# IAES

## Inter-Agency Emergency Simulation Exercise

**BHUTAN**
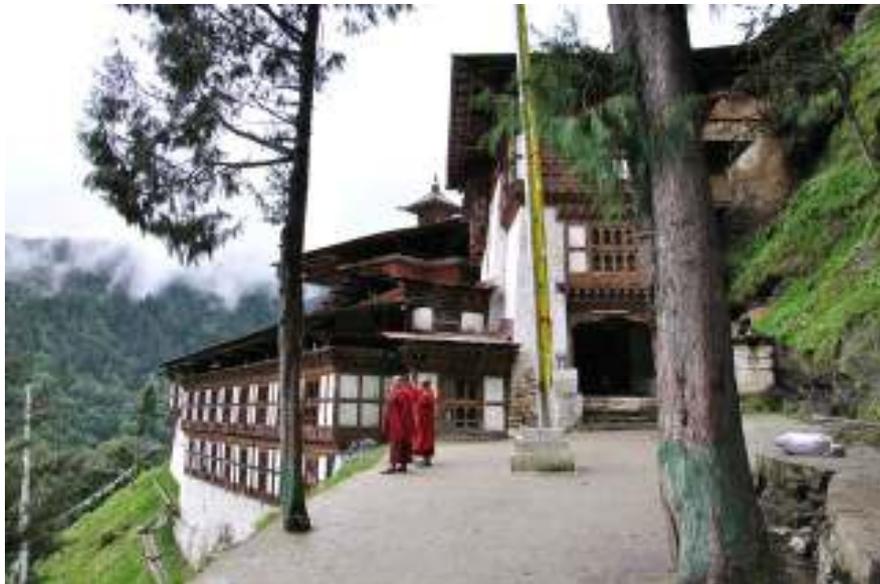




**Thimphu, July 2010**

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# Background

In July 2010, the UN Country Team in Bhutan took part in a series of UNCT or Inter-agency preparedness and response simulation exercises and a follow-up debriefing workshop. Participating agencies included: the Office of the UN Resident Coordinator, FAO, IOM, WFP, UNDP, UNDSS, UNFPA, UNHCR, UNICEF, WFP, WHO and UNV. An observer from Swedish MSB was also present.

The simulation was part of an ongoing effort by the UN to reinforce collaboration among humanitarian agencies and strengthen their capacity to respond to emergencies. It aimed to familiarize participants with the emergency roles and responsibilities of participating agencies and with the immediate actions those agencies should take in the initial hours of a crisis.

Starting from a fictional but realistic emergency scenario adapted for each country, the Inter Agency Emergency Simulation or "IAES" as it is known, tests participant understanding and ability to make use of existing preparedness measures (such as inter-agency contingency plans), humanitarian reform framework guidance (e.g. cluster approach, and the consolidated sitrep process), and headquarters, regional office and global cluster mechanisms and resources that are available to support emergency response.

Participating agencies - which can include, in addition to the UN Country Team and IASC partners, government counterparts, donor representatives, private sector actors, and/or the media – are expected to carry out the responsibilities they normally take on in a real such emergency, responding to ever-increasing information demands, preparing key response information, and coordinating planned actions to ensure needs are met and gaps are filled. Inter agency coordination is a key focus of the IAES; participants have the opportunity to assemble and use coordination structures effectively to produce quality outcomes.

The simulation implementation in Bhutan was designed as a four step process involving;

- One half day training for middle management on emergency planning (a refresher course in the basics of emergency management)
- One half day table top simulation based on a Pandemic Scenario and targeting the role of middle management
- One full day Skill drill exercise examining the operational requirements of a remote command post for directing relief operations
- One full day functional simulation involving the entire UN country team and based around a sudden onset catastrophe (GLOF/Flood event).

This process was concluded with a full day debriefing exercise involving all staff.

# Outcome

The Thimphu simulation was generally recognized as a valuable contribution to collaboration and preparedness among the UN family of organizations present in Bhutan.  Due to the unique nature of Bhutan there are only few humanitarian agencies present and the Red Cross/Red Crescent movement is not represented.   Unfortunately the Government of Bhutan was unable to be involved in the simulation due to other commitments but it is generally felt that a follow up exercise in the future involving the government would be highly beneficial

The exercise benefited from strong coordination displayed by the UN Senior Management Team. Also of great benefit was enthusiasm and levels of commitment and participation displayed by all members of staff throughout the exercise.

Their active efforts to bring together participating agencies in cluster-specific and overall inter-agency coordination meetings resulted in the view held by most participants that simulation response outcomes were decided and produced by consensus.   By the end of an intense one day exercise, the participants were able to coordinate a number of emergency response tasks and were able to put in place many of the key elements that would be required when responding to a

disaster of the simulated magnitude.

In summary, the simulation exercises enabled the UN country team to make a detailed appraisal of their capacity to respond to a disaster and to look at particular issues that may arise during such an event. These included Command and Control, Coordination, Logistics and a number of other operational issues as detailed in the lessons learnt.

# Executive Summary

Lessons learnt by participants in the simulation exercise and analysed in the debriefing workshop the next day included the following:

**Command and Control:** In general this was well defined and appeared clear at a senior level. The RC took command of the situation and was well supported by her senior management team. The role of middle management and staff with designated response responsibilities (such as wardens, guards and drivers) needs to be better defined. The role of non essential staff likewise needs attention.

**Coordination:** With the primary focus of the simulation being on internal UN response, coordination across agencies appeared quite good. Information sharing appeared to be good with only a few procedural issues identified. It will be mentioned later in this report but there is a heavy reliance on communication mechanisms outside of the UN control (mobile phone networks particularly) and a disruption of this system will have a knock on effect. In general coordination and work sharing was good between agencies

**Internal Communications, and information sharing:** Internal communication was hampered by a lack of systems and protocols. This was particularly the case in relation to establishing communications independent of third party systems such as mobile phones and internet. The UN country team is heavily reliant on these third party providers and staff are not well practiced in the use of independent emergency communications such as VHF and HF radio and Satellite based systems. This meant that when telephones and internet were disabled, internal communication became severely limited and in many cases was reduced to message running. All staff require training on all communications equipment, both on physical operations and on operational protocols as well as on the use of specific radio language and discipline.

**Information and Media Management:** This was not widely tested during the simulation however it is clear that there needs to be an established mechanism for all external communications, both to headquarters and regional. This includes dealing with the national government requests, requests from headquarters and coordination with the media.

**Cluster/Sector Coordination:** The UN country team has not fully implemented the cluster approach due to the lack of any partner agencies (with the exception of a very small office of SCF). As such coordination is along agency roles and reflects systems more in common with the old sector based approach. While this works for disasters handled nationally, in the event of a major catastrophe this system with come under significant strain. As such adopting some key principals of the humanitarian reform programme would be helpful

**Key Document Production:** Key document development was limited within the terms of the simulation as the primary objective of the simulation was to test coordination and operational roles rather than document production. Documents required for the simulation were; consolidated sitreps, security warden reports and internal communiqués. In with the exception of warden reporting these were completed in a timely manner and demonstrated good information sharing. The warden system suffered from an over complication of the system which meant that some messages were lost or incorrectly communicated

**Security Issues:** A number of issues were raised. These included the suitability of the current warden system, issues of staff home locations, tracing staff, adequate communication and the lack of knowledge of security protocols. Examples included facility guards being unable to communicate with each other, junior staff being missed in office evacuations, staff not being aware of assembly points, senior staff travelling together as well as other issues mentioned in the body of the report. Essential equipment was either not ready or just not taken during the evacuation from the UNDP house to the UNICEF building and in case of a real emergency situation might thus have been immediately lost. Key issues of staff security are in place, but security systems such as an orderly evacuation need more training and testing.

# Background

Following the development of UNCT emergency plans and with the continued emphasis on Business Continuity Planning across the UN family, the UNCT decided that there was a need for training and testing of their planning assumptions.   As a result the UNCT approached OCHA with the view of conducting a week long series of training programmes and simulation exercises.   Key activities to be undertaken were;

1. Training for middle management staff on key principals related to emergency preparedness,

2. A short (1/2 day) desktop simulation focused on key elements of the Pandemic Influenza Plan,

3. A full day of skill drills focusing on independent operations, primarily the setup and operation of a remote field centre for coordination purposes

4. A full day functional exercise incorporating drills and focused on business continuity planning in a complex setting

5. A full day debriefing session

The exercises were held in Thimphu and involved assets and staff from all represented agencies. Key locations were the UNDP office, UNICEF office (secondary coordination centre), the Taj Hotel (meeting rooms and primary location for skill drills (under point 2)

# Simulation Objectives

The objectives of the Inter-Agency Emergency Simulation (IAES) exercise were as follows:

1. Reinforce partnership among humanitarian agencies and strengthen their capacity to respond to emergencies;

2. Familiarize participants with roles and responsibilities of participating agencies, as well as the immediate actions that should be taken by those agencies in the initial hours of an emergency;

3. Enable participants to practice joint operations and to enable them to work together as part of a singular UN system within Bhutan;

4. Test the efficacy of the preparedness measures of the various participating humanitarian agencies (such as inter-agency contingency planning, business continuity planning and pandemic planning);

5. Enable participants to understand the importance of leadership (decision-making) and of good management (coordination, delegation, time management, flexibility, and task prioritization) in emergency response;

6. Identify in a participatory way inter-agency sectoral strengths and weaknesses in order to enhance the status of preparedness.

