



United Nations Disaster Assessment & Coordination (UNDAC)



USAR team at Hotel Christopher, the former UN Headquarters in Port-au-Prince. Photo: Pablo O'Farrill

Haiti Earthquake January 2010

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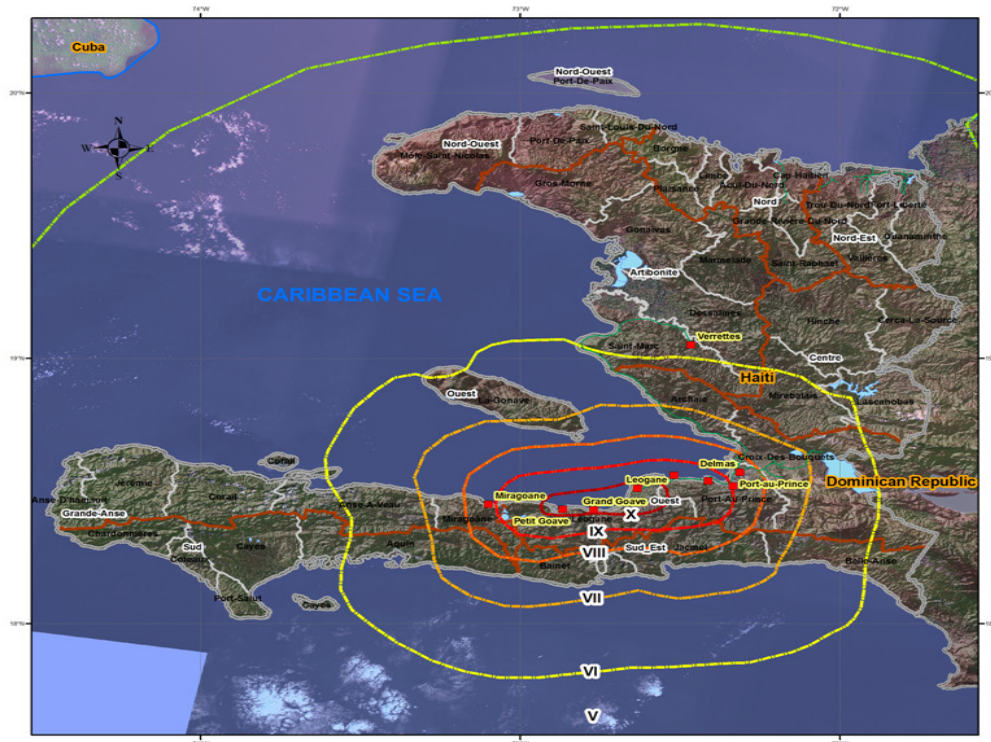
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1.0 Introduction

This report aims to summarize the UNDAC mission following the earthquake in Haiti 12 January 2010. The report focus solely on UNDAC related activities, how outside aspects of the situation and context influenced the mission, and how the lessons identified during the mission could be utilized to update the UNDAC methodology. As such it is not an evaluation of the humanitarian response or other organizations' performance

1.1 Background

On 12 January 2010 at 16:53 local time (22:53 CET) a 7.2 earthquake struck Haiti with devastating effects. The epicentre was located close to the town of Leogane, but the impact led to widespread destruction in the capital Port-au-Prince where large portions of the town's buildings collapsed. Subsequent landslides added to the devastation. As per 3 February it is estimated that as many as 200 000 people may have been killed by the earthquake, but official updates has not been released by the time this report was issued. Many governmental and UN institutions were also severely affected by the earthquake. Key people of the UN integrated mission to Haiti, including their families, were either killed or reported missing.



