Project

"Emergency Response Unit - Ministry of Health"

Final report

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by

Wilma Meeus, M.D.

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Table of contents

About the author	p. 3
Acknowledgements	p. 4
Acronyms	p. 5
Executive summary	p. 6
Map	p. 9
1. Introduction	p. 10
2. Goal and objectives of the project	p. 11
3. Methodology	p. 11
4. Actual accomplishments of the project	p. 12
• Rwanda Disaster Profile	p. 13
• Draft proposal for Gov't Disaster Management Structures	p. 13
• Plan of Action for hospital disaster preparedness plan	p. 13
• Outlines for disaster preparedness plans for 3 priority disasters	p. 14
• Strategic Plan for the establishment of the Disaster Management Unit	p. 15
5. Discussion and recommendations	p. 15
• Discussion	p. 15
• Recommendations and next steps	p. 17
References	p. 19
Annexes:	
A. 1 Disaster Profile for Rwanda	p. 20
A. 2 Diagram proposed disaster management structures	p. 22
A. 3 Plan of action for the development of the hospital disaster preparedness plan	p. 23
A. 4 Outlines for disaster preparedness plans	
A. 4.1 Common constraints and proposed measures	p. 26
A. 4.2 Outline for disaster preparedness plan Armed conflict / civil war	p. 28
A. 4.3 Outline for disaster preparedness plan Major accidents	p. 34
A. 4.4 Outline for disaster preparedness plan Cholera outbreak	p. 40

About the author

Dr. Wilma (W.E.A.M.) Meeus is a medical doctor who has extensive experience in working with health authorities in a number of African countries. During her 12 years in Africa she has worked in Tanzania, Sudan, Somalia, Uganda, Burkina Faso, the Democratic Republic of the Congo (then Zaire) and Rwanda. Her work in ministries has, amongst others, concerned the establishment of an essential drug's programme, support to an EPI programme, the implementation of a nutritional rehabilitation programme and planning and policy development. Dr. Meeus has worked in a number of complex emergency situations, in particular in Somalia and Rwanda. In Somalia she worked with the health authorities on the planning and co-ordination of relief interventions. In Rwanda the advisory post in the Ministry of Health concerned policy development, planning and assistance in the establishment of NGO co-ordination procedures in the aftermath of the civil war and genocide.

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The Strategic Plan for the establishment of the Disaster Management Unit in the Ministry of Health - Rwanda and this report are the final products of an eight (8) months' consultancy with and in the Ministry of Health, Kigali. The products are the outcome of workshops, reviews and meetings with senior Ministry of Health officials and officials from other Rwandan ministries as well as representatives of a number of national and international agencies working in the health sector in Rwanda.

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Dr. Vincent Biruta, the previous Minister of Health, initiated this project because he firmly believed that the Ministry of Health could and should strengthen and improve its disaster management capacity. He was only recently appointed as Minister of Public Works, Transport and Communication. Although from a different angle, he will most probably continue his interest in and commitment to disaster management. The Ministry of Health will only benefit from his efforts in his new post. Dr. Charles Rudakubana, until recently the Secretary General of the Ministry of Health, supported the project in many ways. In particular his rapid responses to requests for support made by the consultant are highly appreciated. Dr. Rudakubana has recently re-joined the Ministry of Defence. Dr. Pie Kamoso, until December 1998 Director of Epidemiology and Public Hygiene in the Ministry of Health, has supported the project from its inception. The time and energy he gave to the implementation of the project were invaluable. Dr. Kamoso is currently studying in the United States. Dr. Veronique Mugisha, who recently took over as Director of Epidemiology and Public Hygiene in the Ministry of Health, continued the support the project received from this directorate. Dr. Mugisha in particular assisted in the development of the Strategic Plan for the establishment of the Disaster Management Unit and will in her current position, follow up on the process of formalising the Unit. Jean-Marie Vianney Buzizi and Augustin Gahutu, two Ministry of Health staff members, were officially appointed to assist in the implementation of the project. They have both been involved in and have given much of their time and energy to the development of draft documentation. They have also played an important role in the organisation of the many workshops the project implemented. Dr. Ruben Sahabo, Epidemiologist at the Directorate of Epidemiology and Public Hygiene, became more closely involved in the implementation of the project after he spent three months in Gisenyi prefecture to assist in the re-establishment of health services after the security situation there improved dramatically. He was, however, exposed to and showed a great interest in disaster management for the simple reason that he shared the office space with the consultant. Many discussions took place in this office and many ideas were articulated with his support and understanding of disaster management issues. This was in no small measure related to his recent experience in Gisenyi. The enthusiasm of the above persons has been extremely stimulating.

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interest, support and commitment it would have been far more difficult to achieve the ambitious goal of the project.

Acronyms

CDMC	Communal Disaster Management Committee
CDM Int. Inc.	Camp, Dresser and McKee International Incorporated
CHK	Central Hospital of Kigali
DEHP	Directorate of Epidemiology and Public Hygiene
DMO	District Medical Officer
DMTP	Disaster Management Training Programme
DMU	Disaster Management Unit
DRC	Democratic Republic of Congo
EPI	Expanded Programme of Immunisation
ERU	Emergency Response Unit
FAR	Forces Armées Rwandaises, ex-Rwandan Armed Forces
GOR	Government of Rwanda
ICRC	International Committee of the Red Cross
IFRCRCS	International Federation of Red Cross and Red Crescent Societies
MOH	Ministry of Health
NDC	National Disaster Council
NDMO	National Disaster Management Office
NGO	Non-Governmental Organisation
OFDA	Office for Foreign Disaster Assistance
PDMC	Prefectural Disaster Management Committee
RMO	Regional Medical Officer
RPA	Rwandan Patriotic Army
RRC	Rwandan Red Cross
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children Fund
USAID	United States Agency for International Development
WHO	World Health Organisation

Executive summary

With the return of the Rwandan refugees from the Democratic Republic of the Congo (then Zaire) in November - December 1996, the number of incidences of violence in Rwanda has steadily increased. The ex-FAR and Interahamwe have continued to wage a campaign of genocide, and in turn, the Rwandan Armed Forces (RPA) have countered their attacks.

The most dramatic and serious attack took place in December 1997: a large number of insurgents attacked, for the second time that year, the Congolese refugee camp at Mudende, located near the border with the DRC in Gisenyi Prefecture. The camp hosted approximately 17,000 refugees at the time of the attack. During this attack an estimated 325 people were killed and 267 persons were injured. Most injuries were caused by machetes or by fire arms.

Just after the Mudende massacres, a senior United States Government official accompanied by the Minister of Health, visited the site of the attack and Gisenyi Hospital where the injured were treated. It was this visit which initiated the project to establish an emergency response unit, a need experienced since 1995. Further discussions between the Ministry of Health and USAID/Rwanda in January 1998 led to an agreement on the implementation of the project to form and operationalise an emergency response unit.

OFDA responded to the request for establishment of an emergency response unit by contracting with CDM to identify and recruit a locally available international consultant to work with the Ministry of Health. The consultant began work in May 1998 with the development of the overall project's plan of action. Actual implementation of the project began in 1998.

The goal of the project was to "provide assistance to the Ministry of Health in conceptualising a viable Emergency Response Unit (now called Disaster Management Unit), that could respond to a variety of emergency situations in a timely and efficient manner".

Objectives of the project were to (1) prepare a detailed Plan of Action and time frame for the development of the Plan for the Emergency Response Unit (ERU), (2) identify the capacities of MOH, other GOR ministries, national NGOs and national associations, international NGOs, ICRC - IFRCRCS, bilateral and multilateral agencies to respond to emergencies / crises in Rwanda and to define the different types of disasters/emergencies, either natural or conflict-related, which could affect the health status of Rwandan populations, (3) define the priorities for disaster management planning in Rwanda, (4) determine the capacities and resources required to respond effectively to disasters defined as priority for disaster management planning in Rwanda, (5) determine the minimum capacity of the Emergency Response Unit (ERU) of the Ministry of Health and to prepare the strategic plan to render the ERU operational, (6) develop hospital disaster preparedness plans for hospitals in key regions, (7) determine and plan the minimum resources requirements to be prepared and/or pre-positioned, (8) finalise the plan of the ERU and to prepare the final project report.

A process-oriented and participatory approach was used during project implementation. Primary project participants included Ministry of Health departments; several ministries considered key in disaster management; key partner organisations at local, prefectural and central levels; UNDP and IFRC. Suggested preparedness models and work documents were introduced and discussed during four workshops which were implemented during the project in Kigali and Gisenyi. Three priority disasters were selected for preparedness and response planning, including armed conflict/civil war, a cholera outbreak and major accidents.

During its implementation the project developed:

- The Rwanda Disaster Profile (Annexe 1)
- The draft proposal for the establishment of Government Disaster Management structures (Annexe 2)
- The plan of action for the development of the hospital disaster preparedness plan - Gisenyi and Ruhengeri (Annexe 3)

- Three outlines for disaster preparedness plans (armed conflict/civil war, a cholera outbreak and major accidents) and short term measures recommended by workshop participants (Annexe 4)
- The Strategic Plan for the establishment of the Disaster Management Unit in the Ministry of Health.

The proposed *disaster management structures* should allow for a more cohesive, co-ordinated and collaborative approach to disaster management in the future. The decision to make the Disaster Management Unit directly responsible to the Secretary General is an important step: it recognises the importance of the tasks of the Disaster Management Unit and the potential need to override activities of all Directorates when a disaster occurs and affects a significant part of the population. The suggestion to request the Secretary General to co-ordinate interventions and relief assistance in case such is required until the Disaster Management Unit is formally established is also very sensible and rational. It is the Secretary General who oversees the different Directorates and who is also in direct contact with the Regional Medical Officers, who are responsible for the implementation and co-ordination of all health and disaster relief interventions in their respective regions.

The *outlines for disaster preparedness plans and the plan of action for the development of a hospital disaster preparedness plan Gisenyi and Ruhengeri* form a firm basis upon which the Disaster Management Unit can build. They provide a roadmap for the implementation of next steps in the process of the development of final and operational plans and as models for the development of other preparedness plans.

The *strategic plan for the establishment of the Disaster Management Unit* which was appraised and discussed by senior Ministry of Health officials is considered sound and will form a solid foundation for development of capacity in disaster management at the Ministry of Health. Once the Minister of Health has formalised the establishment of the Disaster Management Unit, its permanent staff will have access to a clear document that will facilitate priority setting and planning of activities to be undertaken by the Unit.

The following minimum recommendations should be put into practice in the near future to facilitate the implementation of the Emergency Response Unit/Disaster Management Unit:

- It is recommended that the partners in the project, i.e. the Ministry of Health, USAID/Rwanda and OFDA/Washington, seek ways to maintain the momentum in disaster management planning by engaging in discussions with other bilateral and multilateral donors. Wherever possible they should solicit the support of bilateral and multilateral donors to assist in the continuation of the development of disaster management capacity in key ministries.

- Many of the training and resource gaps identified during the disaster preparedness planning process were found to be similar for the three prioritised disasters. The Disaster Management Unit should make it one of its priorities to implement the short-term measures which were proposed and suggested during workshop four (4).

- Once the Strategic Plan has been officially presented to the Minister of Health, steps will need to be taken to ensure that the Disaster Management Unit will be formalised as an official Ministry of Health department. It is recommended that the Directorate of Epidemiology and Public Hygiene, as the Directorate responsible for this project, follows up with the Minister of Health as to further requirements to finalise this process. To accomplish this, the Cabinet of the Government of Rwanda must endorse the establishment of a new department in the Ministry of Health. Following this at least the Ministry of Public Service and Labour and the Ministry of Finance and Economic Planning must be informed to allow the recruitment of permanent staff and guarantee an adequate budget for the Unit.

- It is imperative that Disaster Management structures are established at central, prefectural and communal level. The Minister of Health is requested to take the lead in Cabinet to discuss the procedures and mechanisms to be put in place to make this happen.

- It is important that the Ministry of Health follows up on the development of the hospital disaster preparedness plan Ruhengeri and Gisenyi, by monitoring the implementation of activities included in the plan of action. The appointment of a (temporary) head of the Disaster Management Unit could play an important role in the follow up of the implementation of the plan of action. Partner organisations working in the two prefectures should be encouraged to assist in the implementation of the plan of action and the completion of the hospital disaster preparedness plan.

Finally, this Executive Summary is not intended to be read as a stand-alone document. It should be read in conjunction with the Strategic Plan for the establishment of the Disaster Management Unit in the Ministry of Health. The Strategic Plan includes a description of the (1) roles and responsibilities of the Disaster Management Unit, (2) proposed management structure and staffing requirements of the Disaster Management Unit, (3) job profiles, (4) material and financial resource requirements, (5) pre-positioned emergency supplies, (6) roles of partnering agencies and other affiliated donor organisations in working with the Disaster Management Unit.

MAP

1. Introduction

The Ministry of Health has had to deal with many emergency situations since 1994, the year the Government of National Unity was established. In the aftermath of the war and genocide, the priority of the Ministry of Health was the re-establishment of the health care delivery system. However, the Ministry of Health had to organise emergency interventions on numerous occasions. Some examples include:

- measles outbreaks due to the breakdown of health services and consequently the decrease in vaccination coverage;
- meningitis outbreaks (seasonal and mainly in the Northeast);
- shigella dysentery outbreak because of the lack of clean drinking water;
- massive return of Rwandan refugees from neighbouring countries;
- cholera outbreaks in the prefectures bordering Lake Kivu;
- typhus outbreaks throughout the country, but mainly confined to over-populated institutions such as prisons and communal cachots;
- global malnutrition rates exceeding 10% in drought-prone prefectures;
- massive population movements and closure of health facilities in the Northwest because of insurgencies.

The Ministry of Health has always responded to medical emergencies or crisis situations which affected the provision of health care both directly, because of closure of health facilities and indirectly, e.g. higher risk of outbreaks of epidemic and communicable diseases because of overcrowding and insufficient safe water supply and limited access to health services. However, the responses have not always been timely because of lack of funds, lack of supplies and insufficient human resources to be re-deployed in the affected areas. It is not known how many lives could have been saved if the response had been more efficient and rapid. The Ministry of Health, however, has recognised the need to strengthen and improve its preparedness and response capacity to manage consequences of disasters.

Some measures the Ministry of Health has taken to improve its preparedness and response capacity in recent years are listed below:

- The Ministry developed a manual which incorporates protocols concerning the detection, confirmation, case management and public awareness raising campaigns for all epidemic diseases prevalent in Rwanda. However, the manual has not yet been disseminated to all health staff. Moreover, the contents of the manual have not been incorporated in the curricula for nurse training. As a result, all new nurses will still need to be introduced to and trained in the use of the protocols.
- In collaboration with the Swiss Co-operation, the Department of Epidemiology and the Laboratory of the Central Hospital of Kigali (one of the two national referral hospitals) have established a mobile laboratory unit. This unit has the means to carry out field investigations in case suspect cases of epidemic diseases are detected. The unit has improved the detection and confirmation of epidemic diseases. However, the project supporting the unit is nearing its end. If the Ministry of Health does not have the means to take over the running costs of the unit, the unit will most likely stop functioning.
- The Ministry of Health has an emergency budget, which is mainly managed by the Epidemiology Department. The annual emergency budget is limited and only covers expenses to control disease outbreaks. Consequences of disasters which influence the health status of the affected populations negatively in general terms are not covered by this budget.

The above measures have improved the responses to certain consequences of disasters, albeit mainly related to control of epidemic diseases.

The limited scope of mechanisms of the Ministry of Health to be prepared for and respond to a broader range of disasters has been the reason the Ministry requested assistance in the establishment of the Disaster Management Unit. To underline the importance the Ministry of

Health attached to the project, senior Ministry of Health officials temporarily made available two staff members to work with the consultant during the implementation of project activities.
The plan of action developed in the first phase of the project described the different steps the Ministry of Health felt were necessary to determine the various disaster management aspects to be covered by the unit. The project was initially developed for the duration of four months. This was revised after the project was two months into its implementation. At that time, it was recognised that the establishment of the disaster management unit required a process-oriented and participatory approach and more involvement at the field level. This would, however, not have been possible within the short lifespan of the initial project. To allow for extensive participation in the conceptualisation and planning process, the project duration was extended to eight months. At that time, USAID also asked that the activity focus on only three (3) priority responses. IN collaboration with the Ministry of Health and other involved organisations these were decided to be armed conflict/civil war, a cholera outbreak and major accidents.