# Methodology

The methodologies developed for the simulation and the debriefing have been designed around the general structure of emergency planning and simulation testing.   This has included a three step process identified as:

1. Table top simulation (TTX) – Designed to raise awareness and look at structural issues from an overview perspective

2. Skill drills – Targeted mini exercises designed to enable participants to become familiar with highly specific practical tasks such as using radios to undertake warden checks, fitting personal protective equipment (PPE) correctly, setting up tents and other equipment

3. Functional exercise – A full day exercise involving paper based tasks, realistic scenarios and the actual deployment of personnel and equipment in a limited way. In Bhutan this included swing tests (relocation of command points), use of remote area communications (radios and satellite phones) and sharing of UN assets

In consultation with the UN Country Team, the facilitators developed a series of scenarios based on identified hazards within Bhutan.   The aim was to make the scenarios as relevant as possible and as such to test systems and plans using easily identified threats.   As Bhutan has recently seen cases of the H1N1 Influenza virus this was decided as the initial scenario and used as the primary basis for the table top simulation.   This involved a broadening or the current infection base within the country and the disruption of some key services.   Following the TTX a series of skill drills were conducted.   The key scenario revolved around a catastrophic incident requiring humanitarian assistance with the complicating factor of a disease pandemic affecting essential services and requiring special precautions during humanitarian response operations. The aim was to build on the lessons of the TTX and to prepare participants for the Functional simulation. The final exercise was a full functional exercise and was designed to test the actions of the UN family in the event of a catastrophic rapid onset disaster.   The scenario commenced with a disease pandemic during high rainfall and flood risk. Such floods are common in the mountainous areas of Bhutan and this was seen as an appropriate test. This was followed by a catastrophic sudden onset flash flood event based on the idea of a Glacial Lake Outburst Flood (GLOF).

The conduct of the various simulations varied.   The TTX involved participants in a single location working through a series of questioning injects which they would discuss and feedback to each other and the facilitators in a discursive manner.   The Skill drill exercises involved a scenario premise and they would then use emergency equipment to fulfil a series of tasks such as setting up a temporary operation base, establish communication via satellite phone and radio. Sending out a rapid assessment team and using personal protective equipment for the handling of H1N1 patients to be moved "from a collapsed building".   The functional exercise was a combination of the initial two with controlled injects but also the requirement to take real action in response to the information provided.   Such information was provided through Email, written notes, telephone calls and personal visits by facilitators.   The aim was to work across several locations and included requirements for staff to evacuate offices and to relocate operations into sister organisation headquarters as defined in the BCP.

# Facilitators

For the simulation exercise, the facilitators undertook the following duties:

 Briefing the UN RC;

- Management of the simulation centre;
- Presentation of instructions to participants;
- Monitoring inter agency coordination and cluster meetings to obtain input for the debriefing workshop held the day after the exercise;
- Role-playing key external actors, including media, RO and HQ staff, donors, the ERC, etc.;
- Monitoring adherence to the simulation instructions;
- Briefing the UN RC after the exercise.

On the second day, the team facilitated a participatory debriefing workshop which allowed participants to identify their preparedness and response weaknesses and to elaborate related sector action plans to improve their preparedness status.

# Participants

Participants in the simulation exercise and in the debriefing workshop represented a range of Government, UN, and non-governmental organizations:   The Office of the UN Resident

Coordinator, FAO, IOM, WFP, UNDP, UNDSS, UNFPA, UNHCR, UNICEF, WFP, WHO and UNV.

In addition to these "internal" participants the DSS regional officer based in New Delhi involved himself in some email communication, which was not planned but still useful. The Swedish MSB sent one observer who also acted as part of the facilitation team.

No external participants (Government of Bhutan, NGOs, etc.) were present for this exercise although future exercises are planned that will involve the Government of Bhutan.

# Results expected from the exercises

## *Exercise 1 – Pandemic TTX*

Expected results;

a. Improved awareness of the various possible impacts of a pandemic on both internal and external operations.

b. Heighten awareness of the UNCT plan and standard operating procedures.

c. Identify and prioritise response activities.

d. Identify plans, policies, and procedures which are specific for Bhutan and members of the UN Family.

e. Identify resources available

f. Identify critical operations.

### Participants

Middle management of all UN agencies present in Bhutan. The exercise started at 13:00 am and formally ended at 16:00 pm. Prior to the exercise a short training session on emergency planning was conducted.

## *Exercise 2 – Skill drills*

Expected results

a. To familiarise participants with certain aspects of emergency response

b. To enable participants to carry out some actions that would be expected of them in the case of a real emergency situation

c. To test essential equipment such as radio communications, remote internet and email systems and other communications equipment as well as the use of personal protective equipment.

d. To test how members of staff work together in an operational setting

e. To test how members of staff function away from a routine office environment

### Participants

Middle management of all UN agencies in Bhutan. The exercise was conducted over the course of one working day

## *Exercise 3 – Functional Exercise*

➢ Interactive exercise, designed to challenge the entire emergency management system

➢ Involve a variety of locations with decision making taking place outside of individuals offices

- ➢ Involved controller(s), players, simulators, and evaluators.
- ➢ Geared for policy, coordination, and operations personnel.
- ➢ Players practice their response to an emergency by responding in a realistic way to planned and sequenced messages given to them by simulators.
- ➢ Messages reflect a series of ongoing events and problems. Responses should be realistic and reflect elements of planning and coordination
- ➢ All decisions and actions by players occur in real time and generate real responses and consequences testing coordination, and resource utilisation.

Expected Results

a. To test certain response measures as described in the UNCT Bhutan Contingency Plan and the BCP.

b. To test trigger for decision making and decision making processes

c. To test evacuation procedures.

d. To test BCL measures such as "work from home readiness", working from alternate site and arrangements to accommodate increase staff numbers.

e. To test communication equipment and communication processes.

f. To test response readiness during hazards affecting own operations in addition to creating humanitarian needs.

g. To identify gaps in existing SOP and procedures or the knowledge of it.

## Participants

All UN staff including senior management. The exercise was conducted over one full day with a full day debriefing session.

# Objectives of Debriefing Workshop

The day after the simulation, a workshop was organized to reflect on the outcomes of the simulation, the processes that led to them and to jointly agree on key preparedness and response capacity; strengths, weaknesses or gaps that were experienced.

The objectives of the Debriefing Workshop were to enable participants to be able to:

a. List the actions that fostered achievement of expected outcomes

b. List the key challenges that hindered achievement of expected outcomes;

c. Describe how the pressures of an emergency situation can affect the capacity to continue to manage ongoing projects and project issues

d. Explain the value of emergency preparedness in developing a response to emergency; and

e. Identify key gaps in agency preparedness and the steps needed to address those gaps.

# Results of the simulation

The information contained in this section is a result of the one day debriefing session held with all staff following the functional exercise.   Much of the information is a result of staff reflection.   The facilitation team led the discussion and helped with some of the reflection, however most of the results in this section stem from staff self reflection.

## *Command and Control*

Command and control in an emergency situation is an issue of primary importance in all UN operations and therefore it is important to examines the decision making processes and command and control structures closely as one of the key pillars of emergency planning and response.   For the purposes of the report the Senior Management Team (SMT), which is represented by the heads of agencies will be used as a reference point.   One key finding from the simulation is that various roles and acronyms such as SMT, CMT, CRT, etc are confusing and possibly unnecessary within a relatively small country team and it is recommended that this system be simplified

During the simulation a number of observations were made that indicated that a system of command and control was in place but some "weaknesses" were identified that could be improved on. During the Table Top (TTX) simulation many staff mentioned the role of the senior management team and their own heads of agency as important decision makers and staff would look to management for support and guidance.   This was reflected later in the functional exercise as senior management worked to take control of the situation as it unfolded and to act appropriately.

One of the key points observed was that senior management met early and discussed issues as a group, making decisions with the two most senior members of the UNCT working collaboratively (the RC and the head of UNICEF). This proved to be an effective combination, with other members of the SMT contributing and supporting the decision making. It was felt that the good and trustful working relationship helped to make quick and Sometimes ad hoc decisions, which were made necessary due to the sudden impact of the "hazard" on operations and the relocation of UNDP in the very early stages of the developments.

Another key to this quite effective reorganisation and response was the timely activation of the SMT. With the first incident identified the SMT met to discuss the situation and when a new situation presented itself the SMT showed flexibility of action and decisiveness.   Part of this effectiveness stems again from a small country team that enables good interpersonal relationships as the plans themselves were not that clear describing the general command and control structures and the decision making process. Much of the good decision making appeared largely due experienced staff working closely in a harmonious relationship rather than through formal structures. This in not necessarily a critical issue, however faced with staff turnover and the possibility that senior management staff may themselves be victims of disaster it might be important to look into this aspect.

While senior management have a good understanding of the need to act it is important that this is communicated effectively to implementing staff and that information can flow effectively within the system.   Interviews with staff during the simulation often revealed a lack of understanding of their role and responsibilities during the evacuation and while the disaster unfolded and many staff were unclear as to the direction that senior management were taking on certain issues. Briefing staff effectively is always a challenge in emergency response and this was illustrated during the simulation.

**Key points**

- Good leadership and coordination amongst senior managers
- Task force meetings – held early and with good representation, some might have benefited from a shorter duration
- Clear commitment to act
- Timely activation of emergency staff
- Other senior management quickly took on responsibilities for their areas quite effectively

While the role of senior staff in meeting with each other and making decisions appeared relatively effective, communication with other staff was seen to be lacking at times. Messages from senior management did not appear to be sufficiently communicated and at times messages became lost. What was indicated was a need for senior staff to look at decision making and communication trees to ensure that all staff are correctly informed where possible and that critical staff are kept up to date with senior management decision making. A critical information tree should be established as part of the planning process. It might be an option to always have somebody participating in the meeting just for the purpose of dissemination afterwards the relevant information to all who need to know.