Earthquake January 12th 2010. Source: IIMAP

Haiti constitutes one third of the island of Hispaniola in the Caribbean and was historically a colony under French rule serving as a hub for the slave trade from West Africa to the Americas. In 1804 it gained its independence, but has been followed by political instability and violence since. Today Haiti has a population of around 9 000 000. Insecurity, heavy deforestation, high inflation and lack of a stable economy has led to the country being the poorest country in the Western Hemisphere, completely dependent on international assistance, with 80% of the population living under the poverty line and 54% for less than USD 1 per day (UNDP, 2008). 65-70 % of the population is underemployed or unemployed and people support themselves with subsistence farming. Secondary consequences of the dire situation in Haiti are poor infrastructure, reduced health conditions, malnutrition, and low

life expectancy. 42 % of the population has no access to clean water and as much as 81 % has no access to proper sanitation (UNICEF/WHO 2008). Haiti is situated in the middle of the hurricane belt and often suffers from severe windstorms during the Atlantic hurricane season from June to October. Flooding and landslides are also common. Haiti also lies on a strong tectonic fault line and is therefore earthquake-prone. However, there have been no earthquakes of this size on Haiti since 7 May 1842.

For years, the security situation has been dominated by a violent conflict between rivalry gangs of youngsters plus drug smuggling, abductions, looting and corruption - especially in the police force - and Haiti suffered from an absence of a sufficiently large police force and adequate judicial system. Following an armed uprising in 2004, the UN Stabilization Mission in Haiti (MINUSTAH) was established to ensure a secure and stable environment in a transition-phase towards a democratic rule. As a consequence of the security situation in the country, the UN operates under Security Phase III.

The recurring violence, political instability, and fight for survival due to poverty are keeping the community in a vicious circle where apathy and a sense of despair are prevailing. The population is highly vulnerable to the impact of natural hazards and has few to none capacities or coping mechanisms to deal with the effect of disasters.

1.2 UNDAC Mobilization and Deployment

First reports of the earthquake reached OCHA/FCSS on 12 January at 23:05 (CET) through OCHA/CRD following a call to them from the Head of the OCHA office in Haiti where it was apparent that the Humanitarian Coordinator, Ms Kim Bolduc, would request an UNDAC team. A GDACS Alert had been automatically generated and was received at 23:23 and international Urban Search and Rescue (USAR) teams' duty officers began posting information on the Virtual OSOCC where a discussion topic was immediately opened by an UNDAC member/ICE-SAR member. OCHA/FCSS staff began discussing the situation over Skype in a group conversation at 23:25 and an UNDAC M-1 alert was prepared and sent at 23:33, i.e., 10 minutes after receipt of the GDACS alert and upon the realization that this was most likely to become a major earthquake catastrophe. At 23:40 the first indications of availability for deployment from UNDAC members were registered on the Virtual OSOCC.

At 00:00 FCSS staff came to the office and began working on UNDAC team mobilization. At 00:22 on 13 January, ICE-SAR was the first international USAR team to indicate they were preparing to deploy. All through the night, international USAR teams and other responders continued to indicate their availability on the Virtual OSOCC in accordance with the International Search and Rescue Advisory Group (INSARAG) Guidelines, indicating that they were "Mobilizing", "Deploying" or "Monitoring". By 04:29, over 2 dozen international USAR teams were registered and an initial 10 UNDAC members were selected for deployment to the region.

International USAR teams were asked directly and through the Virtual OSOCC to indicate their availability to carry UNDAC members with their planes direct to Port-au-Prince, a number of which responded positively. UNDAC members subsequently travelled with ICE-SAR, B-FAST and USAID teams on 13 January and support teams from the International Humanitarian Partnership (IHP) with the Dutch USAR team's flight on 14 January. Other UNDAC members, from the Latin America & Caribbean Region, were put on commercial flights into Santo Domingo, Dominican Republic, from where they found their way to Port-au-Prince with the assistance of UNDP Dominican Republic.

At 08:45 on 13 January, the European Union Monitoring and Information Center (EU-MIC) contacted FCSS to advise that an EU Civil Protection Team (EU CPT) was deploying in support of UNDAC. They were to travel with the B-FAST flight later that day who also offered space for deploying UNDAC members from Europe. During the first 12 hours, WFP and ECHO offered UNDAC members for the team, and UNDAC technical partner organizations; MapAction, DHL, Americas Support Team (AST) and Telecoms Sans Frontières (TSF) all deployed. EMERCOM of Russia offered to deploy the Global Radius helicopter and the Space Charter was also activated via UNOSAT for satellite imagery.