2. Goal, objectives and expected outcome of the project

2.1 Goal of the project

The goal of the project was defined as "*providing assistance to the Ministry of Health in conceptualising a viable Emergency Response Unit (now called Disaster Management Unit), that could respond to a variety of emergency situations in a timely and efficient manner*".

2.2 Objectives of the project

The objectives of the project were defined during the first phase of the project, in close collaboration with the Minister of Health in May-June. The following objectives were defined during the development of the plan of action for the implementation of the project:

***Objective 1**: To prepare a detailed Plan of Action and time frame for the development of the Plan for the Emergency Response Unit (ERU).*

***Objective 2:** To identify the capacities of MOH, other GOR ministries, national NGOs and national associations, international NGOs, ICRC - IFRCRCS, bilateral and multilateral agencies to respond to emergencies/crises in Rwanda and to define the different types of disasters/emergencies, either natural or conflict- related, which could affect the health status of Rwandan populations.*

***Objective 3:** To define the priorities for disaster management planning in Rwanda.*

***Objective 4:** To determine the capacities and resources required to respond effectively to disasters defined as priority for disaster management planning in Rwanda*

***Objective 5:** To determine the minimum capacity of the Emergency Response Unit (ERU) of the Ministry of Health and to prepare the strategic plan to render the ERU operational.*

***Objective 6**: To develop hospital disaster preparedness plans for hospitals in key regions.*

***Objective 7:** To determine and plan the minimum resources requirements to be prepared and/or pre-positioned.*

***Objective 8:** To finalise the plan of the ERU and to prepare the final project report.*

2.3 Expected outcome of the project

The expected outcome of the project was determined as "*a detailed plan to establish the Emergency Response Unit/Disaster Management Unit, which should have the capacity to respond appropriately to medical emergencies as well as other possible emergency situations*".

3. Methodology

The project adopted a process oriented and participatory approach: the project invited the participation of all Ministry of Health departments, several ministries considered key in disaster management, key partner organisations and agencies to be involved in the steps undertaken to achieve its objectives.
The process oriented approach aimed to strengthen disaster preparedness planning capacity and to improve the understanding of participants in aspects of disaster management. Most importantly, the process focused on reaching an understanding as to the available Rwandan capacity to manage disasters.

The project developed models and work documents which were introduced and discussed during four workshops which were implemented during the project. Three workshops took place in Kigali, and one took place in Gisenyi. The first workshop focused on the disaster profile for Rwanda, the proposed disaster management structures and the determination of priority disasters for planning. The second workshop focused on the determination of capacities and resources required for the preparedness and response plans for armed conflict/civil war, cholera and major accidents. The third workshop focused on hospital disaster preparedness planning, and the fourth workshop focused on the strategic plan and the completion of the outlines for the three disaster plans.

The events leading up to massive population displacement in the Northwest and which occurred during the implementation of the project were unfortunate. However, the situation in the Northwest offered invaluable lessons to the project and provided a far better understanding of the potential role a Disaster management Unit can play in the future. The strategic plan for the establishment of the Disaster Management Unit, developed by the project, incorporated those lessons wherever possible.

The consultant established relationships with two other organisations involved in disaster management in Rwanda: UNDP and the International Federation of Red Cross and Red Crescent Societies / Rwandan Red Cross.

- The UNDP's Disaster Management Training Programme began its conceptualisation phase in April 1998. The aim of the programme is to develop disaster management in Rwanda, by working in close collaboration with all key ministries, representatives of civil society and UN agencies usually involved in humanitarian interventions when and if such are required.
- The International Federation of Red Cross and Red Crescent Societies's Disaster Preparedness Programme aims to develop disaster management capacity in the Rwandan Red Cross, with a particular focus on development of capacity at communal level such as training of volunteer first aid workers at cellule level (smallest administrative entity in Rwanda, approximately 1,000 inhabitants).

From the beginning of the project the consultant collaborated with the programme officers of the two disaster management programmes. This collaboration was firstly established to avoid duplication of efforts. To this end, weekly meetings were organised to examine ways to introduce aspects of disaster management in Rwanda in general, and to seek advice in and consult on the development of documentation prepared by the project. In particular the support and assistance of the International Federation Delegate provided useful insights. Unfortunately, the UNDP DMTP programme was suspended with the departure of the Programme Officer in October 1998.

4. Actual accomplishments of the project

All objectives of the project were achieved, with the exception of the development of a hospital disaster preparedness plan for Gisenyi and Ruhengeri prefectures. Instead of a hospital disaster preparedness plan, a plan of action to develop the hospital disaster preparedness plan was achieved. This plan of action outlines the activities to be implemented to develop the hospital disaster preparedness plan and which resulted from the planning workshop, will facilitate the achievement of this objective in the near future.

In summary the project developed:

- The Rwanda Disaster Profile (Annexe 1)
- The draft proposal for the establishment of Government Disaster Management structures (Annexe 2)
- The plan of action for the development of the hospital disaster preparedness plan - Gisenyi and Ruhengeri (Annexe 3)
- Outlines for disaster preparedness plans for three disasters which have beset Rwanda in recent times, and short and longer term measures recommended by the workshop participants (Annexes 4.1 - 4.4)
- The Strategic Plan for the establishment of the Disaster Management Unit in the Ministry of Health.

4.1 The Rwanda Disaster Profile

This document is the result of the review of documented occurrence of disasters in Rwanda. The review was conducted using written documentation where this was available and oral information when written information had been lost during the events of 1994. Two prefectures were visited: Cyangugu because of the cholera outbreak and Gisenyi because of the insecurity and resulting breakdown of health service delivery. The review considered the occurrence of disasters, frequency of occurrence and impact on the population as well as responses to the occurrence of those disasters. The review resulted in a work document describing different disasters and a draft disaster profile for Rwanda.

During the first workshop, with participation of eight ministries, the work document resulting from the review and the draft disaster profile was discussed. This discussion led to a consensus as to the disaster profile for Rwanda (Annexe 1). Furthermore, the workshop defined the priority disasters: disasters for which preparedness plans have to be developed with priority because of high probability of occurrence and possible high impact in case of occurrence. The defined priorities were “armed conflict / civil war”, “a cholera outbreak” and “major accidents”.

4.2 Draft proposal for the establishment of Government Disaster Management structures

At the request of the Ministry of Health, the project prepared a draft document outlining the Government disaster management structures to be established. This request was made to facilitate the discussion and which would allow a better understanding of the role that ministerial disaster management units can play in disasters. Moreover, this document should lead to a better understanding of the need to establish disaster management structures at various administrative levels (central, prefectural and communal). The aim of the proposed disaster management structures is to ensure that recognised administrative structures retain their responsibilities for the implementation of activities, whether those are related to development or to disaster management.

The draft proposal was discussed during the first workshop, with a particular focus on the diagram of structures at different levels (see annexe 2). The description of the roles of each of those structures was not discussed in detail: the workshop decided that this should be the responsibility of the ministry who will be in charge of the process of establishing the Government disaster management structures, as this requires senior ministry officials to be involved.

4.3 Plan of action for the development of the hospital disaster preparedness plan - Gisenyi and Ruhengeri

This project activity was added when the project duration was extended from four to eight months. The aim of this activity was to prepare a hospital disaster preparedness plan for two prefectures. The choice for Gisenyi and Ruhengeri was decided upon, because of the

prevailing security situation in these two prefectures, which could have required hospitals to treat mass casualties as had happened during 1997 on a number of occasions.
The workshop organised by the project to achieve this objective was organised in Gisenyi town. The workshop set out to develop the actual hospital disaster preparedness plan for the two prefectures. However, for several reasons the process and group were not able to develop full hospital disaster preparedness plans. These reasons included the fact that:

- the planning capacity of most participants was over-estimated;
- the disaster management concept was new for most of the participants and created confusion. In particular the difference between the management of a medical emergency requiring immediate attention and the management of mass casualties, which require a far more organised approach, often confused the participants;
- problems in the organisation and management of health personnel and services in hospitals are underrated;
- the role of nurses in the management of emergencies is underrated;
- group discussions often focused on what would be the ideal situation instead of on using existing resources in the region (e.g. existing communication systems, available surgical teams and other personnel, laboratory services).

Given these constraints, the workshop process instead led to the development of a plan of action to complete the hospital disaster preparedness plan. With the assistance of the Disaster Management Unit, the health authorities and partner organisations, local and regional participants should be able to complete a well-thought out hospital disaster preparedness plans in the near future. The plan of action is included in Annexe 3 and gives a timeframe in which the hospital disaster preparedness plans should be completed.

4.4 Outlines for disaster preparedness plans for three disasters

During the first workshop organised by the project, priorities disasters were defined for which preparedness and response plans needed to be developed. The defined priorities were “armed conflict/civil war”, “a cholera outbreak” and “major accidents”. This decision was made on the basis of probability of occurrence and the possible impact in case of occurrence. The decision for the first two disasters was based on the fact that Rwanda actually had to cope with the consequences of armed conflict and cholera at that moment. The decision to include ‘major accidents’ was made on the perceived threat and the lack of any mechanism to cope with the consequences of major accidents, in particular if a major accident would occur in an urban area. The lack of an operational fire department, insufficient follow up as to the application of norms and standards in the construction of new housing and installation of electrical wiring, a significant increase of flights arriving at and departing from Kigali airport and increased pirating of electrical installations in densely populated suburbs were amongst the most important reasons why the first workshop defined major accidents as a potential threat.

Prior to the workshops, the project developed the format for disaster preparedness plans, and prepared draft documentation which already described the most obvious activities to be undertaken and the capacity and resources required for the implementation of those activities. During two workshops the outlines for disaster preparedness plans for three disasters were finalised.

- The first of these two preparedness planning workshops determined the activities to be undertaken to be prepared for and respond to the three disasters, and the capacities and resources required for the activities. Participants for this part of the planning workshop represented eight different ministries, UN agencies and NGOs. The activities covered all sectors, not only health.
- The second preparedness planning workshop had participants working in the health sector and only considered activities for which the Ministry of Health is primarily responsible. The workshop determined whether capacities and resources required are indeed available. The focus of this process was on the identification of important gaps as to the availability of capacities and resources. The workshop did not attempt to quantify required and available

capacities and resources, because it is impossible to predict the impact of a disaster beforehand. The outlines do, however, provide a clear indication as to the most important lacunas in preparedness and potential response capacity. The Disaster Management Unit should, once it is established, be able to develop a clear plan of action to respond to the identified lacunas: the workshops identified the main constraints and proposed solutions, divided into short and longer term measures. Interestingly, most constraints were similar for the three prioritised disasters (see Annexes 4.1 - 4.4 for the common constraints and proposed measures, and the developed outlines for disaster preparedness plans).

4.5 The Strategic Plan for the establishment of the Disaster Management Unit

The strategic plan for the establishment of the Disaster Management Unit was developed taking into account the many lessons learned during the Northwest crisis. During this crisis an estimated 600,000 inhabitants were displaced because of insecurity. The insecurity also resulted in the closure of many of the health facilities, loss of health personnel, loss of health facility equipment, loss of harvests and the impossibility to plant during later agricultural seasons with a number of indirect consequences: high malnutrition rates, outbreaks of vaccination preventable diseases (measles in particular), and diseases linked to overcrowding, inadequate water supply and sanitation.

During this crisis the project paid close attention to the disaster response, both from the Ministry of Health and from partner organisations. In particular, the following issues were followed up closely and discussed regularly with the relevant departments in the Ministry of Health: (1) the capacity to develop short term intervention plans, (2) availability of capacity / human resources for collection of baseline data and provision of health services, (3) availability of essential supplies, availability of monitoring mechanisms (epidemiological surveillance, supervision, nutritional surveillance, stock management system, etc.), and (4) procedures to release the required resources and co-ordination of interventions and partners. This Northwest crisis experience, however unfortunate, has proven to be extremely useful in the development of the strategic plan. Senior Ministry of Health officials discussed the draft and adapted the plan where necessary, during the last workshop organised by the project.

5. Discussion and recommendations

5.1 Discussion

5.1.1 Procedural aspects of the project

The decision by OFDA to finance the project coincided with the start of security problems in the Northwest. Although at that time no one could have envisaged the size of the problems that would occur, the timing of the project could not have been better, however unfortunate the events.

The initial duration of the project (four months), was far too short given the ambitious project design and activities to be implemented. The fact that disaster management is a new concept in Rwanda was not fully recognised or anticipated. In addition, the initial project design did not fully take into account the limited planning capacity of health personnel. The approach adopted for the implementation of the project, process-oriented and participatory, therefore required a considerable extension. This was granted with the agreement of OFDA and the USAID mission in Rwanda.

The extension has made it possible for the project to achieve its objectives and use an appropriate approach. The project has had the opportunity to engage many key players and has been able to create an interest in disaster management amongst those who worked closely with the consultant and/or participated in the workshops. However, the project has also had to decide to focus on the health sector only after the initial phase. Because of this and the suspension of the UNDP Disaster Management Training Programme in October 1998, momentum gained by the project might have been lost: in particular staff from other ministries expressed disappointment that they would no longer be involved in the process. As a result, the interest of other ministries was not being followed up on.

The use of a local consultant was beneficial to the project in that it allowed maximum availability of the consultant to individuals and organisations involved in the Disaster Management Unit planning process. However, in the future, it would be more effective to produce less documentation and have the consultant spend even more time directly working with participants to build capacity.

5.1.2 Participation

In the course of the project the technical and administrative departments of the Ministry of Health, a number of ministries who play a key role in disaster management, UN and bilateral agencies as well as humanitarian agencies and NGOs participated in the project's activities. In many cases continuity in participation was achieved, due to the interest of the ministries and agencies as well as of the individual participants in the disaster management process.

About halfway into the project, the decision was made to focus on the health sector only. This because two other partner agencies were involved in disaster management programmes targeting all sectors (UNDP - Disaster Management Training Programme and Rwandan Red Cross assisted by the International Federation of the Red Cross - Disaster Preparedness Programme). This decision was not appreciated by participants who were to be left out from that stage. The sense of disappointment amongst participants is important to note, in particular because of the suspension of the UNDP Disaster Management Training Programme, which should have provided the necessary assistance in the establishment of national disaster management structures and could provide support to other key ministries in setting up ministerial Disaster Management Units. (The Disaster Preparedness Programme targets the Red Cross movement in Rwanda and works at grassroots level.)

In the later phases of the project Ministry of Health personnel from district, regional and central level were invited to participate in the activities. They provided many insights and contributions based on the actual situation in the health districts and district hospitals. Those contributions were very important as these guaranteed that the reality in the field remained a focus of attention. Especially the views of nurses employed in district hospitals and district staff who supervise health centre personnel added much value. For instance, they raised issues concerning personnel in general, personnel administration and organisation, staffing levels of health centres, and the running of health facilities. Many of the proposed short term measures mentioned in annexe 4.1, such as the organisation of a rotation system for personnel to ensure that skills to deal with medical emergencies are kept up to date, budgeting for the rental instead of the purchase of vehicles and the exploitation of existing communication systems, were the result of their participation.

For most of the workshops relevant UN and bilateral agencies, humanitarian and non-governmental organisations were invited to participate. In many cases agencies indicated that they were unable to attend because of other duties (mainly relief interventions in the Northwest). Although it is understandable that certain activities take precedent, it is unfortunate to note that an activity aimed at developing capacity in disaster management at government level is not given higher priority. Ultimately, capacity development should be the goal of all international agencies working in Rwanda.

Participation of people working at grassroots level has been limited during the implementation of the project. It is recognised that development of capacity in disaster management at grassroots level is the ultimate goal of all projects and programmes working towards improving disaster preparedness and disaster response. However, to arrive at this, institutional capacity in disaster management has to be available. Given the fact that disaster management is a new concept for and has only recently been introduced in Rwanda, capacity development at institutional level has to be given priority in the near future.