Information management is an important part of command and control. During the simulation there was a high reliance on external information and there did not appear to be a coordinated system of gathering information through first hand assessments. Information such as road and bridge conditions, air access, etc. will be critical to developing a response. In the event of a large disaster requiring international assistance, access will be critical and detailed information of transportation links will be most critical. There should to be a system for structured assessments that feed information back into the decision making process. The planning process needs to include a methodology for gathering information. This should be accompanied by a hierarchy of needs so that critical information is gathered and transmitted first.

Almost all meetings that were held did not involve any taking of minutes, which is very important in order to assure that all necessary measures are taken and can be followed up. It is very important to ensure that instructions given are followed through and it appears that follow up was not always done. A system of check lists is another option of ensuring actions are indeed carried out.

Roles and responsibilities as mentioned above is a critical issue. Prior to the exercise the staff were split into a number of different roles and provided labels for their teams such as SMT, CMT, CRT, etc. These roles were often overlapping with some staff members of two or three different teams, sometimes confusing staff as they did not always know in which capacity they were acting. Some staff were trying to undertake more than one role and were not clear as to which role had priority. This needs clarification and simplification.

Information management is a key issue in command and control and weaknesses were found in a number of areas. These included;

- Difficulties in communication without mobile phones and land lines (usually one of the first things to fail during a major disaster)

- Inadequate access to stand alone internet and email communications, negatively impacting on "working from home" arrangements, which involved senior management staff who was out of communication

- When email was re-established, senior staff were bombarded with information. This information flow needs to be managed or it will overwhelm in time.

Finally, there was no established system for setting up a joint emergency operations centre (EOC). While the swing test was effective in that SMT gathered in a secondary location and thus established such a joint emergency operations centre. Once it was clear that the UNDP building was not in danger, the senior staff returned to their various offices, thus abandoning the temporarily existing EOC, which affected the speed and possibly effectiveness and quality of decision making. As part of the planning process an EOC must be defined – as well as an alternate location – and it is recommended that all senior staff work from this location until the acute phase of the emergency is declared over. This declaration should be made by the SMT.

## Recommendations:

- Senior Management needs to keep critical staff informed and there needs to be a system in place for communicating instructions clearly and to the right individuals.

- Minutes need to be taken during emergency meetings. Note takers should be included in such meetings.

- Staff need to be aware of their roles and responsibilities. The systems of SMT's, CMT's, CRT's, etc needs to be simplified

- It needs to be clear to staff that not everyone will know what is going on at all times – managing expectations – but there must be confidence that senior staff are managing the situation, which requires sufficient information flow to all. An established system assuring regular updates to all is helpful. Note takers in the emergency meetings could also be assigned the responsibility to disseminate certain information regularly using defined mechanisms for information dissemination.

- Similarly, information needs to be rapidly and concisely communicated to senior staff but there must be a method in place for managing this information to prevent senior decision makers from being overwhelmed with requests, information and paperwork. This should include strong delegation

- Teams must be able to be formed to collect information from primary sources – send a team to see if the road is open. These can be formed from staff not undertaking critical functions. However, a rapid assessment methodology might need to be developed in order to assure that the most important information will be collected.

In general command and control was effective while the SMT worked as a team. Once the SMT began to return to their usual place of work this team lost some of its cohesiveness.

## *Coordination*

With the primary focus of the simulation being on internal UN response, coordination across agencies appeared quite good. Information sharing was often hampered by poor familiarisation with communications equipment, particularly when phone services were removed. This will be discussed under communications.

Strengths;

- Close working relationship between members of the SMT with everybody willing to support and help each other

- Joint meeting and senior staff remaining together to enable rapid decision making

- Small country team meaning that information can be quickly circulated

Weaknesses

- No EOC meaning that the coordination that is engendered by the SMT working together is weakened or lost once the team moves apart (back to their offices).

- UNCTs that do not regularly have to deal with disasters often lack the experience that is important to make quick decisions and to prioritise the required action, which can to a certain degree be compensated by regularly exercising emergency situations.

- The team has not implemented parts of the humanitarian reform process and while there are sector working groups these need to be better defined. During one part of the exercise the medical team were not feeding information into the decision making system and this was not tracked. With defined clusters each part of the emergency response would have a person responsible for reporting and information would be less likely to be overlooked.

The simulation largely examined the internal planning for emergency response within the country with limited outside assistance. However in the event of a major catastrophe involving a large scale international response, not having a system that reflects the humanitarian reform programme could be a disadvantage. It is recommended that the team revisits the key parts of the humanitarian reform process and implements some of the key coordination protocols.

## **Recommendations;**

- Establish a defined EOC and designate an alternate location. SMT staff should use this as a basis of operations until they declare the acute phase of the disaster is over

- Revisit the humanitarian reform process and look at implementing key aspects, particularly revisit the cluster approach

- Coordinate with SCF the the Government of Bhutan to ensure that suggestions on coordination have widespread support and can be implemented in an inclusive fashion

- Conduct exercises and drills regularly to maintain readiness and awareness

## *Internal Communications and information sharing*

Communication was seen as one of the largest challenges during the simulation. Much of the feedback focused on the difficulty in using stand alone equipment and the heavy reliance on communications supplied by vulnerable third party providers (satellite communications is not included in this assessment).

In general communications continued to function. In the absence of telephones radio messages were used and even note running was utilised. These were solutions to the problem posed by the lack of effective comms but they were not always well planned or well executed.

Bhutan is not alone in relying heavily on vulnerable third party communications providers but it must take action to ensuring that communications are possible without cell phone networks. Cell phone networks not only work with handsets but also with some wireless data systems (such as 3G internet systems). All of these are reliant on towers and communications infrastructure, all of which are vulnerable to damage or to manipulation by authorities. Radio equipment permits communications in the absence of telephones and satellite systems can provide broadband internet independent of local systems. The RBgan is perhaps one of the most critical systems as in the absence of VSAT systems the RBgan will provide essential internet services

There were a number of criticisms of the communications systems that must be addressed;

- Training on the use of handsets – many staff with handsets were not aware of how to use them or what their limitations were

- Proper radio communications – Radio procedures and protocol to prevent staff talking over each other. A simple system is centralised communications, a system commonly in use with emergency services. This involves a radio operator acting as a go between for all communication. The user contacts the operator and the operator passes on the message to the second user. In the event of a long conversation the operator may ask both participants to change frequency for a private conversation; however the primary channel remains the preserve of the operator.

- Poor and outdated equipment – radios with malfunctioning batteries, unserviceable equipment, lost chargers, etc. This needs to be addressed. Typical life for a radio battery is three years and batteries should be replaced at this interval with old batteries returned for recycling.

- RBgan and Thuraya Satellite communications equipment. Insufficient familiarity with systems, systems not set up correctly (one RBgan was set to the North America satellite – the default setting). Incompatibility with some computer equipment. During the skill drill testing no information was successfully sent via satellite link. This is a serious issue as without effective satellite communications the team in Bhutan would be essentially cut off from the outside world in a major disaster.

- While available, satellite phones were not used during the period when all other communication means were down. Senior management did not attempt to assure immediately that satellite communication would be established.

- Some staff did not have handsets and required them and some staff, such as guards had handsets that did not function

- There is no ability to radio as far at Paro in the even that road transportation to Paro is affected. This should be explored

- It was found that the radio signals could be heard in certain TV channels in the close vicinity of the UNICEF building

In general information sharing was good and it appeared that most critical staff were kept informed of developments. Email communication was in general short and to the point and cc lists were kept relatively short, ensuring that information was passed succinctly.

## Recommendations

- Regular training on all communications equipment (once or twice per year a "radio day"?). Include radio training into briefing of new staff on arrival in Bhutan?

- Updating of communications equipment, particularly radios (especially batteries)

- Rationalising the use of radios to ensure that all critical staff have access to radio equipment in the event of a disaster

- Employ a specialist consultant to correctly set up satellite equipment and provide staff training on using the equipment for Internet and General telecommunications

- Look at deploying a repeater on higher ground to ensure adequate radio coverage across Thimphu. Examine the possibility of a repeater that could enable radio communication to Paro airport

- Ensure that all independent means of communication are thoroughly tested on a regular basis to ensure that teams are familiar with their operation

- Ensure that all guards at all UN premises have access to radio communications and are trained on their operation (also a security issue)

## *Information and Media Management:*

This was not widely tested during the simulation however it is clear that there needs to be an established mechanism for all external communications, both to headquarters and regional. This includes dealing with the national government requests, requests from headquarters and coordination with the media.

In the event of a large scale emergency the demands placed on a country team by headquarters, the government and external bodies is often overwhelming and needs to be managed. As a result it is important that this is planned for. Failing to prepare adequately for the information demands can mean that differing messages are transmitted causing confusion and or embarrassment and a appearance that the UN is not working in a coordinated fashion. It can also mean a number of people are actioning the same requests, sucking up time and resources.

## Recommendations

- Establish a coordination group for dealing with media enquiries and ensure that this group receives the relevant training. This group should be represented by all agencies or at a minimum the largest agencies.

- This same group should also be responsible for managing external communications and would be responsible for the consolidated sitreps and other key information sharing devices under the humanitarian reform agenda

- Such a unit could be an Information Management Unit as used in other large scale emergencies and OCHA may be in a position to assist.

