

SIERRA LEONE Landslide and Flash Floods

18 August – 6 September 2017



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Executive Summary

- Following the landslide, which occurred on 14 August, the Government of Sierra Leone (GoSL) requested international assistance. The UN Resident Coordinator (RC) requested for an UNDAC team to be deployed to the country to support the Government in its coordination role.
- The UNDAC team deliverables include:
 - nine situational updates,
 - operational mapping done by MapAction,
 - an environmental impact report, humanitarian contact list,
 - 4W online set-up, as well as
 - liaison with Office of National Security (ONS) and the United National Country Team (UNCT).
- As part of the deployment, the following trainings have been delivered:
 - Crisis Communication and common messaging for UNCT Communications and Community Engagement officers,
 - GIS basics for ONS Situation Room.
- Evaluating the humanitarian response under ONS and the nine sectoral pillars, it is advocated to explore the establishment of an Emergency Operations Centre (EOC) mechanism to support improved oversight, resourcing, information and decision-making. Ideally this would be a key component of a comprehensive legally mandated NDMA for the country. The ONS (Office for National Security) is in charge of the overall coordination of the disaster relief effort, working through sectoral pillars and a decentralised structure of Incident Response Centres (IRCs). Despite recent emergency responses (flooding 2015, Ebola), the national disaster management structures appeared unsystematic initially, and operating on an *ad hoc* basis. Unavailability of data and weak information flow have been constraints in this response. Structures for reporting, decision-making and accountability also appeared unclear. While systems were created to deal with some of these issues during the response, there is a need to consider support to the ONS to ensure a more structured approach in the future;
- As a vital part of disaster management, risk reduction is of fundamental importance. There is an urgent need to control the risks of erosion and landslide slip from main landslide deposit in Regent Subdivision. If these risks are controlled there is a low probability of any major pollution from building/household debris mixed in the primary deposit. There are opportunities for debris recycling, but the waste management in Freetown pose severe environmental risks and is in urgent need of improvement;
- On a long-term note, the poor sanitation practice and unsafe water sources contribute to health risks in affected areas and to negative impacts on the environment. Mitigation and reduction of environmental risks as well as improved solid waste management are two crucial areas that should be addressed in the medium and long term development planning and risk reduction support from the UN to the Government of Sierra Leone.

Key Recommendations

To the GoSL:

- Consider setting up a National Disaster Management Agency anchored at the highest level of Government, in line with the ECOWAS proposal for a model disaster management agency;
- Adapt the legal framework in line with the new NDMA when established;
- Provide budget lines for early warning and disaster management systems.

To the ONS/ Disaster Management Department (DMD) and Pillar Leads:

- Develop standard operating procedures (SOPs) for a national and decentralised Emergency Operations Centre (EOC) with a clear command & control structure. The EOC should include a situation room, but the overall it should be operations-focused and to integrate the logistics component;
- Lead an after-action review exercise gathering all key stakeholders, which should lead to specific response plans and SOPs for the most likely events in Sierra Leone besides epidemics (flash floods, landslides, collapse of structures);
- Consolidate existing early warning systems in the situation room and identify possible gaps (for instance monitoring of risks of landslides) and determine triggers for early action including at decentralised level;
- Include clear processes in the contingency planning.

To the UNCT:

- Support ONS/DMD to translate the inter-agency 'no regret' plan into specific response/contingency plans for floods, landslide and cholera (most likely events others than epidemics);
- Strengthen the pillar co-lead by updating the UNCT contingency SOPs;
- Support GoSL (concerned Ministries and Agencies) in developing standard rapid multisector needs assessment and data reporting tools and standards;
- Establish an information exchange platform with development and humanitarian actors (NGOs, Red Cross, UN, key partners) to support the Government in its emergency preparedness and disaster risk reduction efforts; the COPIA currently active in Guinea could serve as model to adapt;
- Participate in the ONS-led after action review gathering all key stakeholders which should lead to specific response plans and SOPs for the most likely events in Sierra Leone besides epidemics (flash floods, landslides, collapse of structures);
- Reinforce and systematise the process behind coherent messaging and community engagement activities;
- Although a UN Incident Manager was designated by the RC to coordinate and pool UN resources to respond to the crisis, few stakeholders were aware of that arrangement and the Incident Manager's profile should have been raised by being the one UN voice at the ONS meetings and by leading an hoc UN emergency task force.

To the OCHA Regional Office for West and Central Africa (ROWCA):

- Support the rolling out of the IASC Emergency Response Preparedness approach including minimum preparedness actions and advanced preparedness actions for most likely events;
- Support the UNCT in preparing the After-Action Review with the Government;
- Liaise with other UN regional offices to ensure their participation in the After-Action Review and support to emergency response preparedness in Sierra Leone.