Based on the potential humanitarian consequences and the complexity of operating in an environment like in Haiti it was clear that the UNDAC team had to be large, consist of members with complementary skills, and integrate partners from many organizations. Thanks to the swift request for an UNDAC-team by the Humanitarian Coordinator in Haiti, the first UNDAC members arrived with the two first arriving USAR teams to Port-au-Prince and were on the ground less than 24 hours after the earthquake struck. The airport operations was shut down, and the team had to exit the airplane using own ladders.

In the airport the two first arriving UNDAC members met up with official from the Departement de la Protection Civile (DPC) in Haiti, who took them to the Minister of the Interior. The arriving USAR teams meanwhile established a Reception and Departure Centre (RDC) at the airport. See also annex 1 and 2 for a list of members, their functions and a timeline of their deployment with first actions.

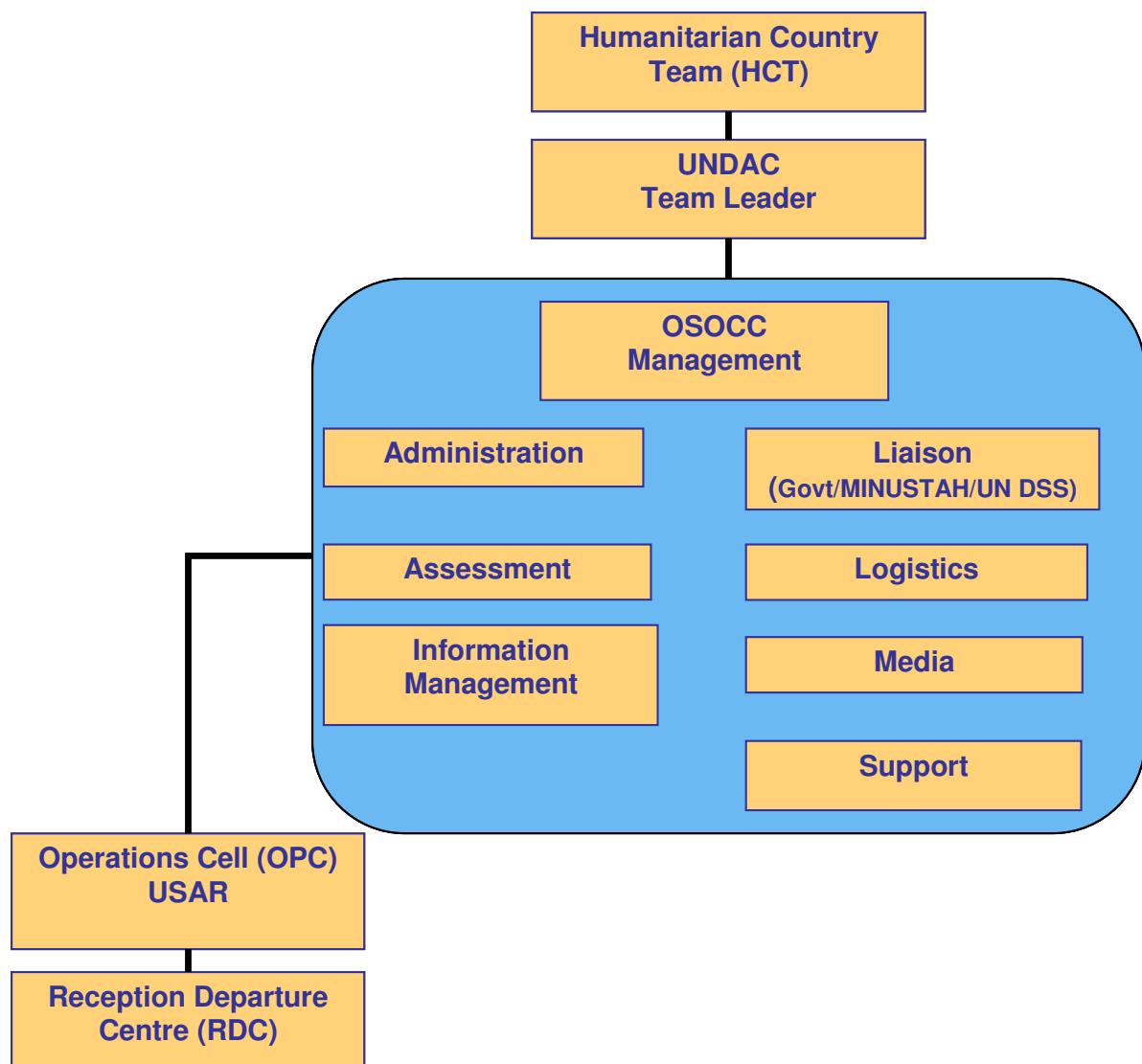
2.0 Plan of Action and Coordination

The initial UNDAC Plan of Action (PoA) team was prepared en route to Haiti and the main mission objectives were to:

- Provide support to the Government of Haiti (GoH)
- Provide support to the United Nations Humanitarian Coordinator (HC) and Humanitarian Country Team (HCT)
- Facilitate coordination of incoming international USAR Teams
- Conduct impact and damage assessment to establish the extent of the affected areas
- Provide support to the cluster leads
- Support inter-agency needs assessments in the disaster affected areas
- Facilitate the work of incoming relief teams

The roles and responsibilities of the incoming UNDAC members were assigned based on the initial team composition. As previously mentioned all available resources would be required, and the EU CPT was integrated in the UNDAC team and assigned functions together with UNDAC members (See annex 2). The EU CPT was to operate the OSOCC alongside UNDAC according to Operational Guidelines