## *Cluster/Sector Coordination:*

The UN country team has not fully implemented the cluster approach due to the lack of any partner agencies (with the exception of a very small office of SCF). As such coordination is along agency roles and reflects systems more in common with the old sector based approach. While this works for disasters handled nationally, in the event of a major catastrophe this system with come under significant strain. As such adopting some key principals of the humanitarian reform programme would be helpful.

## Recommendations

Revisit the cluster approach and if required ask for assistance from the Humanitarian Reform team.

## Production of Key Documents:

Key document development was limited within the terms of the simulation as the primary objective of the simulation was to test coordination and operational roles rather than document production. Documents required for the simulation were; consolidated sitreps, security warden reports and internal communiqués. With the exception of warden reporting these were completed in a timely manner and demonstrated good information sharing.   The warden system suffered from an over complication of the system through too many wardens with in some cases overlapping regions of responibility which meant that some messages were lost or incorrectly communicated.

See also issues on communication and coordination above

## Security and Staff welfare Issues

Security was tested in the absence of the security manager which provided a useful test of the overall security system. There were a number of issues raised and these are examined in no particular order;

1.      Evacuation of buildings

While a number of participants felt that the evacuation of the main building was successful, there are a few issues raised.   There are;

- a.      Some staff were "forgotten" in the evacuation despite the presence of floor wardens. These staff were found walking around the building after the evacuation had taken place

- b.      Some staff did not know where to evacuate to.   Staff need to be aware about assembly points, preferably with a safe distance from the building (in the even of a bomb threat for instance)

- c.      There did not appear to be a system of accounting for staff such as a roll call.  In the event of a fire it is important that all staff can be accounted for.

- d.      Many participants did not know who the floor wardens were. Floor wardens should be clearly marked, wearing a reflective vest or other clear means of identification.

- e.      Guards had no means of external communication and as such would not be able to alert authorities or emergency services should an incident such as fire or bomb threat occur

- f.      A PA system was installed, but not used

- g.      Essential equipment such as Sat phones should be kept ready in order to be evacuated without delaying the evacuation itself

2.      Movement of staff

- a.      During the evacuation the critical members of the senior management team departed in one vehicle. Should an incident occur, this could cause a loss of the most senior members of the team

- b.      Staff live in a wide variety of locations around Thimphu and are often reliant on the various bridges that cross the city.   In the event of a major disaster these could be cut leaving staff stranded on either side.   As a result provisions should be in place to either house staff who cannot go home or to billet staff who may become stranded while at a field location.

3.      Staff welfare during a disaster

- a.      The following provision for staff are important;
    - i.      Food,
    - ii.      Clean water

iii.    Somewhere to rest

iv.    Sufficient sanitation

b.    In a major emergency staff welfare needs to be managed as staff will be working in stressful conditions and will often not pay enough attention to their own well being. Staff should be allocated to ensure that sufficient supplies of food and water are available and areas should be designated for staff to rest, particularly staff who may not be able to return home. Without these essential supplies the capacity of staff will diminish dramatically over a short period of time. Such responsibility could be assigned to "non-essential" staff during an emergency.

4.    Ensuring staff safety

a.    Warden system

i.    In general the warden system was adequate but it appeared to be over complicated with too many wardens and to many warden zones.   At times it appeared unclear if all wardens had completed full checks.

ii.    Part of the reason for the confusion was that many wardens were responsible for other duties and were frequently interrupted during warden checks

iii.    At one point a warden reported that all staff were accounted for despite the fact that at least one person on the warden list had not been contacted

iv.    As part of the warden system, regular tests should be carried out including tests that ensure that people can reach safe areas in a timely fashion

v.    It is recommended that the system is greatly simplified.   The number of wardens should be reduced and the geographic locations be revised.   Wardens should not have any other critical duties or such duties should only be commenced once their warden duties have been concluded

vi.    Communication to staff and/or their dependants on the other side of the river will e a challenge if (i) all bridges would be damaged and (ii) the normal phone network would be down. It might be necessary to keep some radio or other emergency communication equipment positioned at the other side of the river for such cases.

b.    Compound Guards

i.    Compound guards had no means of communications as the radio equipment they had was defective and they had no external phone access.   It is strongly recommended that security have access to an external phone, even if it is only capable for contacting the emergency services

5.    Emergency Equipment

a.    As part of good planning the SMT should discuss what emergency equipment should remain on hand.   As a minimum the following should be considered;

i.    Pandemic PPE

ii.    Emergency IT equipment

iii.    First Aid kits

iv.    Equipment for an emergency operations centre, particularly a field based system incorporating a simple tent and equipment for operation

v.    Basic emergency equipment for vehicles

b.    Such emergency equipment need not be a comprehensive list of new equipment, but it may include equipment identified as already on hand that can be utilised in an emergency

## Summary

The simulation exercises were to most accounts considered "eye opening" and successful. This was down to the enthusiasm displayed by the staff and the commitment by senior management to ensure that adequate time and resources were allocated for the event. In all three simulation methods were utilised in order to build confidence and competence in staff to enable the country team to get the most from the experience.

While there are a number of identified gaps and weaknesses in this report it is important to remember that this is a test of systems and not a test of individual performance.   All individuals performed exceptionally and to the best of their ability and the facilitation team was very impressed by the enthusiasm and the staff dynamics.  All the exercises were designed to test the systems that are in place and to try to offer some guidance on how these can be improved.   Critical elements consist of simplifying systems which by their nature become more complicated over time.   This does not mean demolishing all systems, but reviewing and critically appraising what is in place and revising – the simplest system is usually the best.

Key points are;

a.     Simplifying command and control systems by examining the grouping of staff and how these groupings function,

b.     Strengthening communication and coordination channels,

c.     Improve communication through better coordination,

d.     Reducing reliance on third party communications systems by investing in radio and satellite equipment and training

e.     Establish clear protocols for dealing with external bodies

f.     Re-examine the humanitarian reform process

g.     Revise and simplify security actions in collaboration with DSS

# Annexes

## *Annex 1 – Skill Drill Scenario*

IAES – Bhutan 2010

Current situation (scenario) – Dam Outburst and flooding caused by severe weather

**Summary of the Situation**

Recent geological surveys in the mountains above Thimphu have identified a large Glacial lake in the Jigme Dorge National Park.   Due to recent changes in the climate and a major landslide a few years ago the Glacial lake has expanded dramatically and had been estimated to contain over 5.5 km3 of water.

Over the past week Bhutan has experienced unusual levels of rainfall as the monsoon has commenced. In the past 7 days the region has seen almost 1000mm of rainfall, close to the entire average rainfall (average rainfall 1020mm to 1520mm). This has had a devastating effect on the country, particularly in the region around Thimphu which has been hardest hit. The excessive rainfall has caused a number of large landslides in the area including one that devastated military accommodation on the east bank of the Chhu river. The road to Paro has become unreliable and the Indian military has deployed extra resources in an attempt to keep the road open. The road to Wangdue Phodrang has been completely cut with a large section to the road collapsing into the valley.

This morning at 0750 the excessive rainfall and the unstable conditions caused the glacial lake at Jigme Dorge to collapse releasing most of the contents of the lake in less than 15 minutes.   The resulting GLOF (Glacial Lake Outburst Flood) raised the height of the Chhu river by 27 meters above the already 8 meters the river had previously risen due to the unusual rainfall.   This has caused a flood front that has travelled at high speed down the valley and has destroyed everything in the valley floor.

At approximately 0830 the flood front reached Thimphu with devastating consequences. The journey down river have caused the flood waters to pick up a large amount of debris. Much of this has been dumped into the expanding valley and has created a large flood front.   The flood front has destroyed all major bridges in the vicinity of Thimphu.   There was no prior warning of the GLOF approaching Thimphu.

The area of destruction includes all areas within 500 meters of the river on both sides. Some housing remains intact but all smaller buildings have either been destroyed or seriously damaged

**Initial damage report:**

- The extent of the damage is unknown but easily viewed from the UNDP office as flood waters have come within 100 meters of the building,

- It appears that bridges have been destroyed preventing access to the opposite side of the river

- Some UN staff who live on the opposite side of the river are not in the office

- The cell phone network appears to be down and no phone calls are getting through

- There are some reports that the Kings palace has been affected but there is no further information available

- Roads leading to the river are clogged with debris originating from the flash flood

- There are obviously large numbers of people affected by the flood waters but all that is known are reports from people claiming to have had narrow escapes and others claiming that they had seen people swept away by the flood waters

**Response of the Government**

The government had already requested assistance from the international community, particularly India to assist with the damage caused by heavy rain fall.   There is currently no information from the government regarding the latest incident.

The Indian government had activated military forces in Bhutan to deal with the issue of road closures in the area, particularly between Thimphu and Paro.   It is unclear if any of the Indian forces had been affected but many of the squads working on the roads were based close to the river.

**Skill drill 1.**

Due to the destruction in the lower part of town it is feared that the land near to the area affected may have become unstable.   As a result it has been decided that a temporary coordination centre will be setup close to the office.

**Key points:**

- The UNDP office is unstable and must be evacuated immediately
- There are some concerns that other UN premises may also become unsafe due to the risk of landslide and should also be evacuated.
- The SMT has decided to setup a temporary command centre at the Taj Hotel to coordinate the initial phase of relief operations.

The command centre:

The Command centre will consist of;

1. Tented accommodation for staff
2. Communications equipment to enable contact outside Thimphu
3. Email and Internet communications
4. Space to enable effective coordination
5. Safe working environment

**Key objectives**

1. Setup command centre
2. Communicate with Geneva (Facilitator will provide phone number)
3. Organise a team to check staff welfare by visiting on warden location and reporting back by radio
4. Organise one team to examine the main government office and report back on contacts made as well as the condition of roads, bridges and infrastructure en route (see facilitator)
5. Send short email sitrep to OCHA (see facilitator for details of email address)

**Skill Drill 2**

Activate Phone tree.