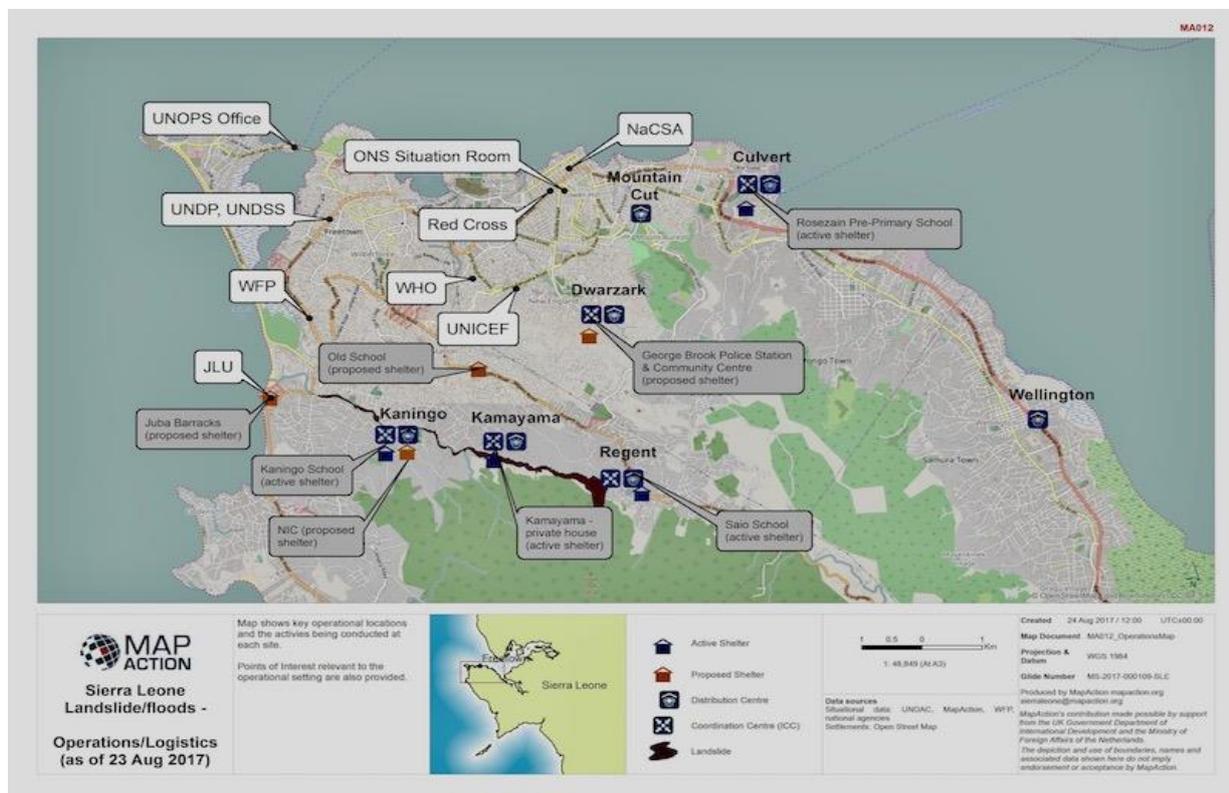
Background Information

Description of disaster and consequences

On 14 August, heavy rains triggered flash floods and a six-kilometre-long landslide in Sierra Leone's capital Freetown, submerging and wiping out over 300 houses along the banks of the Juba river. Flash floods also affected at least four other communities in other parts greater Freetown. At least 500 people died, and 810 are missing, although many of them are likely to be among the unidentified 500 deaths. Over 5,900 people having been directly affected by the disaster. Based on the number of destroyed homes roughly 3,000 people have been displaced. The recurrent flash floods largely resulted in infrastructural damage with very few fatalities and injuries. While most of the internally displaced persons (IDPs) moved in with host families, as of [date], XX people have been voluntarily relocated to two primary holding centres (Old Skool at Hill station and Juba Barracks). Seasonal rains continue, but no further flooding or damage reported to date. Further assessments have not suggested specific risk of additional landslides.

Short overview of initial needs and response

Over 200 wounded individuals were taken to hospital. Search and rescue was supported by the Sierra Leone army, Sierra Leone Red Cross and volunteers. Initial distribution of non-food items and wet food targeted the direct affected communities by a variety of national and present organisations. Shelter remained a priority from the very onset through the response. The bulk of displaced were housed with and thus made an impact on the host communities and temporary shelter featuring standards below SPHERE benchmarks. The standards of assistance have been low in many areas. WASH partners have taken action to prevent the contamination of water sources and epidemics.



Mission Objectives

Reason for UNDAC deployment to the disaster

The Government declared a level-3 national emergency and requested international assistance. The UN Resident Coordinator (RC) requested for an UNDAC team to be deployed to the country to support the Government in its coordination role.

Summary of ToRs specific Sierra Leone

- Support the ONS, which is coordinating the response on behalf of the Government in its role, and with regards to managing information and stakeholders such as NGOs, civil society and development partners;
- Support the ONS with strengthening the national response plan;
- Support with assessment, including mapping of vulnerable areas and communities and risks of future landslides;
- If required, prepare a Flash Appeal;
- Support the Government with communications (internal and external), which requires coordination and strengthening.

Team composition, support and deployment

The team included 10 members at its peak: seven UNDAC members and three MapAction staff. Despite arriving and leaving at different times, the cohesion between the team members was seamless and enabled the team to provide strong support to the RC and Government at all times.

- *Outcome of initial meeting with RC:* Upon arrival, the team was briefed by the RC and his Special Assistant. Based on this briefing, initial tasks were to support coordination efforts, assessment of the environmental impact, provide information management (IM) support, reporting and mapping. Team members were allocated tasks and given priorities accordingly.
- *Relations with Governmental entities:* The team enjoyed good relations with relevant Government entities, particularly with the ONS and colleagues in the Situation Room, despite the fact the ONS staff being overwhelmed with competing priorities at times.
- *Summary of initial Plan of Action (PoA):* An initial PoArrival/Action in accordance with the UNDAC handbook was drafted by the Deputy Team Leader (DTL) and finalized by the Team Leader (TL). In the task division, it was agreed between TL and DTL that every team member should have the possibility to participate in all general activities (site visits, field trips, meetings, etc). Specific activities, such as those related to environmental issues, were assigned to subject matter experts (SME). For all functions, a backup amongst the team members was assigned. This was revealed to be a good working methodology. Minor changes were done after the second day. Especially during the first week, many meetings had to be attended leaving only one person at the OSOCC at certain moments. To the extent possible, the team tried to ensure the same person attends specific meetings to ensure continuity. The excellent cooperation with MapAction colleagues and their precious input needs to be highlighted. An overview of their products can be found in on the [MapAction website](#) and [ReliefWeb](#).

(The full team composition can be found at the end of this report).

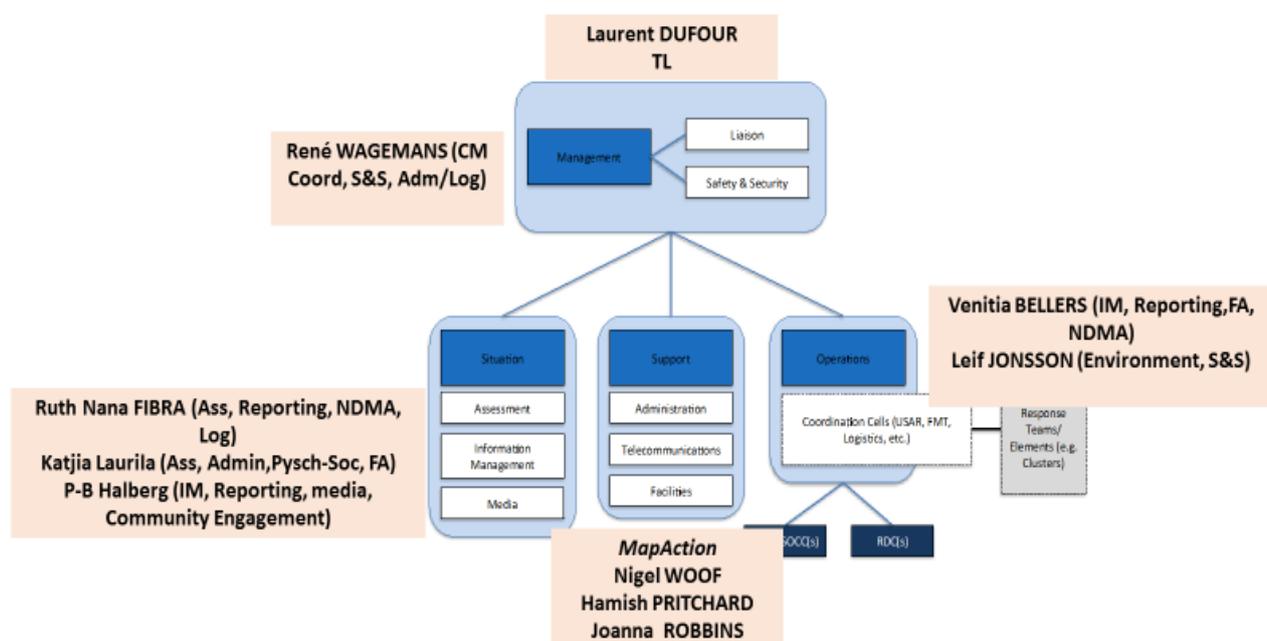
Name	Meeting	Function	Details
Laurent	<ul style="list-style-type: none"> ONS daily UNCT 	TL	RC Donors IEM
René	<ul style="list-style-type: none"> ONS (2) UNCT(2) START network (NGO's) 	DTL Admin(3) Log(3)	OSOCC Mgt CM Coord S&S Internal Report + EOM report
Katja	<ul style="list-style-type: none"> Techn Meeting at WFP Cash Transfer WG 	Sit/Ass Adm(1) Log(2)	Coord pillar LNO Psycho-soc FA (1)
Ruth	ONS(2)	Sit/Ass Adm(2) Log(1)	WASH/Health LNO Reporting(3)
Venetia	ONS(1)	Ops/IM	IM(2) Reporting (2) FA(2)
Leif	Initial Environmental Assessment Environmental risk aspects Environmental components in early recovery (UNDP, WB DaLA, UN-Habitat) Techn Meeting at WFP (2)	Ops	Risk Analysis Environment S&S (2)
Peter	Communications with communities	Sit/IM	IM (1) Reporting (1) Media
Nigel	WFP, UNOPS	MapAction	
Hamish	WFP, UNOPS	MapAction	
Joanne	WFP, UNOPS	MapAction	

Legend: (1)=main Responsible; (2) = first replacement; (3)= second replacement.