5.1.3 Methodology of the project

The project adopted a process-oriented and participatory approach to achieve its objectives. This has proven to be fruitful and was probably the only way the project could have achieved its goal at this stage. As stated above, disaster management is still a new concept for Rwanda and was only recently introduced. The participatory approach has allowed a number of key players to develop a more thorough understanding of the concept of disaster management and has, in the process, raised interest in the subject. This interest and engagement in disaster management offer many opportunities for the future, if the momentum that was gained, can be maintained.

The planning process the project presented was an eye-opener for many of the participants. The attempts to focus on the availability of local capacity and resources first and foremost have been successful, although it was an unexpected approach for many: all too often local capacity is not taken into account when preparing for emergency responses.

5.1.4 Final outcome of the project and recommendations

The use of the categories "natural", "man-made" and "natural and/or man-made" disasters in the *disaster profile for Rwanda* is considered appropriate for Rwanda. The disaster profile as determined by the workshop corresponds with disaster profiles in countries where the industrial capacity is low. This document can be used as a reference in the future to help planners stay focused on priority disasters.

The proposed *disaster management structures* should allow for a more cohesive, co-ordinated and collaborative approach to disaster management in the future. The project recognises the need to establish structures (permanent if possible) and to develop capacity at communal and prefectural level. A forum to discuss disaster management in a decentralised system might have to be established, preferably by the Ministry of Internal Affairs which is the lead ministry in the implementation of the decentralisation policy.

The *outlines for disaster preparedness plans and the plan of action for the development of a hospital disaster preparedness plan Gisenyi and Ruhengeri* form a firm basis upon which the Disaster Management Unit can build. They can be used to identify next steps in the process of the development of final and operational plans and as models for the development of preparedness plans for other disasters.

The *strategic plan for the establishment of the Disaster Management Unit* which was appraised and discussed by a limited group of senior Ministry of Health officials is considered sound and will form a solid foundation for the development of capacity in disaster management in the Ministry of Health. Once the Minister of Health will have formalised the establishment of the Disaster Management Unit, its permanent staff has access to a clear document that will facilitate priority setting and planning of activities to be undertaken by the Unit.

The decision to make the Disaster Management Unit directly responsible to the Secretary General is an important step: it recognises the importance of the tasks of the Disaster Management Unit and the potential need to override activities of all Directorates when a disaster occurs and affects a significant part of the population. Such a decision can only be taken by the Minister of Health and the Secretary General.

This proposed line management structure should be very effective, because it puts the Disaster Management Unit at the same level as the Regional Medical Offices. It is exactly those offices which will be best informed about possible threats to disaster and will directly experience the consequences of disaster. Moreover, the Regional Medical Offices are responsible for mobilisation of necessary capacity and resources if they have difficulty managing the aftermath of a disaster with the available capacity and resources. Emphasis should be placed on making sure this is implemented.

The suggestion that the Secretary General to co-ordinate interventions and relief until the formal establishment of the Disaster Management Unit takes place is very sensible and rational. It is the Secretary General who oversees the different Directorates and who is also in direct contact with the Regional Medical Officers, who are responsible for the implementation and co-ordination of all health interventions in their respective regions. These interventions include relief interventions in case a disaster occurs. The Secretary General should be encouraged to take this role and the Ministry of Health should endorse this recommendation.

5.2 General recommendations and next steps

It is recommended that the partners in the project, i.e. the Ministry of Health, USAID Rwanda and OFDA Washington, seek ways to maintain the momentum in disaster management planning by engaging in discussions with other bilateral and multilateral donors. Wherever possible they should solicit the support of bilateral and multilateral donors to assist in the continuation of the development of disaster management capacity in key ministries.

Many of the training and resource gaps identified during the disaster preparedness planning process were found to be similar for the three prioritised disasters. The Disaster Management Unit should make it one of its priorities to implement the short-term measures which were proposed and suggested during workshop four.

Once the Strategic Plan has been officially presented to the Minister of Health, steps will need to be taken to ensure that the Disaster Management Unit will be formalised as an official Ministry of Health department. It is recommended that the Directorate of Epidemiology and Public Hygiene, as the Directorate responsible for this project, follows up with the Minister of Health as to further requirements to finalise this process. To accomplish this, the Cabinet of the Government of Rwanda must endorse the establishment of a new department in the Ministry of Health. Following this at least the Ministry of Public Service and Labour and the Ministry of Finance and Economic Planning must be informed to allow the recruitment of permanent staff and guarantee an adequate budget for the Unit.

It is imperative that Disaster Management structures are established at central, prefectural and communal level. The Minister of Health is requested to take the lead in Cabinet to discuss the procedures and mechanisms to be put in place to make this happen.

It is important that the Ministry of Health follows up on the development of the hospital disaster preparedness plan Ruhengeri and Gisenyi, by monitoring the implementation of activities included in the plan of action. The appointment of a (temporary) head of the Disaster Management Unit could play an important role in the follow up of the implementation of the plan of action. Partner organisations working in the two prefectures should be encouraged to assist in the implementation of the plan of action and the completion of the hospital disaster preparedness plans.

While awaiting the official establishment of the Disaster Management Unit the Ministry of Health should recruit the proposed permanent staff (with a temporary appointment), provide office space and the necessary budget for the Disaster Management Unit's running costs.

The use of a local consultant was beneficial to the project in that it allowed maximum availability of the consultant to individuals and organisations involved in the Disaster Management Unit planning process. In the future it is recommended that even greater emphasis be placed on the local capacity building process and less on the preparation of documents so that participants have the necessary time to arrive at consensus, results are lasting, and assistance providers are even more available to project participants.

As a follow up to this project, it is recommended that, as soon as possible, a two (2) year project proposal is prepared by the Ministry of Health, outlining the technical assistance, material and financial resources required to make the Disaster Management Unit a viable and efficient Ministry of Health department. The Secretary General should, as soon as possible, designate the Directorate responsible for this activity to maintain the interest in disaster management of the many workshop participants.

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Annexe 1 Disaster profile for Rwanda

General:
The types of 'disasters' as listed below are in effect ***hazards*** which could lead to disasters and could cause emergencies which require urgent responses. For the ease of the reader of this document the terminology used is Natural Disasters, Man-made disasters and Mixed natural or man-made disasters, where it should read hazards which could lead to a disaster.

A ***hazard*** is defined as *"a threatening event, or the probability of occurrence of a potentially damaging phenomenon within a given time period and area"*[(b)].

A ***disaster*** can be defined as *"an event, natural or man-made, sudden or progressive, which impacts with such severity that the affected community has to respond by taking exceptional measures"*[(b)]. Characteristics of a disaster:

- Disruption of normal patterns of life;
- Human effects such as loss of life, injury, hardship and adverse effects on health;
- Effects on social structure such as destruction of or damage to government systems, buildings, communications and essential services;
- Community needs such as shelter, food, clothing, medical assistance and social care.

A. Types of disasters
A.1 Natural disasters
Drought Flooding Volcanic eruption Earthquake Locust infestation Hail storm Methane emission
A.2. Man-made disasters
Civil war / armed conflict Genocide Road accident Major accident, including fire Forest/grassland fire Deforestation Erosion
A.3 Disasters of natural and/or man-made origin
Landslide Epidemic
B: Definition of disaster:
B.1 Natural disasters [(a)]
Drought: Period of deficiency of moisture in the soil such that there is inadequate water required for plants, animals and human beings. Flood: Significant rise of water level in a stream, lake, reservoir or a coastal region. Volcanic eruption: Discharge of fragmentary ejecta, lava, and gases from a volcanic vent. Earthquake: A sudden break within the upper layers of the earth, sometimes breaking the surface, resulting in the vibration of the ground, which where strong enough will cause the collapse of buildings and destruction of life and property. Locust infestation [(a)]: A pervasive influx and development of insects or parasites affecting human, animals, crops and materials. Hail: Precipitation of ice particles. Methane emission: Emission of methane, which in contact with air forms an explosive mixture.

B.2 Man-made disasters [a]
Civil war / armed conflict: Violent and disruptive activities (e.g. bombing, armed clashes, mob demonstrations and violence), resulting in a collapse of political authority. Genocide: A planned, deliberate effort to eliminate a population for religious, political, ethnic, racial reasons by violent means (defined in the Convention on the prevention and punishment of the Crime of Genocide, UN General Assembly 1948). Road accident Major accident: Accident usually of violent nature, such as industrial or other explosion, major fire, aircraft crash. Forest/grassland fire [a]: Fire in forest or brush grasslands that cover extensive areas and usually do extensive damage. They may start by natural causes such as volcanic eruptions or lightning, or they may be caused by arsonists or careless smokers, by those burning woods, or by clearing a forest area. Deforestation [a]: the clearing or destruction of a previously forested area. Erosion: Loosing or dissolving and removal of rock or soil.
B.3. Disasters of natural and/or man-made origin
Landslide [a]: In general, all varieties of slope movement, influenced by gravity. More strictly: downslide movement of rock and/or earth masses along one or several slopes Epidemic [a]: 1. An unusual increase in the number of cases of an infectious disease which already exists in the region or the population concerned. 2. The appearance of a significant number of cases of an infectious disease introduced in a region or population that is usually free from the disease

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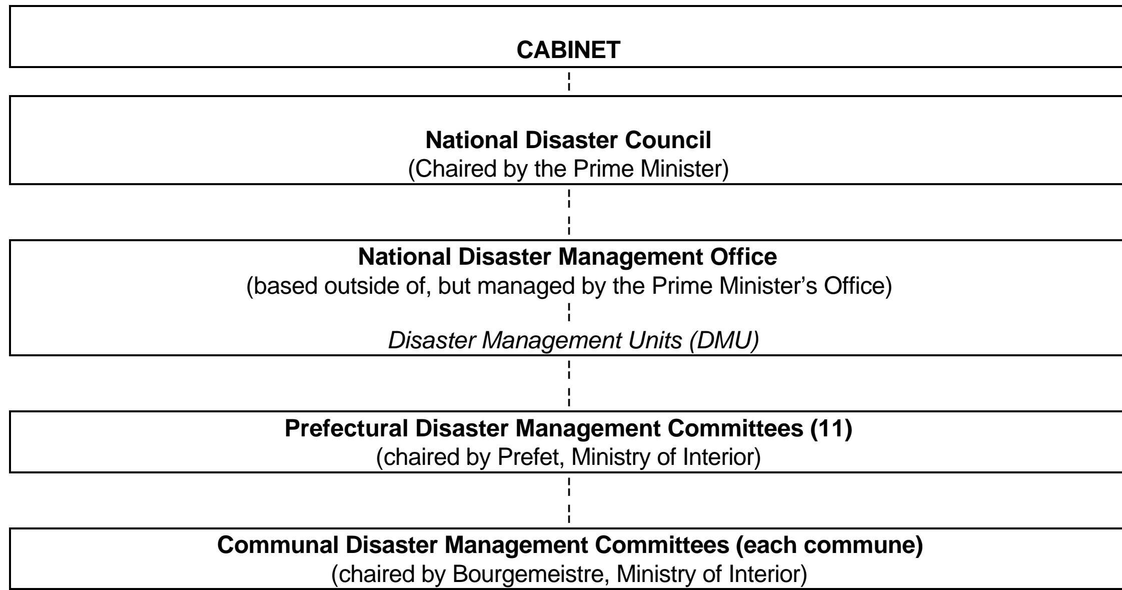
Annexe 2 Diagram of proposed disaster management structures



Annexe 3 Plan of Action

for the

Development of a hospital disaster preparedness plan - Gisenyi and Ruhengeri

CONSTRAINT	PROPOSED SOLUTION	ACTIVITIES	RESPONSIBLE FOR FOLLOW UP	TIME SCHEDULE
1. Lack of communication between site of disaster and health facility	Utilisation of existing communication networks	1.1 Identification of existing networks 1.2 Contacting of relevant authorities/owners of networks as to conditions of use 1.3 Dissemination of written information as to condition of use of networks to all people concerned	1.1 RMO/DMO 1.2 DMO/RMO 1.3 DMO	Feb. - Mar. 99
2. Personnel administration (names, addresses, means of contacting, duty roster) insufficiently organised	Reinforce administration and organisation	2.1 Continuous up-dating of personnel list 2.2 (Re-)Organisation of daily duty roster system 2.3 Establishment of clear personnel management procedures during emergencies / disasters	2.1 DMO / administrator 2.2 DMO / head of health facility 2.3 MOH	2.1 Feb. - Mar. 99 2.2 Mar. 99 2.3 Mar. - Apr. 99
3. Lack of clear system to alert off duty staff in case of disasters	Organise alerting system	3.1 See 2 3.2 Establishment of clear procedures as to re-deployment of personnel for each of vital services in case of disasters	3.2 DMO / RMO	3.2 Mar. - Apr. 99
4. Weak triage system	Reinforce and improve triage system / train staff	4.1 Determination of job description, profile for staff involved in triage 4.2 Organisation of triage teams during disasters 4.3 See 11	4.1 MOH 4.2 DMO / RMO	4.1 Mar. - Apr. 99 4.2 Mar. 99
5. Hospital network in case of disasters not established	Organise hospital network	5.1 Organisation of a consultative meeting between health authorities in the prefectures 5.2 Establishment of a network of surgical teams, support staff, nursing staff, technical staff 5.3 Organisation of simulation exercises to ensure that network is operational 5.4 Organisation of regular reviews of network	5.1 RMO 5.2 RMO / DMO 5.3 RMO / DMO 5.4 DMO / RRC	5.1 Feb. 99 5.2 Feb. - Mar. 99 5.3 Jun. - Jul. 99 5.4 On-going
6. Insufficient blood transfusion capacity in case of mass casualties	Increase blood transfusion capacity	6.1 Identification of blood donors 6.2 Blood grouping of voluntary blood donors	6. RRC blood transfusion services	Start Feb. 99
7. Insufficient sterile theatre clothing and linen	Preposition sterile kits	7.1 Pre-positioning of sterile theatre clothing and linen kits 7.2 Development of management procedures of pre-positioned theatre linen and clothing	7.1 DMO / partners 7.2 RMO / DMO	Feb. - Mar. 99
8. Insufficient or absence of emergency kits (drugs, medical supplies)	Organise emergency kits	8.1 Development of standard emergency kits (drugs, medical supplies) 8.2 Development of management procedures for utilisation of emergency kits / emergency stock	8.1 MOH / DMU 8.2 MOH-DMU / RMO / DMO	Feb. - Mar. 99