**Message will be:**

SIMULATION – SIMULATION – SIMULATION

THIS IS A SIMULATED TEST OF THE UNCT PHONE TREE SYSTEM

MESSAGE IS

'SEND REINFORCEMENTS WE ARE GOING TO ADVANCE'

END MESSAGE

**Expected outcome:**

Phone tree will respond to message

**Skill Drill 3**

Send out Rapid Assessment Team with personal protective equipment (PPE) to report to base the situation and move H1N1 patients out of a collapsed building to higher ground.

**Expected outcome:**

1. To communicate per radio with base during the assessment mission
2. To test the proper use of PPE
3. To test the appropriate handling and movement of injured people

## *Annex 2 – Functional Simulation Running Sheet*

**Inject 1: Current Situation Report**

Recipients – **ALL**

Subject – Opening Scenario (Scenario 1)

**Current Situation**

Over the past two weeks Bhutan has experienced higher than usual amounts of rainfall as the monsoon develops over the Himalaya Region. Over the past week, the rainfall has significantly increased leading to flooding in a number of areas and an increased frequency of landslides. This has been compounded by a warmer than usual period leading to increased water flow from glaciers located in higher parts of the mountainous country.

The effect has been that rivers in the area are significantly higher than usual and some villages near rivers have been affected. There are reports of increased numbers of landslides and the Indian Military is working with local authorities to keep roads open.

The Wang Chhu river in Thimphu has risen dramatically over the past week flooding some of the low lying parts of the city and threatening some of the bridges. Some people have relocated away from the river and are staying with families until the river recedes.

Three weeks ago there were reports of an outbreak of H1N1 Pandemic Influenza at three schools in Thimphu. Approximately 87 students and 12 teachers were infected with the virus. Health authorities closed the affected schools and undertook measures to contact the relatives of the affected people. While these measures initially appeared effective, there have been a number of other outbreaks since this infection was identified and health authorities have expressed concern.

In the past week, numbers of infected people have grown and health authorities are managing high numbers of patients. At present the health system in Thimphu is able to cope but they are experiencing stress in the system.

**Key Points**

- Higher than usual rainfall
- Flooding in areas of the country, particularly in the mountainous regions
- Increasing numbers of people affected by the H1N1 pandemic
- Health system coping, but near capacity
- Road system is unreliable due to higher than normal rainfall and the risk of landslide
- Indian Military assisting local authorities keeping roads open
- Some people are moving from the lower parts of the city to stay with relatives

**Actions by Government**

- Ministry of Health is working in close collaboration with WHO
- Some schools remain closed by the Ministry of Education

- Government of Bhutan is working with the Bhutanese and Indian Military to keep roads open and to provide protection to key infrastructure.

**Actions taken by UN Country Teams**

- WHO is working with the Ministry of Health and UNICEF is working with the Ministry of Education on coordinating efforts to manage the current H1N1 situation

**Inject 2: Request for action**

To:             UNICEF

From:        Staff member

Subject:     Staff illness

Two members (Deputy Head of Office + 1 Driver) at UNICEF are reporting that they are feeling unwell.

**Inject  3: Request for information**

From:        1) UNSIC office Bangkok, 2) SEARO New Delhi

To:             1) RC office, 2) WHO CO

Subject:     Pandemic Situation report

1) Please notify UNSIC of the UN Families current planning situation due to high levels of H1N1 in the country.

What planned actions will the UN Country team take in relation to staff safety?

What actions is the UNCT considering in support of the government?

2) Please provide some figures about the current pandemic situation in country and the measures the DOH and WHO are taking or plan to take.

**Report to facilitation team.   CC Relevant simulation parties.**

OUTCOME – Change phase to crisis phase – RC should have a meeting

**Inject 4: Information**

Recipients – **ALL**

Subject – Worsening situation in Bhutan

The Bureau of Meteorology has announced that over the past two weeks Bhutan has received almost 1000mm of rainfall, equating to almost the entire yearly average.

The ministry of the interior has stated that there has been major infrastructure damage to roads and bridges throughout the country but that the Bhutanese Military in collaboration with the Indian Military has been working hard to keep vital infrastructure open

There are reports that the airport in Paro is under threat from rising flood waters but at this stage it remain open however with reduced flights due to some staff being off work due to illness.   There are also reports that the weather conditions have disrupted flights and that what flights are leaving are busy.

The Royal palace at Thimphu has been affected by flooding and His Majesty the King and the rest of the Royal family have moved to another residence on higher ground away from the Capital.   The King remains in constant in touch with the government and is taking a keen interest in events.


**Inject 5: Information report:**

From: Country Offices

To:     UN HR and Admin Offices

Cc:    RC Office

Subject:      Staff absenteeism


Please note that the following absences have been reported today due to influenza:

UNDP:       3 staff

UNICEF:     2 staff members

WHO:         1 staff member


Two staff members live on the opposite side of the river and there is a risk that this side may have transport problems if the river continues to rise

Send facilitation team the staff advisory (or advice to staff).


**Report to facilitation team.   CC Relevant simulation parties.**



**Inject 6: Request for information**

From:          OCHA Regional Office, Bangkok

To:              RC's office

Subject:      Flood situation in Bhutan


Given the flooding situation in the country, what actions will the UNCT undertake to provide support to the government of Bhutan should such assistance be requested?

OCHA-ROAP requests to provide a brief sitrep and suggests to consider discussing with the RGoB to request an UNDAC mission, if a humanitarian situation develops.

**Report to facilitation team.   CC Relevant simulation parties.**

**Inject 7: Situation Report**

To:    ALL

1100 Hrs

**Significant Event**


Staff working in their offices suddenly notice a large quantity of water, mud and debris striking the capital of Thimphu.  They can hear a loud roaring like a jet aircraft flying low on full power.   UNDP staff can watch from their windows a large quantity of debris flowing past the office, just below the main road.

The force of the debris flow is destroying buildings, trees and other structures and staff at UNDP are now looking out onto a brown mass of rushing water as a number of structures between the office and the river have collapsed into the flood waters.

One of the drivers who was approaching the office describes how he saw the river suddenly grow and that he saw trees, cars and parts of buildings rushing down the valley. He was able to quickly drive up the hill and the bridge he had just crossed had simply disappeared. The flood waters appear to be continuously rising. At this moment the following has occurred:

- The land line telephone network has failed

- The mobile telephone network has failed

- All internet communications have failed

- Electricity to all buildings across town has failed

Note

- Satellite communication is not affected


**Key Points:**

- Staff do not know the extent of the damage or its cause, only what can be seen from their offices

- At UNDP the destruction has reached an area just below the level of the lower road and the office now has a view directly onto the swollen river.

- The river is a dark brown colour and the remains of trees and buildings can be seen in the river.

- It appears that some of the land on the opposite bank of the river has disappeared taking with it some of the road.

- The height of the river indicates that it is likely that bridges in Thimphu are affected.

- It is known that some staff who are sick live on the other side of the river.

- There is a possibility of the UN House being inundated – plan for evacuation

**Government**

- Unknown

**Action:**

- Heads of agencies to establish radio communications

- RC to get information from each head of agency to confirm office status

**Reporting**

Report actions to the facilitation team reporting on staff safety and security as per DSS security guidelines.

**Report to facilitation team.   CC Relevant simulation parties.**

### Inject  8: Request for information:

From:        Government of Bhutan

**To:            RC office**

Subject:     Request for assistance

The government of Bhutan is formally requesting assistance from the United Nations and the Government of India to deal with the major catastrophe that has just occurred in Thimphu.   His Majesty the King and his family are safe and the government continues to function.

The Trashichodzong has been damaged but appears to have been largely spared the worst of the disaster.   It appears that the Kings Palace has been badly damaged.

Information so far gathered by the government indicates that a large debris flow struck the town at around 1100hrs today and has devastated much of the low lying parts of the city. Teams sent by the government have indicated that all bridges across the river have been destroyed, effectively cutting the city in half.

Rescue efforts are underway to attempt to find survivors trapped in debris and it is known that many people have lost their homes and businesses. The government is concerned about caring for people that have lost their homes and survived the disaster. The Bhutanese government would like to know what assistance can be provided now and what assistance could they look forward to in the near future.

**Key Points:**

- Government formally requesting assistance, particularly for rescue operations and caring for displaced people
- Government is largely untouched by the disaster although government buildings have been damaged
- The city has been cut in half with all bridges destroyed
- Rescue efforts are commencing
- Unknown numbers of people affected

**Report to facilitation team.   CC Relevant simulation parties.**

### Inject 9: Information:

To:    ALL

Subject:     Telecoms functioning

Mobile and limited land line services are not functioning

Email is now functioning.

**Inject 10: Information**

To ALL

Subject:     Disaster in Thimphu


In Thimphu large numbers of people have gathered at the edge of the disaster zone trying to assist or just watching the flood waters.   A number of people can be seen with injuries, many of these are covered in mud.   Many victims are wearing torn clothing and most appear to be in a state of shock.

Groups of people who were not affected are trying to dig in some of the unstable wreckage and mud looking for survivors.

There is no word on casualties but it is feared that at least 200 people who were in the market district near the river are missing.   It also appears that some 1200 people may have been made homeless.

The rain that has been falling for the past two weeks is continuing.