Other team management documents include:

- A Safety and Security Plan (Annex A);
- A SWOT analysis, which took place half-way through the mission to discuss team's performance in comparison with its ToRs

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Coordination Activities

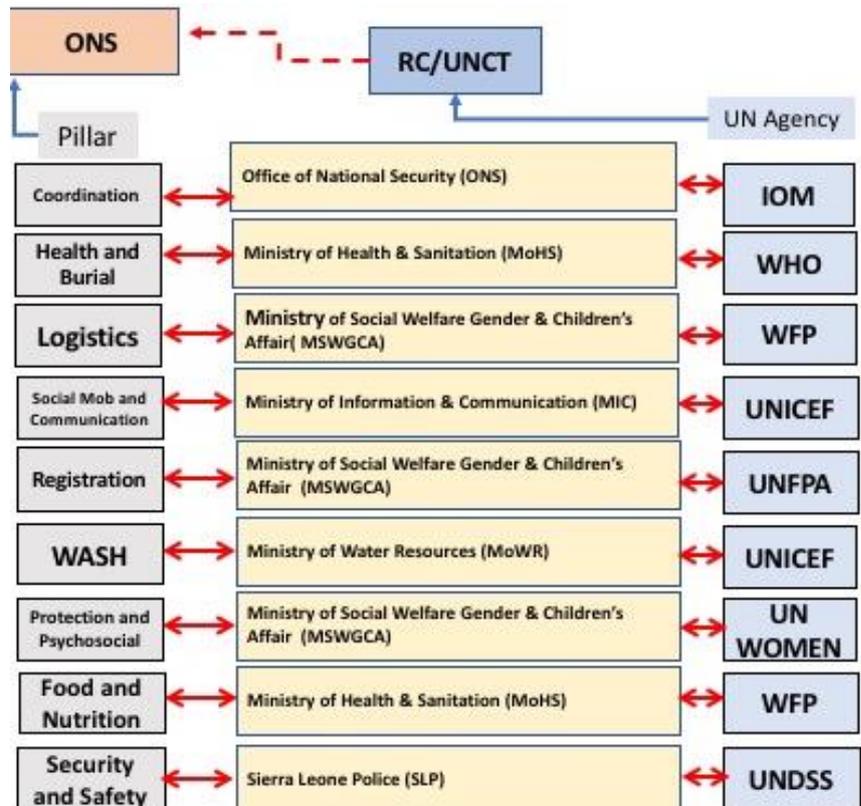
Structures established and why

To avoid unnecessary and potentially duplicative coordination forums, the team supported existing National-led structures: the ONS and its DMD, as well as the technical pillars led by line Ministries and supported by UN agencies (see chart on the right). The team attended meetings of the Pillars and other *ad hoc* structures, such as the Cash Working Group.

Upon arrival, the UNDAC Team established an OSOCC-like workspace in the UNDP conference room, providing information, as well as maps and other useful information. The team also organized itself according to the OSOCC guidelines.

The team supported the ONS Situation Room, which provided a coordination hub for response operations, on a daily basis. The support included:

- Ensuring a smooth flow of information between Incident Response Centres (six IRCs in the different affected communities) and the Situation Room, using standardised reporting tools and format to ensure a consistency in data collection;
- Providing situation and operational maps, as well as consolidating partners' contact lists and 4W (Who does What Where and When);
- Supporting the preparation of ONS meeting (secretariat support);
- Ensuring liaison with the wider humanitarian community, including by participating in the NGO START Network.



The very limited activity of foreign militaries in the relief effort did not justify establishing a humanitarian civil-military coordination (UN-CMCoord) function within the team. The geographical location of the airport (1-2.5 hours from the town), as well as the limited scale of the international relief effort were the reasons why an RDC was not established.

Relation with national coordination structures, OCHA, and humanitarian community

- UNDAC/MapAction members participated in almost all relevant working groups within the pillars, although this resulted to be very challenging in terms of communication (awareness and the systematic use of WhatsApp by Pillars to announce meetings and changes) and transport (also see International Humanitarian Response, below);

- On 25 August, two UNDAC members were appointed to assist the Situation Room at the ONS. Their integration required coordination between TL and the head of DMD in charge of managing the Situation Room. Once integrated, the working relationship was positive;
- Initially, access to the Situation Room was constrained by some reluctance over access of non-ONS staff which had manifested prior to the UNDAC team's arrival. However, following formal introductions and the demonstration of value of UNDAC resources, particularly MapAction products, the relationship became positive and constructive with UNDAC team members regularly present in the Situation Room. This improved communication, access to data (on both sides) and provided valuable insight into the functioning of crisis response at the ONS;
- Frequent communication and coordination was done through phone and email with OCHA-FCSS and ROWCA, mainly through the TL;
- The team supported UNDP-SL in the coordination of preparations for Early Recovery Framework, assisted World Bank Damage and Loss Assessment (DaLA) team with environmental information and field visits, and supported the RC requesting urban planning assistance from UN-Habitat.

Evaluation of structures

- The national structure (ONS) was initially difficult to access. The role of Situation Room was unclear at first, and its internal functioning lacked clear structure. Decision-making structures were vague and information management was initially weak (improved during the second week). No analytic work had been done the first week of the crisis leaving all agencies/organisation without consolidated baseline data on the affected population. The IRCs established on site also lacked clear leadership during the first days of the crisis and their role (including coordination of the actors on the ground) was clarified only during the response, causing confusion;

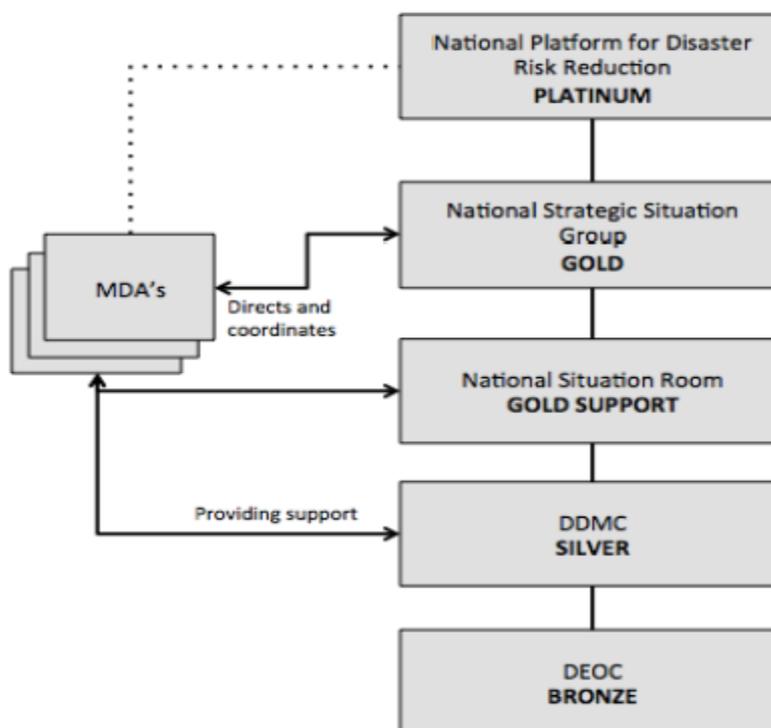


Fig: The national structure for the control of a Flood (*MDA: Ministry Department, Agency; DDMC: District Disaster Management Committee; District EOC)