CONSTRAINT	PROPOSED SOLUTION	ACTIVITIES	RESPONSIBLE FOR FOLLOW UP	TIME SCHEDULE
9. No or insufficient fuel reserves for back up generator	Preposition 48 hour stock on hospital premises	9.1 Identification of consumption pattern of available generator during 48 hours 9.2 Pre-positioning of adequate fuel supplies / 48 hours 9.3 Development of management procedures for utilisation of emergency fuel stock	9.1 DMO 9.2 DMO / partners 9.3 MOH - DMU / RMO / DMO	Feb. 99
10. * For Kabaya only: - faulty autoclave/X-ray machine/ back up generator	Repair and/or replace faulty equipment	10.1 Identification of problems of faulty equipment 10.2 Organisation of repairs and/or replacement of faulty equipment	10.1 DMO Kabaya 10.2 DMO Kabaya	Feb. 99
11. Personnel insufficiently trained in management of emergencies	Train personnel	11.1 Identification of candidates for training in management of emergencies 11.2 Identification of training needs 11.3 Development of curriculum in management of emergencies 11.4 Development of a formal training schedule 11.5 Organisation of on-the-job training 11.6 Organisation of rotation schedule for all medical, nursing and technical staff to maintain skills in management of emergencies	11.1 DMO / RMO 11.2 DMO 11.3 MOH 11.4 MOH / RMO 11.5 DMO 11.6 DMO	Start Mar. - Apr. 99
12.** Insufficient emergency room capacity	Increase ER capacity	12.1 Reallocation of hospital space for ER **<u>OR</u>** construction of ER 12.2 Development of list of standard equipment for ER 12.3 Purchasing and distribution of ER equipment 12.4 24 hr deployment of sufficient and qualified ER personnel 12.5 Organisation of continuous training for ER personnel	12.1 DMO / MOH - DMU 12.2 MOH - DMU 12.3 MOH / partners 12.4 DMO 12.5 DMO	12.1 Start Jul. 99 12.2 Jul. - Sep. 99 12.3 Start Sep. 99 12.4 Start Jul. 99 12.5 Start Jul. 99
13. Insufficient provision of first aid at site of disaster	Establish a network of first aid workers	13.1 Identification of volunteers 13.2 Training of first aid workers, 1 / 1,000 inhabitants 13.3 Development of standard first aid kit 13.4 Development of protocol as to utilisation of kit 13.5 Purchasing and distribution of kits	13.1 RRC / DMO 13.2 RRC / DMO 13.3 MOH / RRC 13.4 MOH / RRC 13.5 MOH / RRC / partners	Feb. - Dec. 99
14. Insufficient capacity of laboratories to guarantee quality of blood	Provide reagents and rapid serological (HIV, hepatitis, Syphilis) testing supplies	14.1 Review of national blood transfusion policy 14.2 Development of protocol for blood transfusion in emergency situations 14.3 Provision of rapid serological test supplies 14.4 Organisation of training for laboratory staff in use of tests	14.1 MOH - DMU 14.2 MOH - DMU 14.3 MOH / partners 14.4 RRC blood transfusion services	Apr. - Jun. 99
15. Lack of awareness of population re. disasters	Increase awareness of opinion leaders re. the need for solidarity of populations during disasters	15.1 Organisation of a meeting with opinion leaders and Social Welfare Committees	15.1 DMO	Start Mar. 99
16. Communication between hospitals and other health facilities not established	Establish communication system between hospitals	16.1 Inventory of available equipment, not installed 16.2 Installation of available equipment 16.3 Training of radio operators 16.4 Request for health emergency frequency	16.1 DMO/RMO 16.2 Technical services MOH 16.3 Technical services MOH 16.4 MOH	16.1 Apr. 99 16.2 Apr. 99 16.3 Apr. - May 99 16.4 Start Apr. 99

CONSTRAINT	PROPOSED SOLUTION	ACTIVITIES	RESPONSIBLE FOR FOLLOW UP	TIME SCHEDULE
17. Low level of intersectoral collaboration	Formalise prefectural and communal disaster management structures	17.1 Organisation of consultative meetings between relevant ministries 17.2 Development of final document outlining disaster management structures to be established 17.3 Official adoption of final document by the Government of Rwanda 17.4 Establishment of disaster management structures	17. MOH	Start Apr. 99

* This constraint is relevant for Kabaya Hospital only. The activities have already been incorporated in the 1999 Kabaya District Plan of Action. However, because the hospital network should include Kabaya Hospital, it has also been mentioned here.

** The Ministry of Health has included the establishment of Emergency Rooms (ER) in district hospitals in its new 2 year Plan of Action. The activities should start in July 1999 and are supported by the USAID funded 'Quality Assurance Project'. This project will pilot this activity in two - three district hospitals.

Glossary:

DMO District Medical Officer
DMU Disaster Management Unit
ER Emergency Room
MOH Ministry of Health
RMO Regional Medical Officer
RRC Rwandan Red Cross

Annexe 4 Outlines for disaster preparedness plans

Annexe 4.1 Common constraints and proposed measures to solve the identified constraints

- ***Health personnel, capacity in disaster management and in planning and management:***

  Short term measures:
  - Mobilisation of adequately trained personnel from other health regions towards affected areas
  - Organisation of refresher training of health workers in hospitals
  - Development of a rotation system of all health personnel to work in hospitals on regular basis (in particular in emergency rooms)
  - Ensuring of budget for recruitment of temporary staff
  - Strengthening of the Rwandan Red Cross with MOH trainers

  Medium term measures:
  - Training of trainers for refresher courses in triage and referral of seriously injured
  - Training of health personnel in planning and management of disasters
  - Training of administrative and management staff in stock management during disasters (Identification of training needs, development of curriculum, training of trainers, training of personnel)

  Long term measures:
  - Training of new health workers (nurses), first aid workers, ambulance personnel, health inspectors, ambulance personnel, etc.
- ***Ambulance system:***
  - Purchase of adequately equipped ambulances (not buses)
  - Development of standard equipment and drugs lists for ambulances
  - Development of procedures as to the utilisation of ambulances to ensure appropriate use once ambulances are adequately equipped
- ***Communication system:***
  - Exploitation of existing communication systems (Interior, Defence, Rwandan Red Cross, NGOs)
  - Standardisation of radio equipment to be purchased and installed
  - Purchase and install radio equipment in health facilities and ambulances
  - Training of health facility personnel in operating radio equipment
- ***Information system:***
  - Development of a health information system adapted to the data collection needs during emergency situations
  - Revision / adaptation of existing data collection instruments
  - Training of personnel in the use of adapted instruments
  - Ensuring availability of funds for the multiplication of instruments
  - Development of a personnel alerting system

    - Development of data collection instruments to allow vulnerability analysis
    - Development and/or revision of protocols for specific disaster interventions
    - Preparation of map containing information as to water sources, forests, health infrastructures, etc. at communal and prefectural level
    - Development of evaluation/assessment instruments
    - Development of a reporting format for the Communal and Prefectural Disaster Management Committees as well as for the National Disaster Management Office
    - Development of instruments for the monitoring of the evolving situation
    - Establishment/improvement of mechanisms to exchange information with neighbouring countries
- ***Drugs and medical equipment:***
    - Development of standard lists for emergency drug supplies and equipment in disaster situations and pre-positioning of those supplies at different levels of the health system (this should include disinfection materials for the exhumation and re-burial of corpses)
    - Identification of storage depots at central, prefectural and communal level
    - Pre-positioning of drugs and equipment at all levels
    - Development of an emergency stock management system which allows monitoring of the utilisation of emergency stocks
    - Development of a uniform distribution system
    - Identification of stocks of drugs and equipment available at partner agencies
- ***Disaster legislation:***
    - Development of disaster legislation
    - Dissemination of legislative texts relevant to disasters
- ***Procedures to release funds in case of a disaster:***
    - Adaptation of existing procedures to release funds in case of disasters
- ***Strengthening of intersectoral collaboration***

Annexe 4.2 Outline for Disaster Preparedness Plan

ARMED CONFLICT / CIVIL WAR

MINISTRY OF HEALTH - RWANDA

General remarks:

The following document is the result of two workshops, organised by the project “Establishment of a Disaster Management Unit - Ministry of Health” in close collaboration with the Ministry of Health. Many people have been involved in the development of this outline: representatives of technical departments of the Ministry of Health, of eight (8) other ministries, the Rwandan Red Cross, the International Federation of Red Cross and Red Crescent Societies, the International Committee of the Red Cross, WHO, WFP and a number of international NGOs.

The outline for the disaster preparedness plan for armed conflict / civil war only considers those aspects for which the Ministry of Health is primarily responsible and which relate to delivery of health and nutrition services. The Ministry of Health considers disaster preparedness activities to be undertaken by other ministries of equal importance and often pivotal towards achieving its own objectives. However, the Ministry of Health cannot take responsibility for those activities. The Ministry of Health underlines, however, the need for intersectoral collaboration to ensure that populations affected by disaster have access to essential services.

Proposed disaster management structures to be established at communal, prefectural and central level are not mentioned in the outline. While awaiting the formal establishment of those structures, ad hoc committees should be set up, as in the past, and should ensure efficient disaster management and co-ordination of relief interventions.

GLOSSARY:
CDMC = Communal Disaster Management Committee
DMU = Disaster Management Unit
MOH = Ministry of Health
NDMO = National Disaster Management Office
PDMC = Prefectural Disaster Management Committee
RRC = Rwandan Red Cross

COMMUNAL LEVEL

Activities Preparedness Phase	Required capacities	Available capacity	Gap - Response
1.1.a.1 Data collection on health and nutritional status, water and sanitation system; 1.1.a.2 Assistance in the development of hospital disaster preparedness plans; 1.1.a.3 Collection and analysis of data to assess vulnerability of the population; 1.1.a.4 Management of human resources; 1.1.a.5 Identification of facilities and sites for displaced; 1.1.a.6 Training of health workers in triage and referral of injured people	1.1.a.1 Health workers, health inspectors; 1.1.a.2 Health personnel and authorities; 1.1.a.3 Personnel; 1.1.a.4 Health authorities; 1.1.a.5 Health authorities; 1.1.a.6 Hospital staff, trainers	1.1.a.1 Personnel available 1.1.a.2 Personnel available 1.1.a.3 Personnel available 1.1.a.4 Authorities in place 1.1.a.5 See 1.1.a.4 1.1.a.6 Personnel available	1.1.a.1 Possibly need for training in use of data collection instruments; new health inspectors to be trained 1.1.a.2 Training in planning and management required 1.1.a.3 Training required in vulnerability analysis approach and methodology 1.1.a.4 Update personnel list regularly 1.1.a.5 None 1.1.a.6 Curriculum developers and training of trainers required
Activities Initial response / assessment Phase	**Required capacities**	**Available capacity**	**Gap - Response**
1.1.b.1 Continuous collection of data on health and nutritional status; 1.1.b.2 Re-organisation of services according to the hospital disaster preparedness plan; 1.1.b.3 Installation of displaced sites with access to services; 1.1.b.4 Guaranteeing access to essential health and nutrition services; 1.1.b.5 Identification of needs;	1.1.b.1 Personnel; 1.1.b.2 District and hospital authorities; 1.1.b.3 District health authorities; 1.1.b.4 Health personnel, health inspectors; 1.1.b.5 Health authorities;	1.1.b.1 Personnel available 1.1.b.2 Authorities in place 1.1.b.3 Authorities in place 1.1.b.4 Personnel available 1.1.b.5 Personnel available	1.1.b.1 See 1.1.a.1 1.1.b.2 Ensure that relevant skills are up to date: organise rotation system and simulation exercises 1.1.b.3 None 1.1.b.4 None or mobilise from elsewhere 1.1.b.5 None
Activities Co-ordinated response Phase	**Required capacities**	**Available capacity**	**Gap - Response**
1.1.c.1 Guaranteeing access to adequate and appropriate health and nutrition services; 1.1.c.2 Collection of data; 1.1.c.3 Identification of additional needs of affected populations; 1.1.c.4 Monitoring of evolving situation; 1.1.c.5 Management of available resources; 1.1.c.6 Organisation of exhumation of corpses and appropriate re-burial	1.1.c.1 Health personnel; 1.1.c.2 Personnel; 1.1.c.3 Health authorities for CDMC; 1.1.c.4 Health authorities for CDMC; 1.1.c.5 Managers; 1.1.c.6 Health inspectors, health authorities	1.1.c.1 Personnel available 1.1.c.2 Personnel available 1.1.c.3 Authorities in place 1.1.c.4 Authorities in place 1.1.c.5 Personnel available 1.1.c.6 Personnel available	1.1.c.1 Possibly need to mobilise additional staff 1.1.c.2 See 1.1.a.1 1.1.c.3 None 1.1.c.4 None 1.1.c.5 Need for training in emergency stock management system 1.1.c.6 Possibly need to mobilise additional staff
Activities Preparedness Phase	**Required resources**	**Available resources**	**Gap - Response**
1.1.a.1 Data collection on health and nutritional status, water and sanitation system; 1.1.a.2 Assistance in the development of hospital disaster preparedness plans; 1.1.a.3 Collection and analysis of data to assess vulnerability of the population; 1.1.a.4 Management of human resources;	1.1.a.1 Data collection instruments; 1.1.a.2 Emergency procedures, emergency supplies, drugs, equipment, means of communication and transport; 1.1.a.3 Office equipment and supplies, data collection instruments; 1.1.a.4 Office equipment and resources,	1.1.a.1 Available, but need revision 1.1.a.2 None available 1.1.a.3 Instruments not available 1.1.a.4 Available 1.1.a.5 Protocol not available 1.1.a.6 Not available	1.1.a.1 Revision of instruments and funds for multiplication 1.1.a.2 Procedures to be developed, emergency stocks to be pre-positioned 1.1.a.3 Development of instrument 1.1.a.4 Revision of procedures possibly required

1.1.a.5 Identification of facilities and sites for displaced; 1.1.a.6 Training of health workers in triage and referral of injured people	developed procedures and standards; 1.1.a.5 Protocols, means of communication; 1.1.a.6 Curriculum, protocols, procedures and training materials		1.1.a.5 Development of protocol 1.1.a.6 Development of curriculum, organisation of training, training of trainers, identification of trainees, funds for training
Activities Initial response / assessment Phase	**Required resources**	**Available resources**	**Gap - Response**
1.1.b.1 Continuous collection of data on health and nutritional status; 1.1.b.2 Re-organisation of services according to the hospital disaster preparedness plan; 1.1.b.3 Installation of displaced sites with access to services; 1.1.b.4 Guaranteeing access to essential health and nutrition services; 1.1.b.5 Identification of needs;	1.1.b.1 Office supplies, data collection instruments, office equipment; 1.1.b.2 Drugs, medical supplies and equipment; 1.1.b.3 Materials for temporary health facility, drugs, medical supplies; 1.1.b.4 Drugs, medical supplies, supplementary and therapeutic foods; 1.1.b.5 Office equipment and supplies;	1.1.b.1 Available 1.1.b.2 Emergency stocks not available 1.1.b.3 See 1.1.b.2 1.1.b.4 Only normal stocks available, which are insufficient 1.1.b.5 Available	1.1.b.1 Funds for multiplication, revision possibly needed 1.1.b.2 Pre-positioning of emergency stocks, funds for purchase 1.1.b.3 See 1.1.b.2 1.1.b.4 See 1.1.b.2 1.1.b.5 None
Activities Co-ordinated response Phase	**Required resources**	**Available resources**	**Gap - Response**
1.1.c.1 Guaranteeing access to adequate and appropriate health and nutrition services; 1.1.c.2 Collection of data; 1.1.c.3 Identification of additional needs of affected populations; 1.1.c.4 Monitoring of evolving situation; 1.1.c.5 Management of available resources; 1.1.c.6 Organisation of exhumation of corpses and appropriate re-burial	1.1.c.1 Drugs, medical supplies and equipment, supplementary and therapeutic food; 1.1.c.2 Data collection instruments, means of transport, office supplies and equipment; 1.1.c.3 Office equipment and supplies; 1.1.c.4 Means of communications, office equipment and supplies; 1.1.c.5 Office equipment and supplies, stock management system, warehouses; 1.1.c.6 Disinfection materials, protective clothing, burial materials	1.1.c.1 See 1.1.b.2 1.1.c.2 Means of transport possibly insufficient 1.1.c.3 Available 1.1.c.4 Means of communication insufficient 1.1.c.5 Warehouses not available, emergency stocks not pre-positioned 1.1.c.6 Not available	1.1.c.1 See 1.1.b.2 1.1.c.2 Funds for rental, mobilisation from elsewhere 1.1.c.3 None 1.1.c.4 Development of standard communication system 1.1.c.5 Funds for rental, pre-positioning of emergency stocks 1.1.c.6 Pre-positioning as emergency stocks