Telephone communications have been restored but mobile services remain patchy

**Key points:**

- People trapped in the debris

- Number of missing and homeless is unknown but may be high

- Rain continues

- Telecommunications re-established



**Inject 11: Request for information**

To:            WHO

Cc:            RC's Office, UNICEF

From:          Ministry of Health, Bhutan

Subject:       Assistance with disease control


The Ministry of Health in Bhutan is very concerned about disease outbreaks in Thimphu city following the flash flood and debris flow that hit the city earlier today.   They have some major concerns;

1.   How will they be able to control the current outbreak of the H1N1 pandemic in a city that has suffered a major disaster and what should they do to control the spread of the disease?

2.   How should they prioritise the disaster victims given that there are already a number of people seeking health care with H1N1

3.   The ministry of health is very concerned about the health risk posed by bodies trapped in the debris close to the river.   What advice can be given?


**Report to facilitation team.   CC Relevant simulation parties.**

**Inject 12: Take Action**

**Information**

Disaster

To:        RC's office and WFP

Subject:      Water inundation of the top floor of UN House and damage to WFP's office

At 1230 hrs part of the roof at UNDP failed causing a large amount of water trapped in the ceiling to rush into the top floor of UN House. The damage has affected electricity supplies to the top floor and has covered the floor in approximately 5 cm of water making the offices uninhabitable.

As part of the roof collapsed, damage was caused to the wall of the WFP office on the lower floor and this has also allowed water to enter the building at this point. This has also made these offices uninhabitable. The water inundation has also affected the server in the UN building and as a result the IT system has gone down. Mobile phones continue to be able to operate. As a result it is imperative that the top floor of the building and the WFP office be evacuated immediately as there is both a structural risk (from falling pieces of damaged ceiling) and an electrocution risk in staying in the office.

**Key points:**

- Evacuate the top floor of UN House immediately
- Evacuate WFP offices immediately
- Secondary work sites have been identified at UNICEF, but they may need notification
- Internet to the entire UN House is affected.

**Inject 13: Situation update:**

To:   ALL

Subject:      UNDP Internet back on line

The internet at UNDP has been re-established but damaged offices are still not functioning.

**Inject 14: Information**

To:        All

From:      Department of Disaster Management, MOHCA, Bhutan

Subject:      Disaster Map

The Government of Bhutan has made a small map of the Thimphu Area affected by the flash flood and debris flow.

ATTACHMENT

**Inject 15: Information:**

From:      Government of Bhutan

To:        ALL

Subject:     Airport Closure


Damage reports have just been received from the airport in Paro. Initial reports are that the debris flow has caused a blockage in the river that flows past the airport causing some water inundation to the runways and the main terminal building. Authorities have stated that fortunately damage is light and that they expect to have the airport functioning again within 48 hours.

The Indian Military has offered assistance from the military and civilian base at Bagdoga and are currently prepositioning two helicopters there to support relief operations. Druk air has also offered the use of two helicopters that are based in Nepal.

All air support will take a minimum of 24 hours to become available.


**Inject 16: Request:**

From:      Government of Bhutan

To:        RC's office

Subject:     Search and Rescue Assistance


The government of Bhutan is requesting assistance through the INSARAG network for search and rescue support. The government has stated that they will waive any visa requirements to people travelling on an official capacity with the United Nations for one month.


**Inject 17: Request for Information**

From:      OCHA Regional Office, Bangkok

To:        RC's Office

Subject:     Situation Report


OCHA Bangkok Regional Office has received a report of the disaster from the GDAC's and Red Puma alert network. They are requesting a situation report as well as any requests for assistance.

OCHA is offering to help with coordination of INSARAG teams and has offered to send an UNDAC team to assist.

OCHA has stated that speculative media reports have started suggesting up to 1500 people are missing and some 30, 000 affected. Could you please confirm these figures with the government and include the latest figures in the situation report?

**Report to facilitation team. CC Relevant simulation parties.**

**Inject 18: Request for Information**

From:        UNICEF HQ, Geneva

To:         UNICEF CO, Bhutan

Subject:     Situation report


UNICEF staff have been alerted to the disaster through GDAC's, RedPuma and through media reports. They are requesting an urgent sitrep and have offered to send an emergency response team.


**Inject 19: Request for information**

From:        WHO Regional Office, SEARO

To:         WHO office, Bhutan

Subject:     Request for information


WHO staff have been alerted to the disaster through GDAC's, RedPuma and through media reports.

They are requesting an urgent sitrep and have offered to send a HAC team.


**Report to facilitation team.   CC Relevant simulation parties.**


**Inject 20: Information**:

To:   ALL

From: Bhutanese Military

Subject:     Road Conditions, Thimphu


Currently the following road conditions exist:

Thimphu:    No bridges functioning

             Road on the east side of the river partly destroyed

Thimphu – Paro

             3 Bridges destroyed, 2 damaged and unsafe

             Sections of the road destroyed by the river

Thimphu – Wangdue Phodrang

             Functioning.

             No bridges to Thimphu town west bank

             Sections subject to landslide

             Indian Military crews maintaining road access

Military has limited helicopter operations in place in collaboration with the Indian Military.

**Inject 21: Request for Information**

From:        Government of Bhutan

To:          RC's office

Subject:      Donor assistance.

The government of Bhutan has been offered assistance from Swedish SIDA.   SIDA would like to coordinate with the government, the RC's office and OCHA in the event of a CERF and Flash appeals but is also happy to provide bi-lateral assistance.

**Report any action to the facilitation team.   CC Relevant simulation parties.**

**Inject 22: Information**

To:          ALL

Subject:      Repairs complete at UNDP

Repairs to the roof at UNDP are complete.   While the offices are still in a mess, the building is now safe and suitable for the return of staff.

**Inject  23: Request for information**

To:          Administration Office

From:        Staff

Subject:      Accommodation and meals

Some staff members from all agencies have stated that as their homes are on the Eastern side of the river they are not able to return home and will need to find accommodation on the western side.  Some staff are happy to sleep in the office but will need blankets and bedding. Some staff are not happy to stay in the office. Contacting hotels, the only hotel with any accommodation is the Taj Hotel which currently is charging $700.00 per person, per night.

All staff working at the offices will need meals. Please inform all staff of logistical arrangements that are being put into place to assist staff who are unable to return home.

**Report to facilitation team.   CC Relevant simulation parties.**

**Inject  24: Request for action**

To:          RC's Office

From:        OCHA CRD New York

Subject:      Prepare consolidated sitrep for briefing of the DSG Humanitarian Affairs and the SG

Current Data:

Refer to attachment


Other information

Flood waters are receding to pre flood levels

USGS has published information on their web page that indicates that the source of the flash flood was a glacier lake in the Jigme Dorge National Park.   Due to recent changes in the climate and a major landslide a few years ago the Glacial lake has expanded dramatically and had been estimated to contain over 5.5 km3 of water.

Over the past week Bhutan has seen unusual levels of rainfall as the monsoon has commenced.   This morning due to the weeks of heavy rainfall and the unstable ground conditions the glacial lake at Jigme Dorge to collapse releasing most of the contents of the lake in less than 15 minutes.   The resulting GLOF (Glacial Lake Outburst Flood) raised the height of the Wang Chhu by approximately 27 meters above the already flooded river. This has caused a flood front that has travelled at high speed down the valley and has destroyed everything in the valley floor.


**Report to facilitation team.   CC Relevant simulation parties.**

## Annex 3: Debriefing notes

### From Post it notes

| What went well |
|---|
| Good communication. |
| Public Announcement Equipment was very useful. |
| Task Force meeting; for Specific Sectors, Education, Health etc. |
| Evacuation. |
| Rapid Assessment. |
| Situation Report. |
| Sick staff updates done regularly. |
| All staff meeting effective, timely and relevant. |
| UNCT meeting went well. |
| Delegation of works was well organized. |
| There was good leadership and less of confusion. |
| Coordination amongst staff was good. |
| Information Flow within UNICEF. |
| Everybody listened to each other and supported each other. |
| Respective warden's role, critical- carried out effectively. |
| Good Response. |
| Communication system went wall, although with few congestions. |
| Concern for security of staff/relatives. |
| Staff safety. |
| Good Response. |
| At the end, incorporation of aspects of Emergency, Education, Health, Child Protection. |
| Instruction was clear (message was clearly communicated). |
| Lot of meetings. |
| Good flow of information. |
| Facilitation by CMT. |
| Commitment was in place. |
| Early preparedness training helped to formulate response plan. |
| Commitment was in place. |
| Good communication. |
| Situation update & communication from RC to CRT. |
| History of events was noted from the beginning. |
| Relocation of CRT to UNICEF. |
| Staff contact by mobile. |
| Communication (Sr. Management) with international organizations for assistance. |
| Increased capacity of the staff to dealt with emergency situation. |
| Information collation for Situation Reports. |
| Key external resource mobilization messages went out. |
| Simulation was at times frightening real. |
| Rapid mobilization of OCHA. |
| Good and rapid overall head count. |
| CRT delivered. |
| The overall coordination was good. Regular meeting (amongst operation team) was very helpful to understand overall response. |
| Planning and meeting at different level. |
| Timely meeting was conducted and responsibilities were fixed accordingly. |
| Good acceptance of evacuated staff. |
| Updated BCP/Pandemic Plan. |
| Communication (IT+phones) worked well and people made full use of it. |
| Clear information with latest updates was very helpful. |