- Coordination between the Pillars is limited: several pillars at the operational level cannot fully play their support and coordination role;

- Although it seems that disaster management plans existed, the team could only obtain them in the second week to evaluate. The response appeared to have been rather *ad hoc* and lacked a structured approach with clear directives and SOPs. It was apparent that existing plans and handbooks had not been utilised or referred to in the immediate aftermath of the crisis;
- The learning accumulated during the 2015 flooding and Ebola crisis similarly did not appear to have been documented or used to inform future emergency responses. Main findings which were discussed with RC can be found in Annex D;
- The authority and coordination/incident management role of the ONS is not sufficient to maximise the efficiency and coherence of the response. Pillar leads often report only to their line Ministry, although this aspect improved over time.

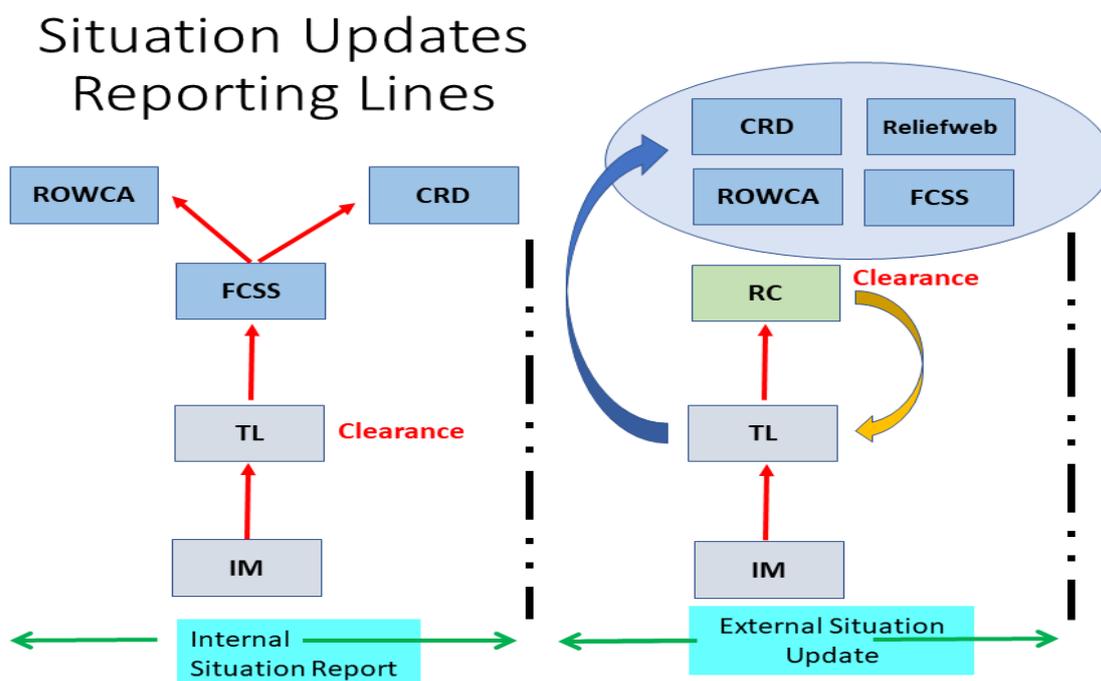
Reporting and Information Management

Reporting

In total fifteen internal situation reports were produced. They were mainly meant to provide FCSS, the RC, ROWCA and CRD with information, which could not be included in the external (public) Situation Reports for different reasons.

Public Flash Updates were produced from day one of the mission. The first four Flash Updates were produced by ROWCA. Once the UNDAC team, under the auspices of the RC, took over the reporting function, the Flash Update was renamed to Situation Update due to the decision not to issue a Flash Appeal and the limited scale of the emergency.

The Situation Updates, were published on VO, ReliefWeb and sent to FCSS, CRD and ROWCA for further use and to a wider audience in Sierra Leone and the region. In collaboration with the RC, the UNDAC team offered the Government to publish a common ONS/UN report from 28 August. The Presidential Spokesperson and the deputy Minister of Communication decided against the mutual



reporting channel, stating that GoSL wanted to ensure full control over the public reporting and its format. Furthermore, the Pillar for Social Mobilisation and Communication, chaired by the Presidential Spokesperson decided on a format for a daily Sitrep and decided to publish the first one on 30 August. The deadline passed and no daily reporting tool has been issued by the pillar and the ONS.

A separate report on immediate environmental risks and aspects was developed and shared with the RC and UNDP Country Office. The report can be found in Annex E.

Information Management

Information management was a shared responsibility among team members with special focus on MapAction and the focal point for contact management. Interaction of with IM and GIS teams of IOM, UNOPS and WFP proved to be very constructive and part of the exit strategy as well. IM products produced by UNDAC included:

- Contact list;
- [Maps \(# and type\)](#) produced by MapAction;
- [3/4Ws.](#)

Relation with national IM, OCHA, and humanitarian community

- The initial training started at the UN Country Team level with a workshop on 22 August. The training focused on Crisis Communication, Communications with Disaster Affected Communities (Community Engagement), handling press and media and common messaging and outreach activities;
- At the national level, the UNDAC team and MapAction organized a training session (29 August) on the mapping of 4W in order to hand-over products and for situation room to improve/reinforce its capacity of data collection (Cfr ToR). Upon the request of UNDAC/MapAction, the RC sent a message on 28 August reminding all agencies to fill in the data collection sheet; Status a couple of weeks later is that half the UN agencies and the INGO/NGOs logged their activities at the 4Ws online portal. That means that the 4Ws tool is not showing an efficient overview. For future references, the 4Ws tool should be simplified and more efforts on debating a common approach and benefits are needed;
- At the NGO level, UNDAC and MapAction participated in the START network, which brings together 24 NGOs, not all of which were present in country at the time of the disaster. Whenever possible, UNDAC connected incoming NGOs with the chair;
- There has been a great need from very beginning for reporting standards to increase the possibility to analyse data. A data expert with the capacity to set up databases and introduce data standards would have been of great benefit to national and international responders. However, this a longer-term investment in capacity-building that often goes beyond the mandate of UNDAC. Furthermore, a light online standard template for 4Ws would have made a major difference for the early stages coordination.

Constraints

- There is no IM working group, and joint work mainly focused on IOM, UNOPS and WFP.
- There was again a problem for OCHA staff to use their HQ laptop during mission because of the restrictions put in by their administrator. Requests to help solving the problem are unnecessarily time-consuming. It would be better to provide deploying staff with an “open” laptop in case of deployment.