PREFECTURAL LEVEL

Activities Preparedness Phase	**Required capacities**	**Available capacity**	**Gap - Response**
1.2.a.1 Preparation of Hospital Disaster Preparedness plans; 1.2.a.2 Analysis of data collected on health and nutritional status, water and sanitation 1.2.a.3 Definition of criteria for vulnerability; 1.2.a.4 Vulnerability analysis; 1.2.a.5 Identification of camp sites, if such are needed; 1.2.a.6 Monitoring of evolving situation; 1.2.a.7 Prepositioning of essential stocks and resources; 1.2.a.8 Management of all resources;	1.2.a.1 Regional, District and hospital authorities; 1.2.a.2 Health authorities, personnel; 1.2.a.3 Health authorities, personnel, leaders; 1.2.a.4 Health authorities, personnel, leaders; 1.2.a.5 Health authorities, personnel; 1.2.a.6 Health authorities, personnel; 1.2.a.7 Personnel; 1.2.a.8 Managers;	1.2.a.1 Personnel available 1.2.a.2 Available 1.2.a.3 Available 1.2.a.4 Available 1.2.a.5 Available 1.2.a.6 Available 1.2.a.7 Available 1.2.a.8 Available	1.2.a.1 Mobilise Technical assistance for planning and management 1.2.a.2 Possibly training required 1.2.a.3 Introduction in vulnerability analysis approach and methodology required 1.2.a.4 See 1.2.a.3 1.2.a.5 None 1.2.a.6 None 1.2.a.7 Training in emergency stock management system required 1.2.a.8 See 1.2.a.7

Activities Initial response / assessment phase	Required capacities	Available capacity	Gap - Response
1.2.b.1 Analysis of collected data; 1.2.b.2 Identification of needs; 1.2.b.3 Mobilisation of necessary resources; 1.2.b.4 Management of available resources; 1.2.b.5 Assistance in establishment of displaced sites; 1.2.b.6 Guaranteeing access to essential services; 1.2.b.7 Monitoring of the evolving situation;	1.2.b.1 Personnel; 1.2.b.2 Regional Health authorities for PDMC 1.2.b.3 Regional health authorities for PDMC; 1.2.b.4 Managers; 1.2.b.5 Health personnel, health inspectors; 1.2.b.6 Health workers, health inspectors, nutritionists; 1.2.b.7 Health authorities for PDMC;	1.2.b.1 Available 1.2.b.2 In place 1.2.b.3 In place 1.2.b.4 Available 1.2.b.5 Available 1.2.b.6 Available, but possibly insufficient 1.2.b.7 In place	1.2.b.1 None 1.2.b.2 None 1.2.b.3 None 1.2.b.4 None 1.2.b.5 Possibly need to mobilise additional personnel 1.2.b.6 See 1.2.b.5 1.2.b.7 None
Activities Co-ordinated response phase	**Required capacities**	**Available capacity**	**Gap - Response**
1.2.c.1 Guaranteeing access to essential services; 1.2.c.2 Analysis of collected data; 1.2.c.3 Identification of needs; 1.2.c.4 Mobilisation of additional resources; 1.2.c.5 Management of available resources;	1.2.c.1 Health staff, health inspectors; 1.2.c.2 Personnel; 1.2.c.3 Health authorities for PDMC; 1.2.c.4 Health authorities for PDMC; 1.2.c.5 Managers;	1.2.c.1 Available, but possibly insufficient 1.2.c.2 Available 1.2.c.3 In place 1.2.c.4 In place 1.2.c.5 Available	1.2.c.1 Possibly need to mobilise additional personnel 1.2.c.2 None 1.2.c.3 None 1.2.c.4 None 1.2.c.5 Training in emergency stock management system required
Activities Preparedness Phase	**Required resources**	**Available resources**	**Gap - Response**
1.2.a.1 Preparation of Hospital Disaster Preparedness plans; 1.2.a.2 Analysis of data collected on health and nutritional status, water and sanitation 1.2.a.3 Definition of criteria for vulnerability; 1.2.a.4 Vulnerability analysis; 1.2.a.5 Identification of camp sites, if such are needed; 1.2.a.6 Monitoring of evolving situation; 1.2.a.7 Prepositioning of essential stocks and resources; 1.2.a.8 Management of all resources;	1.2.a.1 Drugs, medical supplies and equipment; 1.2.a.2 Data collection instruments, office equipment and supplies; 1.2.a.3 Office equipment and supplies; 1.2.a.4 Office equipment and supplies; 1.2.a.5 Means of transport; 1.2.a.6 Means of transport, communications; 1.2.a.7 Drugs, medical supplies and equipment, warehouses; 1.2.a.8 Emergency stock management system, office equipment and supplies;	1.2.a.1 Emergency stocks not available 1.2.a.2 Data collection instruments available, but might need revision 1.2.a.3 Available, but manual to be developed 1.2.a.4 Available 1.2.a.5 Available, but possibly insufficient 1.2.a.6 Available 1.2.a.7 Stocks and warehouses not available 1.2.a.8 Emergency stock management system not available	1.2.a.1 Pre-positioning of emergency stocks 1.2.a.2 Revision of instruments, funds for multiplication 1.2.a.3 Development of manual required 1.2.a.4 See 1.2.a.4 1.2.a.5 Funds for rental 1.2.a.6 None 1.2.a.7 Pre-positioning of stocks and development of emergency stock management system 1.2.a.8 Development of emergency stock management system
Activities Initial response / assessment phase	**Required resources**	**Available resources**	**Gap - Response**
1.2.b.1 Analysis of collected data; 1.2.b.2 Identification of needs; 1.2.b.3 Mobilisation of necessary resources; 1.2.b.4 Management of available resources; 1.2.b.5 Assistance in establishment of displaced sites; 1.2.b.6 Guaranteeing access to essential services; 1.2.b.7 Monitoring of the evolving situation;	1.2.b.1 Data collection instruments, office equipment and supplies; 1.2.b.2 Office equipment and supplies, means of transport and communication; 1.2.b.3 Means of communication; 1.2.b.4 Emergency stock management system, office equipment and supplies; 1.2.b.5 Means of transport; 1.2.b.6 Drugs, medical supplies and equipment, supplementary/therapeutic food; 1.2.b.7 Means of transport and	1.2.b.1 Available, but might need revision 1.2.b.2 Means of transport and communication possibly insufficient 1.2.b.3 See 1.2.b.2 1.2.b.4 See 1.2.a.8 1.2.b.5 See 1.2.b.2 1.2.b.6 See 1.2.a.7 1.2.b.7 See 1.2.b.2	1.2.b.1 Revision of data collection instrument 1.2.b.2 Equipment as to MOH standards 1.2.b.3 See 1.2.b.2 1.2.b.4 See 1.2.a.8 1.2.b.5 See 1.2.b.2 1.2.b.6 See 1.2.a.7 1.2.b.7 See 1.2.b.2

	communication, office equipment and supplies;		
Activities Co-ordinated response phase	**Required resources**	**Available resources**	**Gap - Response**
1.2.c.1 Guaranteeing access to essential services; 1.2.c.2 Analysis of collected data; 1.2.c.3 Identification of needs; 1.2.c.4 Mobilisation of additional resources; 1.2.c.5 Management of available resources;	1.2.c.1 Drugs, medical supplies and equipment, supplementary and therapeutic foods; 1.2.c.2 Data collection instruments, office equipment and supplies; 1.2.c.3 Office equipment and supplies, means of transport; 1.2.c.4 Office equipment and supplies, means of communications; 1.2.c.5 Stock management system, office equipment and supplies;	1.2.c.1 See 1.2.a.7 1.2.c.2 Available 1.2.c.3 See 1.2.b.2 1.2.c.4 Available 1.2.c.5 Available, except stock management system	1.2.c.1 See 1.2.a.7 1.2.c.2 None 1.2.c.3 See 1.2.b.2 1.2.c.4 None 1.2.c.5 See 1.2.a.8

CENTRAL LEVEL

Activities Preparedness Phase	**Required capacities**	**Available capacity**	**Gap - Response**
1.3.a.1 Development of contingency plans; 1.3.a.2 Development of management system for human and material resources; 1.3.a.3 Development of emergency procedures for external humanitarian assistance; 1.3.a.4 Analysis of early warning data; 1.3.a.5 Conducting a vulnerability analysis;	1.3.a.1 Staff DMU for NDMO; 1.3.a.2 Personnel DAF; 1.3.a.3 Personnel NGO Co-ordination Unit; 1.3.a.4 Technical personnel; 1.3.a.5 DMU staff for NDMO;	1.3.a.1 Available 1.3.a.2 Available 1.3.a.3 Available 1.3.a.4 Available 1.3.a.5 Available	1.3.a.1 Strengthen/improve planning and management capacity 1.3.a.2 None 1.3.a.3 None 1.3.a.4 None 1.3.a.5 Introduction to approach and methodology
Activities Initial response / assessment Phase	**Required capacities**	**Available capacity**	**Gap - Response**
1.3.b.1 Analysis of data; 1.3.b.2 Analysis of identified needs; 1.3.b.3 Mobilisation of resources; 1.3.b.4 Utilisation of procedures for accelerated project and personnel approval, customs clearance, etc. to ensure required external assistance; 1.3.b.5 Management of resources; 1.3.b.6 Monitoring of evolving situation;	1.3.b.1 Technical personnel; 1.3.b.2 Permanent staff NDMO and DMUs; 1.3.b.3 Permanent staff NDMO and DMUs; 1.3.b.4 Personnel Co-ordination Units; 1.3.b.5 Personnel DAF; 1.3.b.6 Permanent staff DMU for NDMO;	1.3.b.1 Available 1.3.b.2 Available 1.3.b.3 Available 1.3.b.4 Available 1.3.b.5 Available 1.3.b.6 Available	1.3.b.1 None 1.3.b.2 None 1.3.b.3 None 1.3.b.4 None 1.3.b.5 Training in stock management system 1.3.b.6 None
Activities Co-ordinated response Phase	**Required capacities**	**Available capacity**	**Gap - Response**
1.3.c.1 Guaranteeing of access to essential services; 1.3.c.2 Analysis of data and identification of needs; 1.3.c.3 Mobilisation of necessary resources; 1.3.c.4 Guaranteeing of efficient management and distribution of available resources; 1.3.c.5 Organisation of regular field visit to monitor the	1.3.c.1 Technical personnel; 1.3.c.2 Technical personnel; 1.3.c.3 Permanent staff NDMO and DMUs; 1.3.c.4 Managers DAF; 1.3.c.5 Personnel DMU	1.3.c.1 Available 1.3.c.2 Available 1.3.c.3 Available 1.3.c.4 Available 1.3.c.5 Available	1.3.c.1 Possibly mobilisation of additional resources, funds 1.3.c.2 None 1.3.c.3 None 1.3.c.4 Training in procedures for management of resources

situation			1.3.c.5 Possibly technical assistance
Activities Preparedness Phase	**Required resources**	**Available resources**	**Gap - Response**
1.3.a.1 Development of contingency plans; 1.3.a.2 Development of management system for human and material resources; 1.3.a.3 Development of emergency procedures for external humanitarian assistance; 1.3.a.4 Analysis of early warning data; 1.3.a.5 Conducting a vulnerability analysis;	1.3.a.1 Office equipment and supplies, reference materials; 1.3.a.2 Office equipment and supplies, emergency stock and resources management system; 1.3.a.3 Office equipment and supplies, means of communications; 1.3.a.4 Means of transport, communications, office equipment and supplies; 1.3.a.5 Office equipment and supplies;	1.3.a.1 Available 1.3.a.2 Available, but possibly needs revision 1.3.a.3 Available 1.3.a.4 Available 1.3.a.5 Available	1.3.a.1 None 1.3.a.2 Revision and training in use of new management system 1.3.a.3 None 1.3.a.4 None 1.3.a.5 None
Activities Initial response / assessment Phase	**Required resources**	**Available resources**	**Gap - Response**
1.3.b.1 Analysis of data; 1.3.b.2 Analysis of identified needs; 1.3.b.3 Mobilisation of resources; 1.3.b.4 Utilisation of procedures for accelerated project and personnel approval, customs clearance, etc. to ensure required external assistance; 1.3.b.5 Management of resources; 1.3.b.6 Monitoring of evolving situation;	1.3.b.1 Office equipment and supplies, means of communication; 1.3.b.2 Office equipment and supplies, means of communication; 1.3.b.3 Office equipment and supplies, means of communication; 1.3.b.4 Office equipment and supplies, means of communication; 1.3.b.5 Stock management systems, warehouses, means of transport; 1.3.b.6 Office equipment and supplies, means of communication;	1.3.b.1 Available 1.3.b.2 Available 1.3.b.3 Available 1.3.b.4 Available 1.3.b.5 No warehouses and emergency stock management system not existing 1.3.b.6 Available	1.3.b.1 None 1.3.b.2 None 1.3.b.3 None 1.3.b.4 None 1.3.b.5 Funds for rental, system to be developed 1.3.b.6 None
Activities Co-ordinated response Phase	**Required resources**	**Available resources**	**Gap - Response**
1.3.c.1 Guaranteeing of access to essential services; 1.3.c.2 Analysis of data and identification of needs; 1.3.c.3 Mobilisation of necessary resources; 1.3.c.4 Guaranteeing of efficient management and distribution of available resources; 1.3.c.5 Organisation of regular field visit to monitor the situation	1.3.c.1 Drugs, medical supplies and equipment, means of transport and communications; 1.3.c.2 Office equipment and supplies, means of communication; 1.3.c.3 Office equipment and supplies, means of communication; 1.3.c.4 Office equipment and supplies, means of communication; 1.3.c.5 Means of transport, assessment instruments	1.3.c.1 Emergency stocks not available, means of transport and communication possibly insufficient 1.3.c.2 Available 1.3.c.3 Available 1.3.c.4 Available 1.3.c.5 Available, but possibly insufficient	1.3.c.1 Pre-positioning, funds for rental and improve fleet management system, equipment according to MOH standards 1.3.c.2 None 1.3.c.3 None 1.3.c.4 None 1.3.c.5 Budget for rental

Annexe 4.3 **Outline for Disaster Preparedness Plan**

MAJOR ACCIDENTS

MINISTRY OF HEALTH - RWANDA

General remarks:

The following document is the result of two workshops, organised by the project “Establishment of a Disaster Management Unit - Ministry of Health” in close collaboration with the Ministry of Health. Many people have been involved in the development of this outline: representatives of technical departments of the Ministry of Health, of eight (8) other ministries, of the Rwandan Red Cross, the International Federation of Red Cross and Red Crescent Societies, the International Committee of the Red Cross, WHO, WFP and a number of international NGOs.

The outline for the disaster preparedness plan for major accidents only considers those aspects for which the Ministry of Health is primarily responsible and which relate to delivery of health and nutrition services. The Ministry of Health considers disaster preparedness activities to be undertaken by other ministries of equal importance and often pivotal towards achieving its own objectives. However, the Ministry of Health cannot take responsibility for those activities. The Ministry of Health underlines, however, the need for intersectoral collaboration to ensure that populations affected by disaster have access to essential services.

Proposed disaster management structures to be established at communal, prefectural and central level are not mentioned in the outline. While awaiting the formal establishment of those structures, ad hoc committees should be set up, as in the past, and should ensure efficient disaster management and co-ordination of relief interventions.

