last week 10 region of Tanzania provide cholera cases, this week 12 regions are affected.

DES:

Date: 12.10.2015.											
Region	**District**	**New case affected areas**	**Cummulative Cases**	**Old cases**	**New Cases**	**Cummulative Deaths**	**Old Deaths**	**New deaths**	**Total discharge**	**New discharge**	**Bed States**
Dar es Salaam	Kinondoni	Ubungo, Kigogo, Mbezi,Kijitonyama, Kimara, Mburahati, Manzese,Goba, , Magomeni, Sinza, Kinondoni, Makuburi, Ngugumbi,Mabibo, Yombo,	1510	1475	35	14	14	0	1441	19	55
	Ilala	Buguruni, Vingunguti, Tabata, , Kipawa, Ilala, Mchikichini, Kigogo, Vituka, Keko, Kivule, Pugu, Chanika, Kivule, Jangwani, Kimara,	1194	1183	11	8	8	0	1155	19	31
	Temeke	Azimio, Kiburugwa, Charambe, Kongowe, Toa moyo,Keko Mwanga, Mbangala, Kurasini	343	332	11	11	11	0	302	6	30
		Total	**3047**	**2990**	**57**	**33**	**33**	**0**	**2898**	**44**	**116**



Rest of the country:



WASH situation:

Water access:

Most of the problems highlighted in this note in terms of water access can be considered as structural. Although, the problem of energy supply encounter country wide this year could have contribute to catalyst the structural problem in quick spread of the outbreak. Actually, because of the drought the levels of water in the hydro electrical power plant get very low and then all the hydro electrical power plant have been either slow down or even stopped.

In Dar Es Salaam the water access can be divided in three main sources:

- *Water supply system operate by DAWASCO (semi-public company)*

The water supply system of DES coverage is about 25% of the population and 10% of the population of the cholera affected areas. The hydraulic system encounters regular water shortage. The distribution network is aged, with very low efficiency (huge leakage), the supply is sectorized (meaning a lot of hydraulic hammer and depression in the network which enable contaminated water intrusion into the system) and unburied pipeline crossing sewage pond with intrusion of waste water into the system. The level of chlorination in the pipeline is not everywhere appropriate or even noticeable. The monitoring of the FRC is done in an irregular basis and at very low scale. The DAWASCO people are reluctant to acknowledge the problem faced with water quality, and so far did not modify the chlorination and water quality monitoring to cope with the outbreak situation. DAWASCO is in charge of water and sanitation and control all the activities and responsibilities around those services.
For instance, they are the one producing the water and testing the water quality as well. There is conflict of interest that could undermine the reliability of the water analyzes results. The same consequence can be suspected on the sanitation issue.

- *Private water seller using water from deep BH and selling through cart or water bozers*

In the cities and in the main affected area are located numerous borehole from 18m to 50m deep. Given the proximity of the sea we could suspect that the water might be salty. Those boreholes are made by private bodies without any authorization. Then, nobody knows how much water is abstract from the ground which make impossible to manage the water resources. This problem is very serious and might have very negative consequence in the close future. The numbers of BH have increase a lot for the last 10 years. Nowadays for instance in one of the most affected area called Ilala over 900 BH have been identified by MSF assessment, and over 300 in Kikonkoni which is the most affected area of DES.
There is a very high risk of over pumping and depletion of the groundwater table in time with as results coming up of brackish water and increasing of erosion on the cost. The lens of fresh water can disappear in time if no control and no survey are performed.

The private seller are numerous and only 60 of them have been identified so far, they are not all registered, they are not structured and they are taking water from any kind of resources. The government has apparently recently started some control on it, but the effectiveness of it can still be put in question.

It has been mentioned by the WASH Head of Unit within the Ministry of Health and Welfare that some of the BH which used to be free of contamination are now contaminated by EColi and choleric vibrio according the test performed. This statement is very weird as no new event such as an earthquake, could have affected the BH bodies and generate contaminated water intrusion. So either those BH were already contaminated which is possible if:

  - The BH haven't been built properly or (still information regarding the type of aquifer and ground are missing)
  - The aquifer itself is already contaminated at this depth (which is rare but possible according type of the ground/aquifer).
  - Or, the water analyze performed are not reliable. In anyway, the water analyzes results should be cross checked to ensure reliability of the data provided in order to avoid wrong and costly activities targeting.