Assessments

UNDAC involvement in assessments was rather limited as initial multi-sector rapid needs assessments were conducted on 15 August by Government officials and agencies, two days before the arrival of the UNDAC team. It is interesting to note that these initial assessments estimated the total affected population about 5,400 persons in 1,100 households, not far from the final figures of 5,900 people in 1,600 households. EU Copernicus also produced satellite images of the landslide area and provided a quite accurate estimate of destroyed houses (about 400). The UNDAC team used this initial data to produce a map of affected areas. A main issue remained the registration of the affected population which took more than a week by the responsible ministry (Minister of Social Welfare) and revealed to be too incomplete to be used by responding agencies/organisations. A verification exercise was organized during the weekend of 26-27 August.

Findings and analysis

It was clear from the beginning that this was a localized disaster but one with a high and sudden death toll. It was also clear that there were two main situations with different impacts: a six-kilometre landslide with high death toll and few wounded persons; and localised flash floods in different parts of Freetown (mostly slums in lowlands and along water channels). It was initially difficult to collect accurate data. Too many organizations undertook their own analysis without coordination. As WFP proceeded with the initial findings, many other agencies took ownership of these figures, as ONS could not provide detailed data. However, when response pillars started to organise themselves on day four or five, sectoral needs assessments became more consistent and reliable. A fine-tuned analysis of gaps remained an issue. Deliveries could largely be collected, but partners admitted that there was a risk of overlapping and excluding vulnerable groups. With the verification exercise, a detailed breakdown of affected people was finally provided -- two weeks into the response.

Adjustments of response

Initially the Government indicated clearly that the preferred option would be for homeless people to find temporary shelter with relatives or host families. This approach was based on past lessons learnt such as from the aftermath of the 2015 floods when over 9,000 people were gathered in two stadiums. Then the ONS and partners realised that several households had nowhere to go and that temporary shelters or sites were required. Two sites were selected in consultation with partners including the UN/UNDAC. Advice for choosing locally available construction material (corrugated iron, wood frames) was not endorsed by the ONS and tents were deemed the main option. Family tents were replaced by larger community tents by order of the Government without notice which further complicated the setting up of the sites and delayed their availability.

National Response

Coordination mechanisms and organizations

- In a first stage, five incident response centres (ICC) were set up in each of the affected areas, with a sixth ICC added later. It took some days before IRCs could play their role. Command control and coordination depended much on the skills of the responsible focal point. Certainly, in the beginning missing hard-and software considerably hampered the coordination with all actors on the ground (agencies and NGOs), transfer of information and the registration of affected population. These ICCs were renamed as IRCs (Incident Response Centres);
- At the national level, the ONS (oversaw the overall coordination of the disaster relief effort. Its Disaster Management Department chaired the daily coordination meeting (twice a day till 23

August, thereafter daily). All information from the field was collated in the Situation Room but no real analytic work was performed, although the organogram shows an analytic cell. No GIS or IM capacity was available to map the information in a systematic way;

- Sectoral leadership was provided through the existing pillar system. While leadership had been largely predefined, in practice this became somewhat fluid as leadership for different elements was shifted according to capacity and other concerns. For example, Logistics was previously shown under the Ministry for Social Welfare, but during this response (exact timing is unclear) was moved under the responsibility of the Army. Similarly, the Nutrition pillar was moved from beneath the management of the Ministry of Agriculture to the remit of the Ministry of Health on 31 August by the NS Coord. Pillars were represented at the IRC level, although representation was uneven and inconsistent initially. Pillars leads have dual reporting lines: to their Ministry and to the ONS. This often weakens the authority of the ONS and its capacity to act as a central incident manager;
- The Environmental Protection Agency (EPA) coordinated the work on environmental risks. UNDAC operations met bilaterally with the EPA and attended coordination meetings with national actors and the WB DaLA team;
- The Sierra Leone Armed Forces (SLAF) played a key role in the initial phase of the search and rescue efforts, providing man power and incident command capacity. However, the SLAF did not have sufficient engineering equipment and resources to respond to this type of situation and a private Chinese construction company provided the required heavy equipment. No further SAR operations were needed because the chance of surviving in a landslide is limited;
- The Sierra Leone Red Cross also played a key role during the initial search and rescue phase. Its role as auxiliary service to the Government should be better recognised by the ONS and Pillars and its presence at the ONS/DMD should be reinforced;
- Many specialised technical groups also provide important capacity for sectoral coordination and response, for instance the cash transfers working group and the WASH consortium.

Response and relations with international mechanisms

- The ONS meeting was as inclusive as possible since the beginning, bringing together key bilateral partners (UK/DIFD, ISAT, Ireland, USA, CDC, EU), the UN RC and agencies, Red Cross as well as other several NGOs, on a daily basis. This openness has a side effect: meetings were not often strategic and the number of people present in the meeting room (often over 50) was not conducive to real decision making;
- The ONS Situation Room did not have the space or set up to accommodate key responders such as the Sierra Leone Red Cross, SLAF or pillar co-leads (UN agencies). The lack of proper Operations Room with dedicated inter organisations desks was also observed and missed.

Constraints

- Weak information management and unclear leadership during the first week of the crisis;
- Existing plans and disaster management structures were reviewed and discussed with the RC. The summary report can be found in Annex D;
- At the pillar/ministry level the situation was complicated by the fact that most information was disseminated through Whatsapp groups, which for various technical reasons were difficult for UNDAC team members to access. In addition, there was no formal meeting schedule for pillars when the team arrived. While most the pillars did eventually establish schedules for meeting, some pillars still chose to meet on an *ad hoc* basis as agreed over WhatsApp groups;
- Absence of minutes from pillar and ONS meetings made it very difficult to track and follow up specific issues that required attention from various Government Ministries and Agencies although

an 'issue tracker' was prepared during week-two but its use was not systematic at IRC and pillar levels;

- Lack of proper Operations Room to gather key responders around desks and to integrate the logistics component;
- No real distinction between information-sharing meetings (forum) and decision making/troubleshooting high level meetings.

Recommendations for capacity-building (see also Annex D and Executive Summary)

- Although the overall structure included the components of an EOC, the elements of this were disparate with unclear systems of authority and communication between them. It is recommended that the structure for operational command of disaster response be reviewed with a view to improving decision-making and operational control of emergency response via an EOC structure;
- Support be given to a facilitated After Action Review (AAR) process for the ONS following the crisis;
- Support GIS and data analysis capacity for the DMD via capacity building, software and hardware inputs for relevant staff;
- Support for Government-led rapid multi-sectoral assessment methodology and practice including intra sectoral coordination processes;
- Consideration of longer-term support to develop DMD into comprehensive legally mandated NDMA with simplified command and decision-making structures (specific recommendations in Annex D);
- Development of disaster specific contingency plans.

International Humanitarian Response

Overview of humanitarian response

The UNCT in Sierra Leone consists of all the 22 UN agencies, funds and programmes. The UNCT works "as one" to support the country in achieving the Sustainable Development Goals and its own national development agenda, or "Agenda for Prosperity" through a people-centred, rights-based approach to development. Following the landslides, daily meetings of the UNCT were held to make sure those affected were receiving the support as well as planning for the long-term recovery. Although a UN Incident Manager was designated by the RC to coordinate and pool UN resources to respond to the crisis, few stakeholders were aware of that arrangement and the Incident Manager's profile should have been raised by being the one UN voice at the ONS meetings and by leading an hoc UN emergency task force. The UNDAC Team Leader attended the meetings. The team also attended the other coordination meetings, such as the UN technical coordination meeting. These meetings, convened by the WFP, related to technical coordination and partnerships. The frequency was initially daily but then three times a week.