GLOSSARY:
CDMC = Communal Disaster Management Committee
DMU = Disaster Management Unit
MOH = Ministry of Health
NDMO = National Disaster Management Office
PDMC = Prefectural Disaster Management Committee
RRC = Rwandan Red Cross

COMMUNAL LEVEL

Activities Preparedness Phase	Required capacities	Available capacity	Gap - Response
2.1.a.1 Assistance in the development of hospital disaster preparedness plans, including the evacuation (ambulance) system; 2.1.a.2 Ensuring the availability of trained first aid workers; 2.1.a.3 Conducting regular simulation exercises at hospitals involving first aid workers;	2.1.a.1 Health authorities and health personnel, ambulance personnel; 2.1.a.2 Curriculum developers and trainers; 2.1.a.3 Health personnel and administrative staff capable of organising exercise;	2.1.a.1 Available, but for ambulance personnel 2.1.a.2 RRC and network of trainers 2.1.a.3 Available	2.1.a.1 Insufficient training in planning and management; train ambulance personnel 2.1.a.2 Insufficient number of trainers: train MOH trainers 2.1.a.3 Insufficiently exposed to emergencies: train and establish rotation system
Activities Initial response / assessment Phase	**Required capacities**	**Available capacity**	**Gap - Response**
2.1.b.1 Ensuring effective search and rescue operations, provision of first aid to and evacuation of victims; 2.1.b.2 Ensuring access to appropriate health care for victims (if necessary operationalise the hospital disaster preparedness plans); 2.1.b.3 Conducting a rapid assessment to identify priority needs (data collection on health and nutrition); 2.1.b.4 Guaranteeing access to health care including nutritional rehabilitation; 2.1.b.5 Guaranteeing evacuation and appropriate burial of bodies;	2.1.b.1 Red Cross volunteers and others capable of carrying out search and rescue operations; 2.1.b.2 Personnel health facilities, personnel alerting system, ambulance personnel; 2.1.b.3 Health workers, health inspectors, 2.1.b.4 Health workers, health inspectors, volunteer health promoters, 2.1.b.5 Health inspectors;	2.1.b.1 Available 2.1.b.2 Available, personnel alerting system not organised, ambulance staff not available 2.1.b.3 Available 2.1.b.4 Available 2.1.b.5 Available	2.1.b.1 Insufficient numbers: training of 1st aid workers and MOH trainers 2.1.b.2 Insufficient numbers: training of new health staff including ambulance personnel; organisation of personnel alerting system; mobilisation of experienced staff from other health facilities or teams 2.1.b.3 Same as above 2.1.b.4 Same as above 2.1.b.5 Same as above
Activities Co-ordinated response Phase	**Required capacities**	**Available capacity**	**Gap - Response**
2.1.c.1 Continuation of data collection; 2.1.c.2 Continuation of identification of needs; 2.1.c.3 Guaranteeing access to essential services;	2.1.c.1 Health workers, health inspectors; 2.1.c.2 Technical personnel; 2.1.c.3 Health workers, health inspectors;	2.1.c.1 Available 2.1.c.2 Available 2.1.c.3 Available	2.1.c.1 Possibly insufficient staff on site: mobilise staff from elsewhere and training in adapted data collection forms 2.1.c.2 None or as above 2.1.c.3 None or as above
Activities Preparedness Phase	**Required resources**	**Available resources**	**Gap - Response**
2.1.a.1 Assistance in the development of hospital disaster preparedness plans, including the evacuation (ambulance) system; 2.1.a.2 Ensuring the availability of trained first aid workers; 2.1.a.3 Conducting regular simulation exercises at hospitals involving first aid workers;	2.1.a.1 Operational ambulance and communication system: ambulances, radios, emergency medical equipment; 2.1.a.2 Training manuals 2.1.a.3 Means of communications, ambulances;	2.1.a.1 Ambulances, but not appropriately equipped and ambulance and communication system not operational 2.1.a.2 Available at RRC 2.1.a.3 Radio and telephone communication systems in some areas	2.1.a.1 Propose standard type of ambulance and radio equipment; Development of standard equipment and drugs list for ambulances; development of protocol as to utilisation of ambulances 2.1.a.2 Funds for multiplication of manuals 2.1.a.3 Use existing communication networks where necessary and possible; for ambulances: as above
Activities Initial response / assessment Phase	**Required resources**	**Available resources**	**Gap - Response**
2.1.b.1 Ensuring effective search and rescue operations, provision of first aid to and evacuation of victims;	2.1.b.1 First aid drugs, medical materials and equipment to stabilise victims;	2.1.b.1 First aid kits and standard ambulance drugs kit and equipment not	2.1.b.1 Development, purchase and provision of standard kits; ambulance

2.1.b.2 Ensuring access to appropriate health care for victims (if necessary operationalise the hospital disaster preparedness plans); 2.1.b.3 Conducting a rapid assessment to identify priority needs (data collection on health and nutrition); 2.1.b.4 Guaranteeing access to health care including nutritional rehabilitation; 2.1.b.5 Guaranteeing evacuation and appropriate burial of bodies;	2.1.b.2 Ambulances equipped with radios, standard equipment in health facilities and emergency supplies (equipment, consumables); 2.1.b.3 Developed protocols for rapid assessments, means of transport, office equipment and supplies; 2.1.b.4 Emergency stocks of water storage systems, plastic sheeting, drugs, medical supplies, food, non-food items, etc.; 2.1.b.5 Readily prepared maps of water sources and identified burial sites;	available; ambulances available, but not appropriately equipped 2.1.b.2 Ambulances and communication: see above; health facilities OK; drugs, consumables and equipment available, but limited quantities 2.1.b.3 Available 2.1.b.4 Not available at MOH 2.1.b.5 Maps of water sources available at other ministries, burial sites commonly known in communes	system: as above; Check with RRC as to stocks of 1st aid kits 2.1.b.2 Ambulances/communication: see above; Pre-positioning of emergency stocks of drugs, consumables and equipment 2.1.b.3 Protocols might need revision 2.1.b.4 Pre-positioning of emergency stocks and identification of pre-positioned stocks with partners 2.1.b.5 Updating of maps might be necessary; intersectoral collaboration required
Activities Co-ordinated response Phase	**Required resources**	**Available resources**	**Gap - Response**
2.1.c.1 Continuation of data collection; 2.1.c.2 Continuation of identification of needs; 2.1.c.3 Guaranteeing access to essential services;	2.1.c.1 Data collection instruments, office equipment and supplies; 2.1.c.2 Meeting space, office equipment and supplies; 2.1.c.3 Drugs, medical supplies, food;	2.1.c.1 Available 2.1.c.2 Available 2.1.c.3 Available, but in insufficient supplies	2.1.c.1 Forms need to be adapted for disaster situations 2.1.c.2 None 2.1.c.3 Mobilisation and pre-positioning of supplies

PREFECTURAL LEVEL

Activities Preparedness Phase	**Required capacities**	**Available capacity**	**Gap - Response**
2.2.a.1 Development of hospital Disaster Preparedness Plans; 2.2.a.2 Organisation of simulation exercises of hospital plans involving first aid workers and updating of plans; 2.2.a.3 Organisation of training of first aid workers; 2.2.a.4 Ensuring data collection and analysis of data for vulnerability analysis;	2.2.a.1 Health authorities; 2.2.a.2 Organisation and planning capacity health authorities; 2.2.a.3 Curriculum developers and trainers; 2.2.a.4 Health workers, health inspectors,;	2.2.a.1 Available 2.2.a.2 Available 2.2.a.3 RRC trainers available 2.2.a.4 Available	2.2.a.1 Capacity in planning insufficient: Training in planning 2.2.a.2 None 2.2.a.3 Insufficient number of trainers: train MOH and RRC trainers 2.2.a.4 Insufficient number of personnel: training new staff/mobilise from elsewhere
Activities Initial response / assessment Phase	**Required capacities**	**Available capacity**	**Gap - Response**
2.2.b.1 Provision of support to search and rescue activities; 2.2.b.2 Analysis of data collected at communal level; 2.2.b.3 Identification of needs and mobilisation of resources and personnel; 2.2.b.4 Guaranteeing access to essential services (water, health, nutrition, food, sanitation); 2.2.b.5 Guaranteeing access to appropriate health services and, if necessary, activate hospital disaster preparedness plans; 2.2.b.6 Ensuring efficient management of resources;	2.2.b.1 Radio/telephone operator to alert 1st aid volunteers, personnel alerting system 2.2.b.2 Personnel 2.2.b.3 Health authorities; 2.2.b.4 Health workers, health inspectors; 2.2.b.5 Health authorities and staff; 2.2.b.6 Managers at regional level;	2.2.b.1 Radio operators not available; alerting system not organised 2.2.b.2 Available 2.2.b.3 In place 2.2.b.4 Available 2.2.b.5 In place 2.2.b.6 Available	2.2.b.1 1st aid workers and health personnel insufficient: training; Radio operators need to be trained; Organisation of personnel alerting system 2.2.b.2 Might need training in use of adapted data collection instruments 2.2.b.3 None 2.2.b.4 Insufficient personnel: mobilisation from elsewhere and training new staff 2.2.b.5 Mobilisation according to plan 2.2.b.6 Personnel need training in

			emergency stock management system
Activities Co-ordinated response Phase	**Required capacities**	**Available capacity**	**Gap - Response**
2.2.c.1 Continuation of assistance to search and rescue operations; 2.2.c.2 Guaranteeing access of affected populations to appropriate health care; 2.2.c.3 Analysis of data to update needs assessments; 2.2.c.4 Mobilisation of additional resources; 2.2.c.5 Guaranteeing efficient distribution, accountability and management of resources;	2.2.c.1 Volunteers trained in first aid; 2.2.c.2 Health authorities; 2.2.c.3 Health workers, health inspectors; 2.2.c.4 Members of Committee; 2.2.c.5 Managers, administrators, personnel for distribution;	2.2.c.1 Volunteers available, but insufficient 2.2.c.2 Available 2.2.c.3 Available 2.2.c.4 Available 2.2.c.5 Available	2.2.c.1 Train 1 1st aid worker per cellule (RRC and MOH) 2.2.c.2 See 2.2.b.4 2.2.c.3 See 2.2.b.4 2.2.c.4 None 2.2.c.5 Managers will require training in emergency stock management system; staff for distribution will need to be remunerated
Activities Preparedness Phase	**Required resources**	**Available resources**	**Gap - Response**
2.2.a.1 Development of hospital Disaster Preparedness Plans; 2.2.a.2 Organisation of simulation exercises of hospital plans involving first aid workers and updating of plans; 2.2.a.3 Organisation of training of first aid workers; 2.2.a.4 Ensuring data collection and analysis of data for vulnerability analysis;	2.2.a.1 Office equipment and supplies, means of communications; 2.2.a.2 Office equipment and supplies, means of transport and communications; 2.2.a.3 Curriculum, training materials; 2.2.a.4 Data collection instruments, office equipment;	2.2.a.1 OK, but use of communication network not guaranteed 2.2.a.2 See 2.2.a.1 2.2.a.3 RRC curriculum and training materials available 2.2.a.4 Instruments available, but need to be revised	2.2.a.1 Use existing communication networks, and establish MOH communication network 2.2.a.2 See 2.2.a.1 2.2.a.3 Funds for multiplication 2.2.a.4 Revision and adaptation if necessary
Activities Initial response / assessment Phase	**Required resources**	**Available resources**	**Gap - Response**
2.2.b.1 Provision of support to search and rescue activities; 2.2.b.2 Analysis of data collected at communal level; 2.2.b.3 Identification of needs and mobilisation of resources and personnel; 2.2.b.4 Guaranteeing access to essential services (health, nutrition); 2.2.b.5 Guaranteeing access to appropriate health services and, if necessary, activate hospital disaster preparedness plans; 2.2.b.6 Ensuring efficient management of resources;	2.2.b.1 local communications network; 2.2.b.2 Office equipment, office space; 2.2.b.3 Office equipment, local communications network; 2.2.b.4 Drugs, medical supplies; 2.2.b.5 Emergency drugs, medical supply and medical equipment stocks; 2.2.b.6 Office equipment and supplies, emergency stock management system;	2.2.b.1 MOH network not available 2.2.b.2 Available 2.2.b.3 Available 2.2.b.4 No emergency supplies available 2.2.b.5 See 2.2.b.4 2.2.b.6 Office equipment and supplies available, emergency stock management system not yet developed	2.2.b.1 Use existing networks 2.2.b.2 None 2.2.b.3 None 2.2.b.4 Ensure sufficient funds, pre-positioning of essential supplies and mobilisation from partners 2.2.b.5 See 2.2.b.4 2.2.b.6 Development of emergency stock management system
Activities Co-ordinated response Phase	**Required resources**	**Available resources**	**Gap - Response**
2.2.c.1 Continuation of assistance to search and rescue operations; 2.2.c.2 Guaranteeing access of affected populations to appropriate health care, other essential services; 2.2.c.3 Analysis of data to update needs assessments; 2.2.c.4 Mobilisation of additional resources; 2.2.c.5 Guaranteeing efficient distribution, accountability and management of resources;	2.2.c.1 Up-to-date curriculum and training materials; 2.2.c.2 Drugs, medical supplies and equipment, water storage, food, non-food items, seeds, digging tools, etc.; 2.2.c.3 Office equipment and supplies; 2.2.c.4 Office equipment and local communications network; 2.2.c.5 Office equipment, warehouses,	2.2.c.1 Available 2.2.c.2 Not available 2.2.c.3 Available 2.2.c.4 Available 2.2.c.5 All but office equipment and supplies not available	2.2.c.1 Funds for multiplication 2.2.c.2 Funds, pre-position and mobilise from other sources 2.2.c.3 None 2.2.c.4 None 2.2.c.5 Development of emergency stock management system, funds for rental of warehouses

	management tools (stock cards, stacking equipment, etc.);		

CENTRAL LEVEL

Activities <u>Preparedness Phase</u>	**Required capacities**	**Available capacity**	**Gap - Response**
2.3.a.1 Development of Hospital Disaster Preparedness plans; 2.3.a.2 Development of curriculum and training programme 1st aid volunteers; 2.3.a.3 Development of warden system and system to mobilise trained 1st aid volunteers;	2.3.a.1 Health authorities; 2.3.a.2 Curriculum developers and trainers; 2.3.a.3 Administrators and Heads of health facilities, radio and telephone operators;	2.3.a.1 Available 2.3.a.2 RRC curriculum and training materials available, trainers available but insufficient 2.3.a.3 Available, RRC prefectural committees established	2.3.a.1 Insufficiently trained in planning and management 2.3.a.2 Funds for multiplication, training of trainers RRC and MOH 2.3.a.3 Need for regular meetings between health authorities and RRC at all levels
Activities <u>Initial response / assessment Phase</u>	**Required capacities**	**Available capacity**	**Gap - Response**
2.3.b.1 Put Disaster Preparedness Plans into action, including emergency procedures for mobilisation of resources; 2.3.b.2 Management of emergency resources; 2.3.b.3 Provision of technical assistance to affected regions; 2.3.b.4 Analysis of data and identification of needs; 2.3.b.5 Mobilisation of resources; 2.3.b.6 Preparation of health situation reports; 2.3.b.7 Organisation of co-ordination meetings with partners in health sector;	2.3.b.1 Personnel DMUs; 2.3.b.2 Managers; 2.3.b.3 Experienced personnel; 2.3.b.4 Personnel various departments and DMUs; 2.3.b.5 DMU for NDMO; 2.3.b.6 DMU of MOH; 2.3.b.7 DMU of MOH;	2.3.b.1 Available 2.3.b.2 Available 2.3.b.3 Available, but insufficient and not trained in disaster management 2.3.b.4 Available 2.3.b.5 Available 2.3.b.6 Available 2.3.b.7 Available	2.3.b.1 None 2.3.b.2 Need training in emergency stock management system 2.3.b.3 Identify training needs amongst personnel at all levels and identification of appropriate training courses 2.3.b.4 None 2.3.b.5 None 2.3.b.6 None 2.3.b.7 None
Activities <u>Co-ordinated response Phase</u>	**Required capacities**	**Available capacity**	**Gap - Response**
2.3.c.1 Organisation of regular co-ordination meetings and partners in health sector; 2.3.c.2 Mobilisation of resources on basis of continuing identification of needs; 2.3.c.3 Management of available resources;	2.3.c.1 DMU; 2.3.c.2 DMU for NDMO; 2.3.c.3 DMU for NDMO;	2.3.c.1 Available 2.3.c.2 Available 2.3.c.3 Available, but insufficiently trained	2.3.c.1 None 2.3.c.2 None 2.3.c.3 Increase staff and improve management capacity
Activities <u>Preparedness Phase</u>	**Required resources**	**Available resources**	**Gap - Response**
2.3.a.1 Development of Hospital Disaster Preparedness plans; 2.3.a.2 Development of curriculum and training programme 1st aid volunteers; 2.3.a.3 Development of warden system and system to mobilise trained 1st aid volunteers;	2.3.a.1 Drugs, medical materials and equipment, means of communication; 2.3.a.2 Curriculum, training materials; 2.3.a.3 Means of communication, transport;	2.3.a.1 Not available 2.3.a.2 RRC curriculum and training materials available 2.3.a.3 Available	2.3.a.1 Mobilisation from other sources, funds for purchase and prepositioning 2.3.a.2 Funds for multiplication required 2.3.a.3 Use existing networks
Activities <u>Initial response / assessment Phase</u>	**Required resources**	**Available resources**	**Gap - Response**
2.3.b.1 Put Disaster Preparedness Plans into action, including emergency procedures for mobilisation of	2.3.b.1 Office equipment and supplies, means of communication and transport;	2.3.b.1 Available 2.3.b.2 Emergency stock management	2.3.b.1 None 2.3.b.2 Development of emergency stock

resources; 2.3.b.2 Management of emergency resources; 2.3.b.3 Provision of technical assistance to affected regions; 2.3.b.4 Analysis of data and identification of needs; 2.3.b.5 Mobilisation of resources; 2.3.b.6 Preparation of health situation reports; 2.3.b.7 Organisation of co-ordination meetings with partners in health sector;	2.3.b.2 Central warehouse emergency stocks and stock management system + office equipment; 2.3.b.3 Means of transport and communication, prepared protocols, food and lodging; 2.3.b.4 Office equipment; 2.3.b.5 See above, DMU; 2.3.b.6 See above, DMU; 2.3.b.7 See above, DMU;	system and warehouses not available, office equipment OK 2.3.b.3 Protocols not all available, administrative procedures ready but too slow 2.3.b.4 Available 2.3.b.5 Available 2.3.b.6 Available 2.3.b.7 Available	management system, funds for rental of warehouses required 2.3.b.3 Protocols need to be revised and/or developed; procedures need revision 2.3.b.4 None 2.3.b.5 None 2.3.b.6 None 2.3.b.7 None
Activities Co-ordinated response Phase	**Required resources**	**Available resources**	**Gap - Response**
2.3.c.1 Organisation of regular co-ordination meetings with partners in health sector; 2.3.c.2 Mobilisation of resources on basis of continuing identification of needs; 2.3.c.3 Management of available resources;	2.3.c.1 Office space, office equipment, communications equipment, transport; 2.3.c.2 Same as above; 2.3.c.3 Same as above;	2.3.c.1 Available 2.3.c.2 Available 2.3.c.3 Available	2.3.c.1 None 2.3.c.2 None 2.3.c.3 None