- *Shallow individual well*

Shallow well in such costal environment (first layer of ground very sandy) and urban/dense environment with latrine pit next to it are for sure contaminated with fecal coliform at least. However, it seems that normally in most of the cases the water fetch from those wells is only use for domestic purposes and not for drinking. Of course, it is tricky to state that this is systematic, especially at time of long shortage of water supply.

Sanitation:

The sanitation situation is pretty alarming as well with many open drains fill with sewage, standing waste water within the living habitat, latrine pit seeping to very permeable ground and running down to the well or directly to open drains.

Given, the sanitary conditions described up there, the coming of the rainy season and the El Nino phenomenon (risk of heavy flood) should be considered as a very high risk to spread quickly and in a wide area the outbreak.

Hygiene practices; cultural barrier and cholera awareness:

The problematic of hygiene practices haven't been clearly identify so far, but of course hand washing, water resources use for drinking and cleanness of water container as well as food handling and conservation are the main target when it comes to cholera. The level of awareness seems to be very low in town, partly due to the lack of communication about the disease. Many cultural barriers (water is from nature and then it is safe, the chlorine has bad taste, the chlorine will affect you sexual performance…) and stigma of the sick people are also to take into account in designing awareness activities and community mobilization. As result, we already notice that most of the death from cholera occurs at community level, which means that people are somehow reluctant to communicate about the disease and to reach the closest health center.

One anecdote has been related by people from the Tanzanian Red Cross: two sick person were trying to go to the health center has they felt cholera symptoms but because of the lack of information they went to a health center very far, two others health center with CTC were closest to the one they reach, and as a result one died on the way.

WASH response:

The level of information necessary to target and design the response is very limited, general and totally insufficient. Most of the information's provided are very general at level of the city or Municipalities. There is even no clear detailed action plan, no map available either with the cases origins, the location of the CTC, the density of population, the type of water resources or any others relevant information…Only table with number of cases per Municipality and a list of affected WARD (without breakdown of number of cases) is available and use to plan the response.

There is very little information available at the level of Municipality but especially WARD in terms of for instance:

- Population and density
- Number of cases…
- Types of water access, water quality, level and risk of contamination of the water resources
- Main environmental risks to catalyst propagation of the outbreak (sewage pond, protection of water access…)
- Main socio-cultural barrier or factor of propagation (presence of market, bus station, stigma, argument used by people when they are reluctant to get aware about the disease…).
- Etc…

The WASH response so far is very limited and slow in implementation. The coming election affect a lot the implementation of the response notably in terms of communication and sharing data/information. The government does not want to extend communication about cholera as the outbreak can be considered as a failure from the government in providing basic services to the population. As a result, the government is trying to control all the response and limit the broadcasting of information.

So far, the main actor of the response have in mind to get prepared as much as possible and in parallel start small scale action, time for the election to end up. Then, they imagine that after the 25th of October 2015, the large scale intervention could be implemented with strong coordination lead from the Office of the Prime Minister. Nevertheless, as mentioned by EU HoD, it will be a lot of time delay to get the governmental structure effective and operational as the election will impact the existing organization charts. Realistically, we could not expect the government to be fully

functional before the mid November. This waste of time in such type of response should not be acceptable. In cholera response more you wait to intervene less the response will be efficient and more it will be costly.

In consequence of the political agenda, the level of communication about the outbreak is totally inadequate.

The response so far is mainly implemented by Municipality staff and volunteer. The Red Cross volunteer are directly manage by the Municipality people. The Red Cross through a standing agreement with UNICEF is used to provide input/equipment /consumable (chlorine)/water guard to the municipality whom are in charge of the distribution.

The coordination at Municipality level is so far irregular and not very frequent.

The Ministry of Health is leading with the support of WHO and UNICEF the response and as a first action start chlorination of the well in ad hoc manner, and sometime regularly. The fact is that well chlorination is not efficient and it is not anymore apply in cholera response unless there is an ad hoc contamination. Nowadays most of the WASH actors intervening in cholera response implement chlorination point next to water resources to chlorinate water directly in the water containers of the users.