The team also coordinated with the NGO START, which is part of the Sierra Leone Association of Non-Governmental Organizations (SLANGO), the country's recognised NGO umbrella body, and attended their coordination meetings. Many international NGOs still operate in Sierra Leone including Oxfam, Save the Children, CARE, World Vision, CRS, Plan International, GOAL, CAFOD, Tear Fund, ACF, SOS Village, MSF and Street Child. These organisations have maintained some emergency response capacity notably in WASH and Health. Despite these coordination bodies, INGO response was loosely coordinated and duplications were observed during the emergency phase, in non-food items (NFI) distributions.

Frequent contact was kept with IFRC's Field Assessment Coordination Team (FACT) who deployed later after the UNDAC's arrival.

Bilateral partners such as DIFD have deployed humanitarian experts to temporarily boost their capacity to monitor and validate proposals from their implementing partners. US CDC has also maintained a presence and has been attending the UNCT meetings.

Cluster/sector response

No clusters are formally activated in Sierra Leone. International humanitarian partners are supposed to liaise with the national response pillars. However, and as noted previously, the architecture of pillars kept evolving without a proper information to partners which created some confusion.

Impact and adequacy

Overall the capacity of international partners in Sierra Leone is relatively high and appropriate. There are obviously positive sequels from the Ebola outbreaks. INGOs are however used to operate as 'freelancers' with little coordination nor frameworks which increase risks of duplication of efforts. For instance, one INGO had already started cash transfers while the ONS asked to hold them until a clear line is approved by the Government. Discrepancies in NFI items were noted despite the proposed standard shelter/family package agreed upon by the Shelter Pillar and IOM.

Gaps and/or bottlenecks

Warehousing and stock management remained a problem throughout the UNDAC mission. Finding out the exact stockpile of food and NFI data proved challenging (even inside the agencies). This crisis was reportedly the first time that response Logistics had been run by the Army, and there was an associated learning curve in establishing this role. On 2 September a new Logistics procedure, based on standard Army protocols was rolled out across the ONS and IRCs, with associated staffing at the IRC and Situation Room levels in place.

Constraints

The use of WhatsApp proved to be very challenging. Many agencies and pillars had their own specific forums and it was consequentially difficult for UNDAC to become aware of planned activities. Furthermore, it is impossible to follow all "chat rooms". For official use agencies should be reminded to use standard emails.

Funding and Appeals

CERF application: N/A

Flash Appeal: It was decided in common agreement with RC/UNCT that no FA would be issued as enough donors and funding/pledges were registered soon after the disaster. It was particularly worth noting the strong regional support and response: Ghana sent a whole team including its national disaster coordinator (NADMO) along with over 65 MT airlifted. Liberia sent a team in a convoy of 20 vehicles; Togo, Nigeria, Guinée, ECOWAS and Morocco sent direct funding to the Government.

Other mechanisms: DFID, Ireland and UE committed over 8m Euros (including recovery programmes). On 18 August, the IFRC issued its [Emergency Appeal](#) seeking a total of 4,637,689 Swiss francs to enable the IFRC to support the Sierra Leone Red Cross Society in delivering assistance to 4,800 people (800 families) affected by flash floods and landslide over 10 months. On 31 August, according to the IFRC, the Appeal was 60 per cent funded. The World Bank pledged 10m USD for recovery and long term solutions,

Compliance with assessment findings: Bilateral in kind donations did not always match the real needs. The disaster provoked a limited number of wounded persons (but high number of sudden deaths) but medical and surgical supplies kept flowing in. In absence of real overview of the existing in-country stocks (GoSL and partners) it is difficult to estimate the gaps during the initial phase of the response.

Relation with national activities: Some activities (deliveries) were conducted without coordination with the involved authority(ies) and /or structures. There are different reasons for this, but the fact that authorities were slow in providing adequate data pushed some organisations to operate swiftly and at short notice. In some cases, this was not appreciated at all by the ONS. Whenever possible, UNDAC stressed the importance of coordination as much as possible with the authorities on the ground, especially during planned deliveries (presence of community leaders to indicate beneficiaries).

Overall Constraints

- **Safety and Security:** as the overall situation in Freetown remained very stable and safe during the mission tenure. This resulted in free movement at all times. No incidents involving UNDAC members occurred. Hotel and office space were adhering to safety rules. The set up made it easy for all members to operate and remaining mobile. The UNDSS team made a safety briefing and provided ID and access cards.
- **Infrastructure:** the UNDAC team was hosted within the office building of the RC which made direct communication easy. The space made available (conference room) corresponded with our needs and the offered support was much appreciated. UNDAC could also use two smaller offices as breakout/meeting room in case this would be needed. Access to internet gsm communications created no obstacles and provided a solid working environment.
- **Other things that may have hampered the mission:** *Ad hoc* meetings (certainly in the beginning of a mission) required a minimum of two vehicles. As road and traffic condition in Freetown are extremely difficult time management revealed to be a challenge to meet all obligations. Much time was lost because of frequent traffic jams forcing a detailed transport plan despite excellent support by UNDP.

Lessons Observed

List lessons observed that may be an added value to the UNDAC methodology:

- Have a 3-4Ws and contact list pre-designed online formats available (as part of the toolbox);
- The UNDAC team signed up the Humanitarian ID, but the rest of the response environment did not and the UNDAC team did not pursue the issue and did little to promote it. UNDAC members are not fully familiar with the benefits of using the Humanitarian ID as data base on contact details;
- Well-functioning and gender-balanced team;
- Mission Software to be cleaned up urgently with review of relevant documents (FCSS), toolbox update;

- Use of free documents open sources (cfr google doc) to be integrated in MS (will enable an easier transfer to others with better potential follow up);
- A module or session on 'How an UNDAC team can integrate existing response coordination mechanisms' could be included in the Refresher Courses and based on past experiences.

Acknowledgements

- Our particular thanks are due to Mr. Sunil Saigal, the Resident Coordinator, who worked tirelessly in support of the response and his constant support, availability and close follow-up of UNDAC activities as well as for providing the team with excellent working conditions;
- The assistance of Ms Linnea van Wagenen (special assistance to the RC) has been extremely useful. Her willingness to provide UNDAC with all possible support has been highly appreciated by all team members;
- UNDP Sierra Leone for seconding two drivers to the UNDAC team and facilitating our work (badges, sim cards, etc);
- Furthermore, the presence of MapAction within the team was much appreciated for their assistance in the field of mapping and IM. They revealed again to be a strong stand-by partner of UNDAC. Their support and presence increased UNDAC's visibility by providing essential documents requested by the humanitarian community as well as ONS;
- The presence of Caroline Thomas (WFP staff) in the Situation was a great support in terms of providing introductions and advising on approach to the ONS, as well as contextual analysis. Her support greatly supported the UNDAC team, and was much appreciated;
- Finally, our best wishes for a speedy recovery go to the people of Sierra Leone who made us feel very welcome.