for Field Cooperation between OCHA and EU. This later proved to be a wise decision as one otherwise would not have been able to staff all functions with UNDAC resources alone. For example was the RDC operated by two EU CPT members and one IHP support staff for the majority of the operation. (See also Annex 1.)

Following first assessments of the situation upon arrival in Port-au-Prince and discussions with first arriving UNDAC members, the PoA was finalized and a structure according to the following organigramme was implemented.



Since the overall coordination process under the leadership of the Humanitarian Coordinator already was located at the MINUSTAH base in Port-au-Prince, the On-Site Coordination Operations Centre (OSOCC) had to be located there. However, as a site for a USAR Base of Operations had for practical reasons been chosen at the airport with enough space and ample security it was the natural choice to locate the USAR operational function of the OSOCC there – approximately 2 km from the main body of the OSOCC – thus establishing a separate Operations Cell (OPC) for USAR coordination. This decision proved to be vital for the USAR phase and the OPC functioned later as an extended arm of the OSOCC. The RDC, initially established by the first arriving USAR teams and UNDAC members at the airport, continued to work under the management of the OPC. The OPC was later enhanced with support staff from MapAction, TSF and IHP, as well as with additional information management staff to enhance the OPC's IM-capacity. Staffing of the OPC came from the UNDAC team, the EU CPT and liaison officers from the USAR teams.

The main OSOCC in Port-au-Prince grew rapidly with the arrival of incoming OCHA staff and partners and provided at its peak working space for 40-50 people. It became the pivotal point for the coordination process and the venue where most meetings were held. The OSOCC Reception experienced a constant stream of people from the humanitarian community asking for services or providing information.