| |
|---|
| Updates on staff wellbeing by location was good. |
| Timely activation of CRT. |
| Planning and coordination. |
| Coordination among different agencies. |
| Well coordination among different teams. |
| In operations we work in time. |
| Staff Enthusiasm. |
| Quick response from UNDP DRR to sick staff member at home, including clear instructions. |
| Coordination with zone wardens. |
| Staff safety ensured. |
| Solidarity between colleagues. |
| Team work.  Team Spirit. |
| Response from Senior Management. |
| Realistic learning. |
| Coordination. |
| Ensuring staff safety. |
| Calls from wardens to check on safety for sick staff members. |
| Safety of staff  (mask, hand sanitizer |
| Contact amongst wardens and staff under them went well. |
| Warden ensuring our safety. |
| UN Coherence (Joint work went well) |
| Ensuring staff safety, Transport coordination, emails notification warnings. |
| Coordination was not that worse than expected. |
| Timely UNCR meeting. |
| Evacuation was effective. |
| Staff Safety, Information sharing |
| Received update on the situation from time to time. |
| Staff were cleared from UNDP office swiftly. |
| Staff mobilized to safety. |
| Staff Safety was taken care and reallocation was on time. |
| Dissemination of information or Situation Report. |

| What did not go well |
|---|
| No appropriate information from CRT. |
| No contact with LSA (no response through email, no response to call) for sick staff member and not contacted by CRT medical Team. |
| We need SoP on evacuation, transportation & management of vehicles. |
| Not well plan for evacuation for Non-essential staff. |
| Minor Traffic. |
| Evacuation. |
| No follow-up |
| Not clear on my simulation role as being sick at home, a written role play should be given. |
| Evacuation was bit confusing. |
| Too much dependence on Govt. for information at a time when crisis was at a peak. |
| Lack of disaggregated data. |
| Access to internet connectivity. |
| Not everyone was on the same page when it comes to having latest information updated |
| Coordination process too complicated. |
| No clear delineation of roles and responsibilities. |
| Sufficient core information lacking – needed to plan |
| Staff does not know how to use radio code. |
| No contact details/work station. |
| UN has good communication skills but need to be harnessed and coordinated better. |

| |
|---|
| No clear instruction on roles and responsibilities. |
| Little congestion and confusion in the communication system. |
| Relocation/evacuation plan was not communicated. |
| Evacuation not according to our evacuation plan. |
| Situation Reporting took place but require further streamlining. |
| Radio communication, Purchase of supplies, meetings took too long. |
| Not aware of whom/where acting LSA and warden (UNDP) on leave. |
| Some staff not aware of their roles. |
| Confusion on roles. |
| Information between Senior UNGT and staff. |
| Communication Gap. |
| No joint EOC. |
| No proper instruction and information. |
| Multi-tasking. |
| Need alternates. |
| Discrepancy between Co-chair in Health TG and Health emergency Task Force. |
| Some organization does not know clearly their role during emergency. |
| No clear instruction from the CRT team. |
| No proper follow-up from warden. |
| Information flow confusion. |
| Did not understand who critical and non-critical staffs are. |
| No clear guidance for those living on the other side of the river. |
| Lack of organization in checking staff well-being. |
| Not informed by warden |
| Emergency planning created more confusion. |
| Lack of coordination for rest of the staff besides CRT & essential staff. |
| The warden system. |
| Information coming in was too fast. |
| Some staff were not aware of their roles. |
| Communication with staff out of the office was not complete.  Some simulation e-mails were not received by everyone. |
| No excess to email after evacuation.  Information not available on time.  Communication proplem. |
| Too many radio users. |
| Guests/missions of UN agencies un-accounted. |
| Lack of communication and information. |
| Warden zone lists not up to date. |
| Awareness about individual roles, some confusion |
| Radio exercise needs to improve.  Needs to have full time radio operator.  To purchase more radios. |
| No information on situation and action taken from Senior Management to staff during the day. (UNDP) |
| Lack of clarity about chain of management. |
| Which staff going to UNICEF and whom remained. |
| Breakdown/gap between HR team and Security Focal Points. |
| Different wardens provided different information/instructions |
| Confusion between the role of CMT, CRT, essential staff, emergency focal point. Rep. RC, DR. |
| Lack of emergency sense, sense of urgency to be improved. |
| No internet at the place of evacuation. |
| Proper IT equipment not in place. |
| Evacuation to other building and work stations not arranged. |
| Alternate work place not ready. |
| Work station not clear to other agencies staff |

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| Satellite communication is not functioning, but crucial during emergencies. |
| Radio communication jam. |
| Radio communication did not go very well |
| Use of radio language not appropriate. |
| Skill Drill, Radio failed. |
| All staff do not have radios. |
| Radio operation was not functional as required to be in emergency situation. |
| Confusion after communication failed. |
| VHF radio needs to be used regularly in order to train all staff. |
| Radio nor reliable. |
| Less Communication equipment functional |
| Communication congestion. Too many people taking at the same time. |
| No properly equipped staff. |
| Communication (dead radio) when out of office. |
| Without radio was difficult to communicate when the phones were down |
| Radio channel traffic too much. |
| No one was using Thuraya as alternate for communication when landlines /mobiles were not working. |
| Radio response in channel 1 very much congested with radio communication |
| Staff are not well trained in VHF. |
| Radio battery was dead at the time of operation |
| Radio check of staff |
| Improper use of radio. |
| Radio communication. |
| Coordination. |
| Exercise did not always follow ESTD BCP protocols. |
| Too many meetings. |
| Confusion regarding CRT/staff meetings- overlap with other important meeting. |
| Too much time spent in meeting among the Sr. Management |
| How does one communicate with staff if the communication network is down? And the staff does not have VHF sets. |
| The instruction/delegation of tasks not very clear. |
| Division of responsibility was often chaotic/haphazard. |
| Unclear roles for some groups eg. Communication group. |
| Some emails received too many times by different persons |
| CMT communications to staff were delayed. |
| No/very little reference to plans. |
| Too many emails. |
| Communication very slow – internet down, printer not working. |
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## Flip-charts (Group Work)

| What went well |
|---|
| Good flow of information from the BhutanSim Office (in a real situation such coordination is critical). |
| General staff meeting conducted in UNICEF (staff and family concerns). |
| Follow-up from wardens/HR on staff and family safety. |
| Government request for support acted upon timely manner (including resources) |
| Activation of coordination teams (RC, CMT, UNCT, CRT) |
| Evacuation of critical/essential staff. |
| Activation of different plan, head count. |

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| UNCT/CMT meeting good |
| Flow of information from BhutanSim |
| Mobilization of external assistance. |
| Prompt decision making. |
| General staff meeting at UNICEF on staff and dependent welfares issues. |
| IT and communication equipment in place. |
| CRT evacuation to UNICEF/EOC well coordinated. |
| Ensuring staff & dependents safety went well. |
| EOC/UNICEF successful in setting up communication & accommodation for CRT. |
| HR team coordination successful (radio sharing/accommodation) |
| Team spirit was seen as very strong among all agencies. |
| Safety of staff/dependents was well taken care. |
| Evacuation was done on time. |
| Good teamwork and participation |
| Some meetings were short & brief. |
| Stockpiling of water, mask, gloves, first aid box & hand sanitizer (UNICEF) |
| Public address system – information updated on a timely manner for meeting (UNICEF) |
| Segregation of roles & responsibility was clear. |
| Active participation/co-operation among the participants. |
| Good flow of information. |
| Commitment from all the agencies to emergency response (WHO, UNFPA & UNICEF) |
| Rapid deployment for search and rescue of UN staff. |
| Some useful date collected during search & rescue operations. |
| Quick & accepted quality of SITREP. |
| SITREP shared with local UN agencies, regional offices & HQ. |
| Timely update of SITREP. |
| Analysis of preliminary date & development of response plan. |
| Convened meeting on Health & WAS, Nutrition to share Task Team response plan. |
| Discussed on pre-positioning of supplies (Dignity kits and health kits) & hospital waiting room. |
| All displaced family, received hand sanitizers. |
| Overall coordination was satisfactory. |
| Warden System – Good coordination, - Good staff response. |
| Evacuation & Relocation – Timely, - Transportation organized,  - Properly relocated. |
| Good coordination between programme, supply and other UN agencies. |
| Transport arrangement in place, eg. IMTRAT. |
| Activation/Implementation of EPRP and BCP. |
| Planned deployment of prepositioned items. |
| Fund mobilization. |
| Evacuation of staff. |
| Information exchange with IPs and government. |
| Response timely (CMT decisions) |
| Situation Report ready on time. |
| Lesson Learnt for further improvement from simulation. |
| Unit cost of supplies available. |
| Simulation scenario relevant- in terms of size of the problem and type of emergency. |
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| |

| What did not go well |
|---|
| Radio clash/jam. Protocol |
| Language problem |
| Warden should not be multi-tasking. |
| Difficulty in contacting staff on leave and duty travel (warden not aware of information). |