Annexe 4.4 Outline for Disaster Preparedness Plan

CHOLERA

MINISTRY OF HEALTH - RWANDA

General remarks:

The following document is the result of two workshops, organised by the project “Establishment of a Disaster Management Unit - Ministry of Health” in close collaboration with the Ministry of Health. Many people have been involved in the development of this outline: representatives of technical departments of the Ministry of Health, of eight (8) other ministries, the Rwandan Red Cross, the International Federation of Red Cross and Red Crescent Societies, the International Committee of the Red Cross, WHO, WFP and a number of international NGOs.

The outline for the disaster preparedness plan for a cholera outbreak only considers those aspects for which the Ministry of Health is primarily responsible and which relate to delivery of health and nutrition services. The Ministry of Health considers disaster preparedness activities to be undertaken by other ministries of equal importance and often pivotal towards achieving its own objectives. However, the Ministry of Health cannot take responsibility for those activities. The Ministry of Health underlines, however, the need for intersectoral collaboration to ensure that populations affected by disaster have access to essential services.

Proposed disaster management structures to be established at communal, prefectural and central level are not mentioned in the outline. While awaiting the formal establishment of those structures, ad hoc committees should be set up, as in the past, and should ensure efficient disaster management and co-ordination of relief interventions.

GLOSSARY:
CDMC = Communal Disaster Management Committee
DMU = Disaster Management Unit
MOH = Ministry of Health
NDMO = National Disaster Management Office
PDMC = Prefectural Disaster Management Committee
RRC = Rwandan Red Cross

COMMUNAL LEVEL

Activities <u>Preparedness Phase</u>	Required capacities	Available capacity	Gap - Response
3.1.a.1 Preparation of maps of high risk areas; 3.1.a.2 Provision of adequate information and advice re. use/preparation of safe drinking water and early detection of signs of cholera; 3.1.a.3 Training of recently graduated nurses in early detection of Cholera and in cholera case management; 3.1.a.4 Guaranteeing availability of adequate supplies of ORS at household level and with Animateurs de Sante; 3.1.a.5 Guaranteeing availability of adequate supplies of appropriate antibiotics and rehydration fluids; 3.1.a.6 Management of stock of emergency resources; 3.1.a.7 Identification of isolation sites for cholera patients;	3.1.a.1 Health personnel, epidemiologists; 3.1.a.2 Community health promoters; 3.1.a.3 Trainers/supervisors; 3.1.a.4 Health centre staff / district health authorities; 3.1.a.5 Health centre staff / district health authorities; 3.1.a.6 Managers at district / communal level; 3.1.a.7 Health centre staff;	3.1.a.1 Available 3.1.a.2 One health promoter per cellule 3.1.a.3 Available 3.1.a.4 Available 3.1.a.5 Available 3.1.a.6 Available 3.1.a.7 Available	3.1.a.1 Need for training or refresher courses 3.1.a.2 Need for training and supervision by health centre staff 3.1.a.3 District teams not fully staffed: add trained staff 3.1.a.4 Health promoters need to be supervised more often, introduce home-made ORS in case packets not available 3.1.a.5 None 3.1.a.6 Personnel need training in emergency stock management 3.1.a.7 None
Activities <u>Initial response / assessment Phase</u>	**Required capacities**	**Available capacity**	**Gap - Response**
3.1.b.1 Ensuring recognition of suspect cases; 3.1.b.2 Collection of information on cases and contacts (home visits); 3.1.b.3 Immediate reporting of all cases of suspected, probable and confirmed cholera to district/regional health authorities; 3.1.b.4 Arrangement for laboratory confirmation; 3.1.b.5 Appropriate case management (rehydration and AB therapy and supportive care); 3.1.b.6 Ensuring barrier nursing measures are implemented; 3.1.b.7 Identification of vulnerable groups/communes; 3.1.b.8 Ensuring the availability of local resources for outbreak control; 3.1.b.9 Analysis of data and identification of needs; 3.1.b.10 Release of technical information on the epidemic and its control to the public and ensure accurate and thorough public awareness on measures which can be taken by the population itself;	3.1.b.1 Trained staff of health centres; 3.1.b.2 Trained staff of health centres and animateurs de sante; 3.1.b.3 Head of health centre; 3.1.b.4 Health centre staff, laboratory staff, district health authorities; 3.1.b.5 Health centre and hospital staff; 3.1.b.6 Health centre and hospital staff; 3.1.b.7 Health authorities and health personnel; 3.1.b.8 Health authorities; 3.1.b.9 Health authorities; 3.1.b.10 Health authorities;	3.1.b.1 Available 3.1.b.2 Available 3.1.b.3 Available 3.1.b.4 Available 3.1.b.5 Available 3.1.b.6 Available 3.1.b.7 Authorities in place and personnel available 3.1.b.8 In place 3.1.b.9 Available 3.1.b.10 Available	3.1.b.1 Need for training and refresher courses 3.1.b.2 As above and supervision of health promoters 3.1.b.3 None 3.1.b.4 Number of laboratory technicians insufficient: train new laboratory staff 3.1.b.5 Refresher courses required 3.1.b.6 See 3.1.b.5 and more supervision 3.1.b.7 See 3.1.b.5 and introduce authorities to vulnerability analysis approach 3.1.b.8 As 3.1.b.7 3.1.b.9 None 3.1.b.10 None
Activities <u>Co-ordinated response Phase</u>	**Required capacities**	**Available capacity**	**Gap - Response**
3.1.c.1 Follow-up on evolution of outbreak; 3.1.c.2 Guaranteeing adequate case management of cholera cases; 3.1.c.3 Guaranteeing early detection of cases and correct case management at household level; 3.1.c.4 Continuation of health promotion activities at household level;	3.1.c.1 Data analysts, health staff; 3.1.c.2 Trained health staff; 3.1.c.3 Trained Animateurs de Sante; 3.1.c.4 Trained Animateurs de Sante as health promoters; 3.1.c.5 Health centre staff; 3.1.c.6 Health authorities;	3.1.c.1 Available 3.1.c.2 Available 3.1.c.3 Available 3.1.c.4 As 3.1.c.3 3.1.c.5 Available 3.1.c.6 Personnel available, authorities in place	3.1.c.1 Training and supervision required 3.1.c.2 As 3.1.c.1 3.1.c.3 Health promoters have to put more emphasis on household awareness raising 3.1.c.4 Health centre staff have to increase supervisory activities 3.1.c.5 None

3.1.c.5 Guaranteeing correct and reliable data collection and transmission of weekly reports to health authorities; 3.1.c.6 Identification of needs;			3.1.c.6 None
Activities Preparedness Phase	**Required resources**	**Available resources**	**Gap - Response**
3.1.a.1 Preparation of maps of high risk areas; 3.1.a.2 Provision of adequate information and advice re. use/preparation of safe drinking water and early detection of signs of cholera; 3.1.a.3 Training of recently graduated nurses in early detection of Cholera and in cholera case management; 3.1.a.4 Guaranteeing availability of adequate supplies of ORS at household level and with Animateurs de Sante; 3.1.a.5 Guaranteeing availability of adequate supplies of appropriate antibiotics and rehydration fluids; 3.1.a.6 Management of stock of emergency resources; 3.1.a.7 Identification of isolation sites for cholera patients;	3.1.a.1 Cartography equipment; 3.1.a.2 Developed curriculum and protocols; training materials; 3.1.a.3 Developed curriculum, protocols and training materials; 3.1.a.4 Storage capacity, emergency stock management system and means of transport, recipe for home-made ORS; 3.1.a.5 Storage capacity, emergency stock management system and means of transport; 3.1.a.6 Storage capacity, emergency stock management system; 3.1.a.7 Cholera emergency kits-tents, beds, etc.;	3.1.a.1 Equipment not available 3.1.a.2 Available 3.1.a.3 Available, but need to be adopted officially 3.1.a.4 Insufficient storage and non existing emergency stock management system 3.1.a.5 See 3.1.a.4 3.1.a.6 See 3.1.a.4 3.1.a.7 None available	3.1.a.1 Make equipment available 3.1.a.2 Funds for multiplication 3.1.a.3 Make available after formal adoption of documents 3.1.a.4 Funds for storage, emergency stock to be pre-positioned, stock management system to be developed and develop recipe for home-made ORS 3.1.a.5 See 3.1.a.4 3.1.a.6 See 3.1.a.4 3.1.a.7 Development of appropriate cholera kit and pre-positioning
Activities Initial response / assessment Phase	**Required resources**	**Available resources**	**Gap - Response**
3.1.b.1 Ensuring recognition of suspect cases; 3.1.b.2 Collection of information on cases and contacts (home visits); 3.1.b.3 Immediate reporting of all cases of suspected, probable and confirmed cholera to district/regional health authorities; 3.1.b.4 Arrangement for laboratory confirmation; 3.1.b.5 Appropriate case management (rehydration and AB therapy and supportive care); 3.1.b.6 Ensuring barrier nursing measures are implemented; 3.1.b.7 Identification of vulnerable groups/communes; 3.1.b.8 Ensuring the availability of local resources for outbreak control; 3.1.b.9 Analysis of data and identification of needs; 3.1.b.10 Release of technical information on the epidemic and its control to the public and ensure accurate and thorough public awareness on measures which can be taken by the population itself;	3.1.b.1 Developed curriculum, protocols, training materials; 3.1.b.2 Standard form notifiable diseases, means of communication; 3.1.b.3 Standard form notifiable diseases, means of communication; 3.1.b.4 Transport media for specimen, operational national laboratory, means of communication; 3.1.b.5 Curriculum, protocols, training materials, drugs, medical supplies; 3.1.b.6 Curriculum, protocols, training materials; 3.1.b.7 Office equipment; 3.1.b.8 Warehouses, emergency stock system, office equipment; 3.1.b.9 Office equipment; 3.1.b.10 Recording and broadcasting equipment, loudspeakers, developed curricula, training materials, protocols;	3.1.b.1 Available 3.1.b.2 Instruments exist, but not available 3.1.b.3 Notification forms available, insufficient means of communication 3.1.b.4 Transport media available, but not pre-positioned 3.1.b.5 Documents available, drugs and medical supplies not always 3.1.b.6 See 3.1.b.5 3.1.b.7 Available 3.1.b.8 Available 3.1.b.9 Office equipment available, but insufficient 3.1.b.10 Equipment is available in some communes	3.1.b.1 Funds for dissemination of materials 3.1.b.2 Funds for multiplication 3.1.b.3 Installation of means of communication 3.1.b.4 Pre-positioning of transport media at district office 3.1.b.5 Pre-positioning of emergency supplies 3.1.b.6 See 3.1.b.5 3.1.b.7 None 3.1.b.8 None 3.1.b.9 Increase available equipment 3.1.b.10 Make equipment available to all communes

Activities <u>Co-ordinated response Phase</u>	Required resources	Available resources	Gap - Response
3.1.c.1 Follow-up on evolution of outbreak; 3.1.c.2 Guaranteeing adequate case management of cholera cases; 3.1.c.3 Guaranteeing early detection of cases and correct case management at household level; 3.1.c.4 Continuation of health promotion activities at household level; 3.1.c.5 Guaranteeing correct and reliable data collection and transmission of weekly reports to health authorities; 3.1.c.6 Identification of needs;	3.1.c.1 Cartography equipment, office equipment; 3.1.c.2 Developed curriculum, protocols, training materials; 3.1.c.3 Developed curriculum, training materials; 3.1.c.4 Developed curriculum, training materials; 3.1.c.5 Developed curriculum, data collection instruments, protocols, training materials; 3.1.c.6 Office equipment, means of communication;	3.1.c.1 Analysis forms available, but insufficient quantity 3.1.c.2 Available 3.1.c.3 Available 3.1.c.4 Available 3.1.c.5 Available 3.1.c.6 Available	3.1.c.1 Funds for multiplication 3.1.c.2 Funds for multiplication 3.1.c.3 Funds for multiplication 3.1.c.4 as 3.1.c.3 3.1.c.5 Regular revision of documents required 3.1.c.6 None