In addition few water guard have been distributed to some location, but no clear criteria of selection, some shallow wells have been closed by authority as well as some BH after water test results. Although, the people need water and distribution/treatment of water for all purposes would be very costly as it seems that those wells were mainly use for domestic purpose (*source OFDA WASH Advisor*).

IEC materials such as posters and leaflet have been distributed.

The task force was planning to distribute water guard (aquatab and jerricane) at large scale (but so far they only have 1000 of it roughly…) and to keep wells chlorination in the meantime, which might increase a lot the dose of chlorine at some point and as a result make the people even more reluctant to drink such water. The problem in distributing aquatab is that demonstration and monitoring have to be rigorously implemented to ensure efficiency and minimum risk of misused. Many experiences with it encounter misused from the targeted population or even no use at all.

In addition, the task force is planning to disinfect as much as possible latrine but level of efficiency of such activity can be also put in question.

The most relevant action planned by the task force is the implementation of PE^2 tank to pump water from BH or well in and perform a more efficient chlorination, and ensure distribution of safe water from the tanks taps by geographic cluster. The problem remains where are the priority places to implement such capacity, what the criteria of selection, etc…

The amount of money engaged so far in the response was not clear from every actor, but it seems that the main funding agency is UNICEF.

Health: The case management is also at concern, but it seems to be less than the WASH response. The equipment's of the CTC are very basic but it is in progress of improvement. Very little information about the case management has been collected during the mission. The health center report on weekly basis so far, whereas the CTC report on daily basis, the way the data are compiled can be put in question. In addition there is very limited information regarding what happen within the community (number of death…).

[2] PolyEthylene (plastic)

Actors involved or who planned to get involved in the WASH response:

So for the time being the main actors of the response are the Municipalities support by Tanzanian Red Cross with UNICEF fund and WHO providing technical assistance to the MoHW. The American NGO PSI is also involved providing equipment and items such as water guard, the Water Aid INGO is planning to be involved in the response as well, MSF Spain is currently leading a WASH assessment to envisage according the result to get involved in the response as well.

CDC are in stage of assessment but already proposes to provide pool tester (to check chlorine residual). Actually, they already provide some but so far nobodies now where they are???

IFRC is planning also to get more involved.

From the side of the donors, DFID and German Cooperation share their concern about the situation and the complexity to intervene. When initially they did not want to get involved in the response considering that they already provide high support to the government and then local authorities should have the capacity to answer the needs, it seems that aware about the risk for the situation to get worst, they could consider potential involvement to support with limitation the response.

OFDA are not directly involved so far, but they could mobilize some resources in case of high degradation of the situation.

Capacity of the partners and stakeholder/ Funding situation:

In general, whether some of the WASH actors meet have proficiency in the sector, the proficiency in terms of design and implementation of a WASH cholera response seems to be pretty low. Many activities planned by the main stakeholder correspond to approach that used to be implemented but have been abandoned quite some time ago. The WASH task force meeting attended during the missing was not very efficient:

- only update of the number of cases at the level of Municipality and city, no epidemiological curves presented
- no supportive document such as map to plan and target area and activities
- no activities programming/planning with division of work/task among the actors present,
- no action point at the end of the meeting

The WASH task force is composed so far of MoHW[3], WHO, UNICEF, PSI, Tanzanian Red Cross, CDC and MSF Spain just joined and Water Aid is expected soon as well.

It seems that there is a clear lack of leadership to implement quick, efficient, cost effective, and pragmatic response.

The response needs to be structured and rationalized and for that data are needed as well. The assessment methodology and tools seems also to be quite weak. Then, check list of data needed to target and design the response at the smaller administrative division as possible should also be produced and template to launch more detailed assessment.

The WASH team from the MoHW seems to be pretty demanding in terms of technical assistance and guidelines.

[3] Ministry of Health and Welfare

The most relevant partners meet during the mission in terms of WASH response was MSF Spain team. Apparently the IFRC envisage mobilizing the British WASH ERU whom could be very relevant to build capacity of the National Red Cross society or at last resort to intervene directly with equipment and staff. A DREF is envisaged by IFRC.