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|---|
| Warden list to be updated regularly. |
| Use of radio mandatory by all staff/agencies. |
| Did not use PA system. |
| No satellite communication for back up internet connectivity. |
| No sufficient radio provision for UNDP. |
| Lack of coordination & communication between HR & LSA & LSE/ZW (all performing same task). |
| Radio etiquette & Language not up to the requires emergency standards + batteries (staff not familiar with call signs) |
| CMT and SMT meeting took too long & delegation of duties not clearly communicated. |
| Thuraya phones not used although fully functional. |
| First Aid, stock piled supplies were forgotten. |
| Email updates not practical/ PA system, other means to be considered. |
| No clear instruction on the roles and responsibilities |
| No clear information on the evacuation. |
| Command Centre was not in place. |
| Too many instructions from different sources. |
| Conflicting messages and instructions. |
| No logistical support for non-essential  staff. |
| Everything left on, eg. computers, lights, etc. in the building. |
| No consistency in check-up. |
| No proper radio management/training. |
| 1. VHF Radio<br>  • Jam<br>  • Clash<br>  • Regular check for the radio system.<br>  • Language |
| 2. Wardens and Staff:<br>  • Multitasking of wardens.<br>  • Difficulty in reaching  staff on leave & duty travel.<br>  • No updated list. |
| 3. Announcement:<br>  • Initial Announcement not clear.<br>  • Confusion.<br>  • Did not use PA system |
| Reception – IT. |
| Delegation of coordination on programme response. |
| Coordination of communication flow. |
| BCP protocol not followed eg. Staff unaware of their roles. |
| CRT communication (instructions to staff unclear/insufficient). |
| Outbreak communication. |
| Assistance to government in data collection. |
| No stock of supplies |
| Overlap in meeting timing |
| Insufficient information from the field. |
| Capacity of staff to use VHF radio limited. |
| Shortage of VHF radio. |
| Lack of back-up support. |
| Short notice of de-activation of simulation. |
| Not enough parking space in UNICEF office. |
| Staff ran out of mobile voucher. |
| No logistic arrangement for staff living across the river. |
| |

| What needs to be done next/Way forward |
|---|
| Joint meeting CRT/CMT. |
| Activating Radio check. |
| BCP more userfriendly. |
| Quize in BCP once in a year. |
| Only two plans; BCP and IACP (from 3 to 2). Pandemic to move to 2 plans. |
| Finalize Rapid Assessment. |
| Training on cluster approach. |
| **Communication**<br>a. VHF radio to all staff.<br>    1. Use of radio – language, call sign – training.<br>    2. Spare battery<br>    3. Regular Maintenance of equipment.<br>b. Begin – Regular testing<br>c. Thuraya Sat. phones – training<br>d. Information dissemination – emergency upates.<br>e. PA system – use.<br>f. Clear line of communication.<br>g. SOP/Protocol<br>    2. Duties and responsibilities<br>        a. Separate wardens for non-essential staff.<br>        b. Roles of non-essential staff<br>        c. Clear communication of roles and responsibilities.<br>        d. Presentation of BCP.<br>    3. Stockpiling and Supplies<br>        a. IT emergency kits.<br>        b. First Aid kits<br>        c. Tents & tools to set-up EOC.<br>        d. Information on stocks.<br>        e. Transportations arrangement. |
| Joint Meeting of CMT/CRT. |
| Activate radio checks. |
| Award for best radio communicator |
| Communication tree |
| Gap analysis |
| Practice radio communication – monthly on a set schedule. |
| First Aid training. |
| Set up Info. KIOSKS. |
| Training |
| Radio for all staff |
| First Aid Training |
| Multi-tasking (not recommended for wardens) |
| **Responsibility:**<br>• Wardens should not be multitasked (not more than one)<br>• Compulsory use of radio by all staff.<br>• Staff information (mobile no. radio sign, fix line no. agency) to be updated regularly in the Annex D, Appendiz 4 of the Security Plan.<br>• The three contingency plan to be consolidated into one. |
| **Equipments:**<br>• Repeater<br>• Helmets, Jackets, Gloves, Masks etc<br>• Torch light<br>• Emergency Family Kit (stock piling) |

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|---|
| **Communication:** <br> • DO should activate wardens immediately after the Disaster before any meeting. <br> • Staff to inform zone wardens on their travel and leave. |
| Consolidation of BCP/Pandemic and Interagency Contingency Plan |
| Simple organogram during Emergency with clear role and responsibilities. |
| Accountability lies on the head of agency during emergency for both Operations and programme. |
| Regular radio check-once in two weeks for the first three months and once a month after three months. |
| Each section should have one trained radio operator. |
| Consolidated call signs to be distributed to all staff. |
| Hands on training – use radio to communicate with the drivers instead of mobile. |
| Scope for unofficial source of information. |
| Warden list to be updated with detail information (email, address, call sign, landline). |
| Channel of communication in addition to email. |
| Ensure the joint multi-sectoral Rapid Assessment among RGoB and UN. |
| Ensure UN staff directory updated regularly. |
| Identify essential staff for different kind of emergency. |
| Regional Stock piling (storage). |
| Connectivity at home for essential staff. |
| Find alternate for email. |
| PME as centre for emergency information. |
| |

## *Annex 4    Participant Instructions*

# Participant Instructions

*"You are now in an emergency situation!"*

## A. GOALS AND ROLES

The main goal of the simulation exercise is to test the status of emergency preparedness of the various humanitarian actors in the country and their capacity to manage a response to crisis within the framework of humanitarian reform.

### 1.    Objectives

- Strengthen partnership among UN agencies and their capacity to respond to emergencies.

- Familiarize participants with roles and responsibilities of participating agencies, as well as the immediate actions that should be taken by those agencies in the initial hours of an emergency.

- Test the efficacy of the preparedness measures of the various participating humanitarian agencies (such as inter-agency contingency plans.)

- Enable participants to understand the importance of leadership (decision-making) and good management (coordination, delegation, time management, flexibility, and task prioritization) in emergency response.

- Examine business continuity planning structures

- Identify in a participatory way inter-agency sectoral strengths and weaknesses.

### 2.    The Simulation Exercise

The simulation exercise is narrowly focused on the first 24 hours of a crisis that is unfolding in your country. In order to focus on this objective, some liberties have been taken with regard to certain key events that would typically occur in such situations – such as emergency meetings of local government or of the UN Country Team.

In this exercise you will not be "role-playing." Rather, respond as you would in a real such emergency. In the exercise, the organisational/office structure is as it exists in reality unless you decide to make changes in order to manage the crisis more effectively.

Assume that the local government, NGO partners, UN agencies, donors are exactly the same as they are in Bhutan. If certain actors are not directly involved in the simulation, you may assume that they would act in the exercise as they do in current reality. Base the elements of your emergency response on detailed, country specific information, that is, on the laws, customs, existing approaches to emergency preparedness and response, and on any other information that you have on Bhutan.

For simulation purposes, all data that you receive from the Simulation Administration Centre should be considered as true and factual.

## B. RULES FOR ALL PARTICIPANTS

### 1. General

- The RC/HC has stressed the importance of the exercise and has asked for technical support from the Regional Offices in facilitating the simulation.

- Regional and headquarters offices will be available and will contact you to provide support as needed. They will be informed about the results and will provide feedback to the facilitators and to your organizations.

- It is up to all of you – country team, clusters/sectors, organizations and individuals – to determine how you will respond.

- Participants may not modify nor add new events to the scenario that is presented.

- Throughout the exercise, facilitators will act as observers, not as participants. They will respond only to questions concerning the procedures of running the exercise.

*A simulation cannot take into account all the situations or information needs that can arise. In such circumstances, use your judgment, make assumptions, and draw on your experience to formulate your response, all the while taking into account the specific context of this country.*

## 2. Timeframe

The exercise will start at 09:30 and continue until 17:00. It is up to you, individually or as a group, to decide how you will use available time. Manage meeting times well (maximum: 30 minutes.) Facilitators will observe your meetings but will intervene only to note time constraints.

## 3. Outputs to be achieved by the End of the Simulation

By the end of the simulation, participants should have collectively produced (or carried out) the following results (or actions.) All requested documents must be communicated to the Simulation Administration Centre by 17:00 at the very latest. Your outputs will be discussed at the debriefing workshop to be held the day after the exercise.

1. A consolidated situation report.
2. Replies to official bodies such as the government of Bhutan
3. Reports to HQ organisations.
4. A decision on the coordination structures needed and the application of standard procedures for its formalization.
5. Summary of available resources (human, financial, material) for, and key gaps in, the immediate response.
6. A decision on a resource mobilisation plan and the development of required draft documents.
7. Definition of agreed modalities for deployment of sector assessment teams (participants, tools/methodology, timeline).

## C. RESPONDING TO EMAILS AND TELEPHONE CALLS

As part of the simulation, and as in any evolving emergency, you will receive a number of emails and telephone calls. Please:

- ALWAYS copy the Simulation Administration Centre on all emails that are part of the simulation (bhutansim@gmail.com).

- Please respond to the Simulation Administration Centre when the email or telephone call involves an external actor (such as government, UN agency, NGO). The exception to this is when the external actor is actually participating in the simulation—then you will respond directly to that UN agency or NGO, with a "cc" to the Simulation Administration Centre.

| Simulation Administration Centre Contact Information | |
|---|---|
| Telephone number | **Main        02322424 Extn 225** <br> **Alternate    17957356** |
| Email address | **bhutansim@gmail.com** |

| Facilitation team | Telephone |
|---|---|
| 1. Shairi Mathur | 17957356 |
| 2. Allan Bell | +41794446194 (use SMS) |
| 3. Ingo Neu | 17110118 |
| 4. Sonam Pelden | 17110120 |
| 5. Gunilla Lindstrom | 17957356 |

### *ATTENTION!*

All simulation mails must include the words

### "SIMULATION-SIMULATION-SIMULATION"

in two places:

- In the subject line.
- At the top of the body of the message.

### *D. MEETINGS*

Please inform the Simulation Administration Centre of all meetings that are scheduled by participants so that a facilitator can be sent to observe.

### *E. SIMULATION DEBRIEFING WORKSHOP*

A debriefing of the exercise will be held for selected participants tomorrow starting at **10.30 at the TAJ hotel, Thimphu**.   This will commence with tea and coffee and an initial welcome.