PREFECTURAL LEVEL

Activities <u>Preparedness Phase</u>	Required capacities	Available capacity	Gap - Response
3.2.a.1 Preparation of investigation of suspect cases; 3.2.a.2 Preparation of health workers in appropriate case management; 3.2.a.3 Guaranteeing availability of resources needed to take samples for laboratory confirmation; 3.2.a.4 Guaranteeing emergency stock of ORS, appropriate drugs and medical supplies, temporary water storage capacity, chlorine/water purification products; 3.2.a.5 Establishment of means of communication (transport, telephone or radio communication equipment); 3.2.a.6 Training of recently graduated staff; 3.2.a.7 Analysis of data; 3.2.a.8 Vulnerability analysis to identify high risk areas; 3.2.a.9 Development of appropriate IEC messages on hygiene, use/preparation of safe drinking water, detection of signs of cholera, early rehydration;	3.2.a.1 Epidemiologist, regional supervisors; 3.2.a.2 Regional supervisors; 3.2.a.3 Trained laboratory and health centre staff; 3.2.a.4 Pharmacist, regional administrator / manager; 3.2.a.5 Radio and telephone operators; 3.2.a.6 Trainers; 3.2.a.7 Regional supervisors / epidemiologist; 3.2.a.8 Health authorities; 3.2.a.9 Regional IEC experts;	3.2.a.1 Available, but insufficient 3.2.a.2 Available 3.2.a.3 Laboratory staff insufficient 3.2.a.4 Available 3.2.a.5 Health staff can operate equipment 3.2.a.6 Available 3.2.a.7 Available 3.2.a.8 In place 3.2.a.9 Available	3.2.a.1 Add qualified personnel as supervisors, train MDs in Public Health 3.2.a.2 None 3.2.a.3 None 3.2.a.4 Training in use of home-made ORS 3.2.a.5 None 3.2.a.6 None 3.2.a.7 None 3.2.a.8 None 3.2.a.9 Mobilisation of additional personnel if required
Activities <u>Initial response / assessment Phase</u>	**Required capacities**	**Available capacity**	**Gap - Response**
3.2.b.1 Collection and transmission of laboratory samples for confirmation; 3.2.b.2 Guaranteeing detection of source of infection; 3.2.b.3 Guaranteeing correct case management, provision of safe drinking water and public information on personal hygiene and use of safe drinking water; 3.2.b.4 Guaranteeing epidemiological surveillance, analysis of	3.2.b.1 Laboratory personnel, health workers; 3.2.b.2 Health workers, health inspectors; 3.2.b.3 Regional supervisors, health workers; 3.2.b.4 Epidemiologist/regional	3.2.b.1 Available, but insufficient 3.2.b.2 Available 3.2.b.3 Available 3.2.b.4 Available at central level 3.2.b.5 Available 3.2.b.6 Available 3.2.b.7 Personnel available, but	3.2.b.1 Training of new laboratory technicians 3.2.b.2 None 3.2.b.3 None 3.2.b.4 Mobilisation of personnel from central level 3.2.b.5 None

data and investigation of high risk areas; 3.2.b.5 Identification of vulnerable populations; 3.2.b.6 Identification of needs; 3.2.b.7 Management of available emergency stock; 3.2.b.8 Transmission of epidemiological data once weekly to local, regional and national authorities and to local partners;	supervisor; 3.2.b.5 Health authorities; 3.2.b.6 Health authorities; 3.2.b.7 Managers; 3.2.b.8 Radio / telephone operator, chauffeurs;	insufficiently trained 3.2.b.8 Available	3.2.b.6 None 3.2.b.7 Training of stock managers 3.2.b.8 None
Activities <u>Co-ordinated response Phase</u>	**Required capacities**	**Available capacity**	**Gap - Response**
3.2.c.1 Guaranteeing correct case management, early detection of new cases; 3.2.c.2 Guaranteeing dissemination of appropriate IEC messages; 3.2.c.3 Guaranteeing accurate stock management; 3.2.c.4 Ensuring epidemiological surveillance, analysis of data and transmission of weekly reports; 3.2.c.5 Identification of needs; 3.2.c.6 Mobilisation of resources;	3.2.c.1 Health workers, Health promoters and supervisory staff; 3.2.c.2 IEC expert; 3.2.c.3 Managers; 3.2.c.4 Epidemiologist - supervisor; 3.2.c.5 Health authorities; 3.2.c.6 Health authorities;	3.2.c.1 Available, but insufficient, health promoters not sufficiently supervised 3.2.c.2 Available 3.2.c.3 Available, but insufficiently trained 3.2.c.4 Available at central level 3.2.c.5 Available 3.2.c.6 Available	3.2.c.1 Organisation of training and supervision of health promoters, train health workers 3.2.c.2 None 3.2.c.3 Training in stock management 3.2.c.4 Mobilisation of personnel from central level 3.2.c.5 None 3.2.c.6 None
Activities <u>Preparedness Phase</u>	**Required resources**	**Available resources**	**Gap - Response**
3.2.a.1 Preparation of investigation of suspect cases; 3.2.a.2 Preparation of health workers in appropriate case management; 3.2.a.3 Guaranteeing availability of resources needed to take samples for laboratory confirmation; 3.2.a.4 Guaranteeing emergency stock of ORS, appropriate drugs and medical supplies, temporary water storage capacity, chlorine/water purification products; 3.2.a.5 Establishment of means of communication (transport, telephone or radio communication equipment); 3.2.a.6 Training of recently graduated staff; 3.2.a.7 Analysis of data; 3.2.a.8 Vulnerability analysis to identify high risk areas; 3.2.a.9 Development of appropriate IEC messages on hygiene, use/preparation of safe drinking water, detection of signs of cholera, early rehydration;	3.2.a.1 Protocols, training materials; 3.2.a.2 Developed curriculum, protocols, training materials; 3.2.a.3 Developed curriculum, protocols, training materials; 3.2.a.4 Warehouses, emergency stock management system, office equipment; 3.2.a.5 Radio and telephone equipment; 3.3.a.6 Developed curriculum, protocols, training materials; 3.2.a.7 Data collection instruments, office equipment; 3.2.a.8 Office equipment; 3.2.a.9 IEC materials, recording and broadcasting equipment;	3.2.a.1 Available 3.2.a.2 See 3.2.a.1 3.2.a.3 See 3.2.a.1 3.2.a.4 Emergency stock management system not available 3.2.a.5 Equipment available, but not MOH 3.2.a.6 Existing 3.2.a.7 Available 3.2.a.8 Available 3.2.a.9 Available, but insufficient	3.2.a.1 Funds for multiplication 3.2.a.2 See 3.2.a.1 3.2.a.3 See 3.2.a.1 3.2.a.4 Develop emergency stock management system 3.2.a.5 Utilisation of existing networks, until MOH system put in place 3.2.a.6 See 3.2.a.1 3.2.a.7 None 3.2.a.8 None 3.2.a.9 Mobilisation of more equipment
Activities <u>Initial response / assessment Phase</u>	**Required resources**	**Available resources**	**Gap - Response**
3.2.b.1 Collection and transmission of laboratory samples for confirmation; 3.2.b.2 Guaranteeing detection of source of infection; 3.2.b.3 Guaranteeing correct case management, provision of safe drinking water and public information on personal hygiene and use of safe drinking water; 3.2.b.4 Guaranteeing epidemiological surveillance, analysis of data and investigation of high risk areas;	3.2.b.1 Specimen transport media, spatula, laboratory reagents; 3.2.b.2 Means of transport, water quality control set; 3.2.b.3 Protocols; 3.2.b.4 Data collection instruments, office equipment, means of communication;	3.2.b.1 Available at central level 3.2.b.2 Available 3.2.b.3 Available 3.2.b.4 Available 3.2.b.5 Available 3.2.b.6 Available 3.2.b.7 System not developed, all others available	3.2.b.1 Pre-positioning at prefectural level 3.2.b.2 None 3.2.b.3 None 3.2.b.4 None 3.2.b.5 None 3.2.b.6 None 3.2.b.7 Develop emergency stock

3.2.b.5 Identification of vulnerable populations; 3.2.b.6 Identification of needs; 3.2.b.7 Management of available emergency stock; 3.2.b.8 Transmission of epidemiological data once weekly to local, regional and national authorities and to local partners;	3.2.b.5 Office equipment; 3.2.b.6 Office equipment, means of communication; 3.2.b.7 Emergency stock management system, office supplies, office equipment; 3.2.b.8 Communications equipment;	3.2.b.8 Available in some places	management system 3.2.b.8 Increase the availability of means of communication
Activities <u>Co-ordinated response Phase</u>	**Required resources**	**Available resources**	**Gap - Response**
3.2.c.1 Guaranteeing correct case management, early detection of new cases; 3.2.c.2 Guaranteeing dissemination of appropriate IEC messages; 3.2.c.3 Guaranteeing accurate stock management; 3.2.c.4 Ensuring epidemiological surveillance, analysis of data and transmission of weekly reports; 3.2.c.5 Identification of needs; 3.2.c.6 Mobilisation of resources;	3.2.c.1 Drugs, medical supplies, IEC materials; 3.2.c.2 IEC materials, recording and broadcasting equipment; 3.2.c.3 Emergency stock management system, office supplies and equipment; 3.2.c.4 Data collection instrument, office equipment, means of communication; 3.2.c.5 Office equipment; 3.2.c.6 Office equipment, local communication network;	3.2.c.1 Drugs and medical supplies insufficient, regularly out of stock because stock not well managed 3.2.c.2 Available, but insufficient budget to use 3.2.c.3 See 3.2.a.1 3.2.c.4 Insufficient means of communication, all others OK 3.2.c.5 Available 3.2.c.6 Available	3.2.c.1 Improve or develop emergency stock management system 3.2.c.2 Funds for multiplication of IEC materials and use of available means 3.2.c.3 See 3.2.c.1 3.2.c.4 Increase available means of communication, improve fleet management 3.2.c.5 None 3.2.c.6 None

CENTRAL LEVEL

Activities <u>Preparedness Phase</u>	**Required capacities**	**Available capacity**	**Gap - Response**
3.3.a.1 Preparation of protocol outlining early detection of signs of cholera, correct case management, investigations to carry out to detect source of infection, health promotion activities in case of cholera; 3.3.a.2 Guaranteeing preparations for confirmation of cases; 3.3.a.3 Analysis of data concerning water supply and sanitation; 3.3.a.4 Identification of high risk areas; 3.3.a.5 Prepositioning of stocks of essential supplies and ensure correct stock management; 3.3.a.6 Collection of epidemiological data from neighbouring countries;	3.3.a.1 Epidemiologist, health workers, IEC experts, health inspectors; 3.3.a.2 Laboratory technicians; 3.3.a.3 Health inspectors; 3.3.a.4 Epidemiologists; 3.3.a.5 Managers / administrators; 3.3.a.6 Epidemiologist;	3.3.a.1 Available 3.3.a.2 Available 3.3.a.3 Available, but intersectoral collaboration required 3.3.a.4 Available 3.3.a.5 Available 3.3.a.6 Available, but system not functioning	3.3.a.1 None 3.3.a.2 None 3.3.a.3 Improve intersectoral collaboration 3.3.a.4 None 3.3.a.5 Training in stock management required 3.3.a.6 Improve information sharing mechanisms
Activities <u>Initial response / assessment Phase</u>	**Required capacities**	**Available capacity**	**Gap - Response**
3.3.b.1 Provision of assistance in field investigations; 3.3.b.2 Guaranteeing laboratory confirmation and identification of source of infection; 3.3.b.3 Official declaration of outbreak once confirmed; 3.3.b.4 Notification of suspected and laboratory confirmed	3.3.b.1 Laboratory staff, epidemiologists; 3.3.b.2 Laboratory staff, health inspectors; 3.3.b.3 MOH;	3.3.b.1 Available 3.3.b.2 Available 3.3.b.3 Available 3.3.b.4 Available 3.3.b.5 Available	3.3.b.1 None 3.3.b.2 None 3.3.b.3 None 3.3.b.4 None 3.3.b.5 None, except funds for use of

cholera cases to WHO; 3.3.b.5 Organisation of public information campaigns; 3.3.b.6 Identification of needs; 3.3.b.7 Mobilisation of essential supplies and resources;	3.3.b.4 Epidemiologist; 3.3.b.5 IEC experts, health promoters, MOH; 3.3.b.6 DMU; 3.3.b.7 DMU;	3.3.b.6 Available 3.3.b.7 Available	national media 3.3.b.6 None 3.3.b.7 None
Activities Co-ordinated response Phase	**Required capacities**	**Available capacity**	**Gap - Response**
3.3.c.1 Ensuring field investigations, collection of specimen for confirmation, identification of source of infection; 3.3.c.2 Ensuring correct case management, early detection of cases, safe drinking water supply; 3.3.c.3 Analysis of data and preparation of reports; 3.3.c.4 Identification of needs; 3.3.c.5 Mobilisation of resources; 3.3.c.6 Guaranteeing accurate and efficient management of resources; 3.3.c.7 Transmission of weekly reports to WHO as to evolution of outbreak;	3.3.c.1 Epidemiologist, laboratory technician, health inspector; 3.3.c.2 Supervisors, IEC experts; 3.3.c.3 Epidemiologists; 3.3.c.4 DMU; 3.3.c.5 DMU; 3.3.c.6 DMU, managers; 3.3.c.7 MOH - Epidemiology Department;	3.3.c.1 Available 3.3.c.2 Available 3.3.c.3 Available 3.3.c.4 Available 3.3.c.5 Available 3.3.c.6 Available, but stock management system 3.3.c.7 Available	3.3.c.1 None 3.3.c.2 None 3.3.c.3 None 3.3.c.4 None 3.3.c.5 None 3.3.c.6 Development of stock management system 3.3.c.7 None
Activities Preparedness Phase	**Required resources**	**Available resources**	**Gap - Response**
3.3.a.1 Preparation of protocol outlining early detection of signs of cholera, correct case management, investigations to carry out to detect source of infection, health promotion activities in case of cholera; 3.3.a.2 Guaranteeing preparations for confirmation of cases; 3.3.a.3 Analysis of data concerning water supply and sanitation; 3.3.a.4 Identification of high risk areas; 3.3.a.5 Prepositioning of stocks of essential supplies and ensure correct stock management; 3.3.a.6 Collection of epidemiological data from neighbouring countries;	3.3.a.1 Office equipment and supplies, water quality control kits, developed IEC materials, data collection forms; 3.3.a.2 Specimen transport media, operational national laboratory; 3.3.a.3 Water quality control kits, cartography and office equipment, means of transport; 3.3.a.4 Data collection forms, office equipment and supplies; 3.3.a.5 Warehouses, emergency stocks, emergency stock management system, office equipment and supplies; 3.3.a.6 Means of communication, reference journals;	3.3.a.1 Available 3.3.a.2 Available 3.3.a.3 Available 3.3.a.4 Available 3.3.a.5 Warehouses available, stocks and stock management system inadequate 3.3.a.6 System not functional	3.3.a.1 None 3.3.a.2 None 3.3.a.3 None 3.3.a.4 None 3.3.a.5 Development of stock management system, pre-positioning of emergency stocks 3.3.a.6 Re-establish system
Activities Initial response / assessment Phase	**Required resources**	**Available resources**	**Gap - Response**
3.3.b.1 Provision of assistance in field investigations; 3.3.b.2 Guaranteeing laboratory confirmation and identification of source of infection; 3.3.b.3 Official declaration of outbreak once confirmed; 3.3.b.4 Notification of suspected and laboratory confirmed cholera cases to WHO; 3.3.b.5 Organisation of public information campaigns; 3.3.b.6 Identification of needs;	3.3.b.1 Means of transport and communication, mobile laboratory equipment (transport of specimen); 3.3.b.2 Means of transport and communication, mobile laboratory equipment and water quality control kits; 3.3.b.3 Office equipment, means of	3.3.b.1 Currently available, but will be temporarily 3.3.b.2 See 3.3.b.1 3.3.b.3 Available 3.3.b.4 Available 3.3.b.5 Available, but insufficient funds for utilisation of media 3.3.b.6 Available	3.3.b.1 Improve fleet management, mobilise funds for rental of transport 3.3.b.2 See 3.3.b.1 3.3.b.3 None 3.3.b.4 None 3.3.b.5 Mobilisation of funds 3.3.b.6 None 3.3.b.7 Funds for mobilisation of

3.3.b.7 Mobilisation of essential supplies and resources;	communication; 3.3.b.4 Means of communication; 3.3.b.5 IEC materials, recording and broadcasting equipment; 3.3.b.6 Office equipment; 3.3.b.7 Office and communication equipment, office + emergency supplies	3.3.b.7 Available, but insufficient	supplies
Activities <u>Co-ordinated response Phase</u>	**Required resources**	**Available resources**	**Gap - Response**
3.3.c.1 Ensuring field investigations, collection of specimen for confirmation, identification of source of infection; 3.3.c.2 Ensuring correct case management, early detection of cases, safe drinking water supply; 3.3.c.3 Analysis of data and preparation of reports; 3.3.c.4 Identification of needs; 3.3.c.5 Mobilisation of resources; 3.3.c.6 Guaranteeing accurate and efficient management of resources; 3.3.c.7 Transmission of weekly reports to WHO as to evolution of outbreak.	3.3.c.1 Means of transport, laboratory supplies (include. water quality control), means of communication; 3.3.c.2 Means of transport, supervision guide lines, protocols, water quality control kits; 3.3.c.3 Office equipment, office supplies, means of communication; 3.3.c.4 Office equipment and supplies, means of communication; 3.3.c.5 Office equipment and supplies, means of communication; 3.3.c.6 Office equipment and supplies, emergency stock management system; 3.3.c.7 Office equipment and supplies, means of communication.	3.3.c.1 Available, but only temporarily 3.3.c.2 Available 3.3.c.3 Available 3.3.c.4 Available 3.3.c.5 Available 3.3.c.6 Emergency stock management system not available 3.3.c.7 Available	3.3.c.1 Funds for rental 3.3.c.2 None 3.3.c.3 None 3.3.c.4 None 3.3.c.5 None 3.3.c.6 Development of emergency stock management system 3.3.c.7 None