The Red Cross volunteers are mainly trained for hygiene promotion, but some of them could constitute a good capacity for others activities of the WASH response. They need appropriate technical briefing, practical exercise and appropriate close supervision from proficient team. Then, the response itself could be partly use to build a more efficient capacity under rigorous and close supervision.

UNICEF propose to hire a proficient staff dedicate to the cholera response as their human resources are already stretched at the maximum with the refugees situation as well. By the way UNICEF is also struggling to mobilize appropriate budget to support further the response. Same statement from most of the main partners: WHO, Red Cross, …

Strategy and modalities/principle for funding:

There are serious caution that should be considered in the case of funding of the emergency response is envisaged, notably:

- Avoid to contribute to remove all sense of responsibility from the local authority in the response implementation
- Ensure appropriate communication chain and coordination among potential donors (especially among EU state members) to raise capacity of lobbying and advocacy to the local authorities to also avoid the local authority to play on the confusion and thus reduce their direct involvement
- Ensure that the local authority put in basket all the capacity and means they have, and that the local authorities are put forward and empower in the implementation of the response.
- Ensure that there is no funding overlapping between capacity build by development fund and capacity provide by additional humanitarian fund (caution: fund diversion in such chaotic situation).
- As much as possible try to work to improve adequately the existing service (water access) rather than creating a new service from which it will difficult or impossible to exit without being blame… For instance avoid funding of water trucking but rather subsidy chlorination of existing private water bozer ensuring also attractive price of the users, get the private seller structured and organized. Advocate to the local authority to ensure establishment of rules and regulation regarding private water selling to improve their sense of responsibility and ensure sustainable safe access to water. In parallel build the capacity of private seller to performed chlorination and FRC monitoring.
- Strongly advocate to the government to improve drastically the communication about the outbreak, as well as their response/involvement asap.
- Strongly advocate to the government to subsidy water supply in order to facilitate and foster the population of the affected area to use safe water for drinking purpose.

The DG ECHO and the delegation should be involved with much tied collaboration. DG ECHO should focus on the implementation of emergency intervention/main gap filling and in parallel the delegation could lobbying and advocate for more and quick involvement of the local authority.

Caution: The rest of country is also at concern.

Recommendation for funding/action:

Given the evolving of the situation and the perspective of getting worth soon due to the coming rainy season and El Nino phenomenon, as well as the slow implementation of the response and the lack of proficiency on the ground, but also the constraint generate by the political agenda, I would recommend at my level to get involve as DG ECHO but with clear limitation in time and budget amount.

The intervention which could be funded by DG ECHO should:

- Ensure from the beginning exit strategy for each activities implemented
- Focus in priority on water access, mass communication and given the level of awareness until some extend the level of awareness of the population of the affected areas is very low, doors by doors visit could be considered but with time limitation.
- Technical assistance for chlorination and monitoring of the FRC (identification of strategic location for post chlorination needs…)
- Eventually according fund available, funding a resources to ensure appropriate data collection and sharing, coordination, strategy, design and targeting of the response with production of a realistic and pragmatic detailed action plan could be envisaged.
- The action funded should focus on the most of the most risky and needed area, and the most of the most vulnerable people. The target area, activities and criteria's to exit should be clearly expressed from the beginning.

MSF Spain seems to be potentially the most relevant WASH actor for the cholera response as:

- Staff meet are pretty proficient in WASH and cholera response
- They have a clear mandate to operate only for the duration of the emergency
- They have a relevant strategy in terms of targeting areas and activities as previously described
- Apparently they are ready to put some of their own fund in the basket

The main problem with them is that they are new, and might struggle a bit at the beginning to get operational notably in terms of human resources but in the meantime they can get the support of MSF Swiss which are already on the ground.

The WASH ERU from the British or German Red Cross deployment is also be envisaged by IFRC and could constitute a relevant WASH capacity on ground However, rather to implement directly activities, the intervention of the ERU should focus on building capacity and supervising the response from the Red Cross (mainly for chlorination and monitoring of FRC[4]). The ERU could potentially bring some contingency equipment in case of serious deterioration of the situation. It is much easier to exit from capacity building activities than from direct implementation, and the added value together with appropriate supervision/refreshing on the field of such action is quite clear.

A follow up joint mission from WASH and Health experts from DG ECHO should be organized within 3-4 weeks.

[4] Free Residual Chlorine