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Annex A: Safety and Security Plan

1. SECURITY SITUATION

a. OVERVIEW:

- (1) The authorities and other main grouping (power lines); (*ULT*)
- (2) Significant historical and recent events; *Ebola crisis 2014-15*
- (3) Threats you assess against Hum staff (include specific ones to national staff, women or other individuals or groups): *NO specific threats so far*
- (4) Use of camera including mobile phones: *No restrictions but can be sensitive in affected area; pictures of military facilities should in general not be taken without prior permission.*

b. UNDSS SLS for SIERRA LEONE: LOW

- (1) Civil unrest: *Street protests and demonstrations tend to occur spontaneously and can turn violent. No reactions of the affected communities at this stage but this can change (to be observed).*
- (2) Armed conflict: *none*
- (3) Crime: most common concern. *Most prevalent crimes are: House/Office break-ins, property thefts, snatchings and assault. Street crimes are largely opportunistic and affects locals and foreigners alike.*
- (4) Terrorism: *No active threat towards Sierra Leone are known for the moment although Al Qaida announced that all countries implicated in the Somalia crisis would be targeted.*
- (5) Hazard: *Rainy season. Road traffic accidents are a source of concern due to indiscipline of drivers, commercial motor cycle riders (okada), narrow streets and bad road surface conditions (pot holes,...). Street conditions can be impacted during the raining season (flooded streets/areas). Mud and landslides possible.*

2. SECURITY RULES

- a. Law and Custom: what local laws and customs should staff be aware of? *Be aware of the mixed Muslim/Christian religion; 31st Aug/01st Sep = public holiday IED AL FITRE;*
- b. Equipment: (*to be adapted according to the circumstances*)

First line	Always to be carried "on the man" in pockets or specific vest	Passport (or copy), vaccination card, torch, compass, whistle, mobile phone, GPS, daily medication, money,...
Second line	To be put in a small rucksack and be taken with you to the office or when on the move (including urgent evacuation). Should allow you to "survive" for 24-48 hours.	Water, dry food for 24-48Hr First aid + medication WASH (limited) Spare clothing (limited) Charger, spare batteries Blanket, Maps, memo stick,...
Third line	Remaining stuff in your travelling bag at the hotel	

- c. Vehicle: control *i/c UNDP drivers*
- d. Medical precautions: *as a general health precaution people are requested to wash their hands with soap*; specific personal medical information (allergies, medication, blood type) about team members should be discussed **without obligation** and it will be up to the team members to decide to indicate specific issues and how to react.
- e. Locations areas out of bounds: *specific attention to the affected sites*
- f. Communication (= NOT a guide to radio use)

UNDSS Radio Room (Emergency)	099800021
	076662408

- g. Travel: **use UNDP drivers only with UN cars. Actually, no renting cars to be used. Driving cars by UNDAC staff only in case of emergency.**

Following travel possibilities are foreseen:

- Travelling inside the city area: **cab(taxi) or rented car with local driver: allowed**
- Travelling outside the city area: **not allowed**

Specific attention should be drawn when implicated in a traffic accident, reason why local drivers should be used whenever possible. You should request advise from your security officer on how to react if you are involved (physical risks by the mob,...)in it.

- **If trips are done by car all doors must be locked and all windows must be kept closed in a way that nobody from outside is able to grab something.**
- h. Night: **if outside hotel apply buddy principle – together out/in!!**
- i. Money: members should avoid carrying large amount of money and should keep/spread it in different pockets and/or locations. **Exchange rate 1USD= 7500 LEONS**
- j. Shelter (safe havens): all staff should be familiar with the shelter in each building to be used in case of attack
- k. Reaction to threats (UXO, fire, accident, earthquake/aftershocks, floods,...) and procedures to follow: **NA**

- If you are involved in a security incident and you have time , you should forward ASAP an “**Immediate Incident Report**” as follows:

- **Who?** - who has the incident happened to?
- **When?** -when did the incident happen?
- **Where?**- where did the incident happen?
- **What have you done about it?**
- **What help do you need?**

- l. Fire escape plan (**see plan**)

m. Recent update 22nd Aug by UNDSS

- Commercial drivers of minibuses (locally referred to as **Poda - Poda**) plying the Freetown - Waterloo route, Fuel tank drivers transporting fuel from Freetown to the regions as well as other heavy-duty vehicles plying the provincial route are unhappy with the amounts levied at the three toll gates and have parked their vehicles. This has resulted in to panic buying of fuel in the regions as witnessed yesterday at some provincial locations. There are **three toll gates - Hastings, Songo and Masiaka** between Freetown and the provinces.
- This morning some park boys were arrested by police at Waterloo for obstructing commercial vehicles. **The situation is peaceful for now but has the potential of turning violent if not properly managed.**
- *UN vehicles plying the route are advised to be aware of the road tolls and be cautious of unusual gatherings along the route. Any staff who notices any suspicious activities along the route from Freetown to the regions especially within the immediate environs of the three toll gates should report to the UN Radio Room.*

3. MEDICAL FACILITIES & EVACUATION

- a. Give procedures:
Call ASPEN ASAP. They are running the ambulance service.
Call UNDSS to inform them and in case of accident and inform the about your actions taken and who, what where, when, number of persons implicated (see Para 2.k)
- b. Who's entitled to medical evacuation and based on which decision: **Approval through RC**
- c. Contact details:

Name	Contact	Remark
International SOS Assistance (Medical Insurance, for EXPERTS)	+41 22 719 1161	UNDAC: Inform TL/DTL or another team member
ASPEN MEDICAL	For UN Staff ONLY: For those	MapAction

	with CIGNA coverage no membership required Off King Harmon Road Call 099888000 (emergency number)	Suggested as better Med assistance
UN Joint Clinic	Dr Moses Kiwanuka (076692815) 078950071 by UNDSS	Only open during working hours-after on call only

4. EVACUATION FOR SECURITY REASONS

- a. Who authorizes? **RC as DO**
- b. Assembly points (mapping) :
 - **UNDP compound: outside/behind the compound at the parking lot**
 - **Hotel: court yard at back entrance of the hotel (until further notice)**
- c. Equipment to be carried : **1st line and 2nd line kit should be ready in your hotel room and/or office at all time**
- d. Likely evacuation routes (outside the country Yes/No): **via the speedboat to Lungi airport (rotation +/- ONE hour)**
- e. Procedures when move: **Ult**
- f. Communication procedures during movement: **Ult**
- g. Arrangements for national staff: **NA**
- h. Responsibilities for staff if remaining behind: **NA**

5. ANNEXES

- a. Contact lists
 - (1) All offices, MIC, embassies of team members, EC delegation, FCSS, UNDSS,....;
 - (2) Police or other local security forces; **Call UNDS emergency number**
 - (3) Relevant civil & military authorities; **NA**
 - (4) List hotel room numbers + contact details members.

Name	Room
Laurent DUFOUR	304
René WAGEMANS	101
Peter-B HALBERG	207
Ruth Nana FRIBA	303
Katja LAURILLIA	302
Leif JONSSON	307
Venetia BELLERS	107
Nigel WOOF	305
Hamish PRITCHARD	106
Joanne ROBBINS	105

In case of fire the buddy principle should be applied

Floor 1: Venetia, Hamish and Joanne

Floor 2: Peter and René

Floor 3 Left: Laurent, Katja and Ruth

Floor 3 Right: Nigel, Leif,

Assembly point: court yard back entrance hotel until further notice

- b. Maps
 - (1) Emergency Evacuation Plan: Assembly point office and hotel in case of emergency (fire, earthquake); list also who is taking what and be realistic (take into account that not every TM will be at the office)
 - (2) Assembly point UNDP compound – **See Ann Map**
 - (3) General road map -**See Ann Map (MA004) ONE copy/TM 1st line kit**

Annex B: Maps

<https://maps.mapaction.org/event/sierra-leone-landslides>

Annex C: ONS Review, Observations, Recommendations

Throughout the course of the UNDAC mission to the Sierra Leone Landslide, members of the team engaged with the ONS with a view to understand their structures and offer immediate support, as well as identify potential avenues for longer-term support that would benefit and strengthen disaster management in Sierra Leone.

Team members were able to work closely with the Situation Room of the ONS, and interview multiple personnel active in the Situation Room as well as other areas of the DMD. Team members also conducted a review of the key documents for disaster response in the ONS.

1. Document review

The National Strategic Situation Group Planning Handbook -Nov 2015: The whole document is written in a “unfriendly” style and complicated to understand unless you read it numerous times. This handbook describes the planning process but is too vague on timing indicating sequences and orders. It was not referred to during the current crisis, and in fact was not located (despite numerous requests from ISAT and UNDAC) until over a week into the response.

Operations Planning Process is not meant to be used in an “emergency operation room”. Its understanding requires a separate course and training of EOC staff to be fully understood (applied).

Referring to the Mudslide and Flooding crisis, contingency plans should be used based on different scenarios that should be described and identified. Each scenario should be developed in a way that it identifies required human and material resources with an appropriate timing (timeline) of sequences and orders.

The focus of the situation room with its organogram gives the impression to be an EOC but its structure doesn't integrate all components in one space (room).

Inter-agency Ebola Virus Disease (EVD) Event Management Rapid Response Plan ‘No Regrets Approach’: Mainly focused on UN support to EVD but a more generic plan should be developed. This document is a good basis but unfortunately only focusing on EVD. It should be made generic and additional plans on other scenarios should be developed as to identify specific requirements, shortfalls, training, etc by all involved agencies. These plans should ideally both inform and be informed by national plans and structure(s).

The National Flood Preparedness Response Plan for Sierra Leone (June 2016- v.3): Lack of specific guidance within the plan, instead the plan is more of a generic set of recommendations. For example, the document recommends contact with private sector, INGOs, NGOs etc but nowhere is articulated what this should comprise or how this would be managed. While recommendations for multi-agency assessment are included, again, there are no SOPs or guidance for this initiative. Generally this cannot be considered an operational document.

Observations

- The Situation Room primarily fulfills a support function, rather than an operational one. Current role is focused upon receiving and collating data in support of daily briefings for operational agencies and partners. It does not have an explicit executive or decision-making function.
- There are no standardized, pre-agreed templates for data analysis and reporting, making even the support function unnecessarily problematic, until a strategy and a reporting structure could be agreed and implemented some two weeks into course of this response.
- Lack of GIS function and limited ICT capacity that would support analysis and decision-making
- Lack of accountability, including unclear chains of command and delegated decision-making.
- Poor communication due to both lack of planning for crisis communications as well as inefficient uses of available communications systems
- Ineffective resourcing – there is a need for a pre-defined standardised and coordinated approach to ensure targeted response to needs that minimises overlaps/gaps
- No predefined methods to integrate inter-agency requirements into the management structure and planning process.
- Lack of an Operational Command Centre or NEOC in the current structure

- Handbook is not an effective operational manual: need greater clarity on roles & responsibilities, as well as to develop standard templates, job descriptions/cards, SOPs etc.
- Lack of baseline data and/or DRM database
- Unclear where horizontal cross-sectoral coordination sits within the current structure
- Lack of mapping of institutional mandates and capacities as related to DRM?
- No information on what EWS exist and how are these monitored, as well as where the protocols and responsibilities lie for triggering action
- Limited systems and methodology in place to support coordinated assessment methodology, responsibility, and leadership at the Government and partners level

2. Comments & Recommendations

During the course of the UNDAC mission, control and flow of information both within and from the ONS improved as methods and templates were drafted and agreed. That said, lack of specific data and consolidated information was a key constraint to the overall response. Unfortunately, it does not appear that similar learning curves reportedly experienced during the 2015 floods and the Ebola crisis left pre-defined strategies and means to manage emergency response other than epidemics.

While a standard part of post-crisis analysis, there does not appear to be a policy or guidance within the NSSG Handbook for an After-Action Review (AAR). This would be an ideal opportunity to consider the elements of the ONS response that worked well, as well as what opportunities for improvement exist, with a view to taking strategic decisions about how the DMD and associated disaster management structures may be revised in the future to better support effective response. From initial discussions, this is not a process that has been undertaken previously, and it is therefore recommended that international partners/the UN consider support to a facilitated AAR process for the ONS, with a view to developing standardised templates and systems to support future responses, as informed by this recent experience.

There is a gap in the emergency operations management, such a defined NEOC (National Emergency Operations Centre). At present, the majority of the elements of a NEOC exist but disparately, which can be a challenge to integrated information management in support of effective decision-making. Overall, the current crisis management structure is unwieldy and does not support accountable, delegated decision-making. This indicates that the emergency management structures themselves may require review. It is recommended that the structure for operational command of disaster response be reviewed with a view to improving decision-making and operational control of emergency response.

At a more fundamental level, there is a need for a robust and clearly defined architecture of cross-sectoral decentralisation that supports resourcing, delegated decision-making, information-sharing and accountability in DRM action as a whole. While elements of this exists, a fully mandated, resourced and operational NDMA would be a good step towards strengthening investment, accountability and performance in disaster risk management for the country.

Recommendations

A review of the emergency operations relating to the landslide and floods would be a useful first step in understanding the constraint of the current response, as well as identifying next steps. Recommendations for medium to longer-term support for crisis management include:

- Support GIS for the DMD via capacity building, software and hardware inputs for relevant staff. Primarily these would be Research and Assessment Directorate staff who take up this role, as well as management of the Situation Room, in times of crisis. Specific inputs to include database provision and support, as well as capacity building on this;
- Review of existing early warning systems for natural & man-made disasters (link up with meteorology systems, police, etc);
- Develop ICT expertise for the Situation Room;
- General need to move towards more qualitative & strategic analysis;
- Support for rapid multi-sectoral assessment methodology and practice;
- After Action Review following the deactivation of the Situation Room – ideally facilitated by partner agency;
- Development and support to an operational emergency command structure such as a NEOC.

At a broader and longer-term level, there is a need to consider a detailed evaluation of the ONS disaster management set-up as the first step in structured support to the development of the DMD into a comprehensive NDMA. Such an exercise could include (but not be limited to):

- Review and definition of legal frameworks for disaster management structures national and sub-national levels;

- Mapping of MDA mandate and capacity as related to DRM;
- Review and definition of the legal frameworks for emergency declaration at the national and sub-national levels;
- Definition of the legal and operational frameworks relating to EWS to explicitly define roles and responsibilities of various authorities and agencies;
- Definition of specific thresholds/triggers for early action and response within contingency plans and EWS at all levels (national and district);
- Definition of emergency protocols to be activated based upon Early Warning Systems (EWS) thresholds and triggers at all levels, including clear roles & responsibilities;
- Review of means to improve management of information, from national to community level, including means to strengthen connectivity and real-time data sharing at all levels;
- Define protocols, templates and methodologies for early action and/or response upon activation of triggers and thresholds;
- Ensure resourcing at sub-national levels can support early action and response;
- Strengthen data access and communications to support early action & response.

Annex D: Environmental Report

See separate document.