Due to the fact that many of international USAR teams as well as humanitarian organizations were flying to Port-au-Prince via Santo Domingo, Dominican Republic, a second RDC was established at the international airport of Santo Domingo under the leadership of the UNDAC team which was deployed to



OSOCC in Port-au-Prince. Photo: Rolf M. Bakken

Dominican Republic following a request from the UN Resident Coordinator in the Dominican Republic. This RDC was staffed by one UNDAC support staff from IHP. The function of this RDC was to ensure that the information regarding teams waiting in Santo Domingo was communicated to the RDC in Port-au-Prince and the necessary actions to support the teams were provided. Some of the teams benefited from the RDC in Santo Domingo to coordinate their arrival to Port-au-Prince whereas other teams preferred to go by road.

2.1 USAR Coordination

The initial reports from the earthquake indicated severe structural damage in and around the city of Port-au-Prince. This triggered an immediate response from search and rescue teams from all over the world who indicated their intentions to deploy to the disaster zone on the Virtual OSOCC. At the RDC, and later the OPC, a priority list was developed based on reports from the national government, analysis of images on Google Earth and the media. The list of priorities included buildings which housed large numbers of people and had the highest potential of trapped survivors. Among those priorities were public buildings, schools, hospitals, apartment blocks, hotels and other large buildings. The first arriving USAR teams were assigned based on these priorities and they immediately went to work.

An early and rapid assessment of the city was conducted to determine the extent of the damage and to locate possible sites for bases of operations for the arriving teams. The rapid assessment indicated that all open space areas in the city of Port-au-Prince were taken by citizens for the establishment of temporary housing. The decision was made to ask USAR teams to establish their Base of Operations (BoO) at their embassies or to stay at the airport where an open area had been found by ICE-SAR. The airport provided enough space for several teams to set up their camps and to be close by. The airport also provided security since the perimeter was bordered by a wall, the gates were staffed by military personnel and there was the benefit of easy accessibility for the teams arriving to the airport.

The number of teams arriving in Haiti continued to increase for several days after impact. To ensure effective utilization of available resources, Port-au-Prince and Carrefour were divided into a number of geographical sectors and teams were assigned to work in these sectors starting from the most affected areas and outwards. A total of 42 sectors covering 63 square kilometres were covered by USAR teams. The teams were either tasked to cover entire sectors conducting reconnaissance missions and prioritizing areas, or deployed to a specific site based on reports which indicated the presence of survivors. INSARAG heavy classified teams were tasked to sectors with the highest concentration of affected buildings. As the days progressed, and more teams arrived, a heavy and medium and, if available a light team, were assigned to each sector. The idea was to saturate the sectors and quickly gain an idea of what buildings needed priority. The teams were assigned to their working sites at 06:00 every morning and they were requested to be in close contact with the OPC during the day.

During the first week, three aerial assessments were conducted and a total of 7 outer lying cities (Carrefour, Gressier, Leogâne, Petit Goave, Grand Goave, Miragoane, Jacmel) were quickly assessed to ascertain if USAR teams were needed for potentially trapped victims. Following the

earthquake at 20 January, an aerial assessment was carried out and three USAR teams were deployed by land to Leogâne urban area. This city was thoroughly covered in one day due to the absence of high buildings and the fact that the population had been living under open air since 12 January. (See also Section 2.4)



UNDAC Member Ramiro Galvez briefing USAR team leaders at OPC. Photo: Pablo O'Farrill

In addition to search and rescue activities targeting specific sectors, USAR teams, or search components only, were deployed in response to requests communicated through various sources. These were forwarded to the OPC by emails, text-messages, satellite phone calls, Twitter-messages, and/or visits to the OPC. Many reports were based on text messages allegedly coming from people trapped under the rubble, but still being able to communicate by phone. After the source of the request and the reliability of the information were evaluated, these requests were prioritized, double-checked and, in many instances, contact was made with those reporting the incident to ascertain the exact location and the validity of the claim. Search groups were sent to those reported sites from reliable resources and rescue teams were only committed to those if the search group could verify the validity of the claim. These kinds of reports diminished as time progressed.

A USAR coordination meeting was held every evening at 19:00 where a summary of the day's work were presented and USAR teams handed in their results of the day in writing. The teams were briefed in detail regarding the safety and security situation and a dedicated UN DSS security officer responded to the concerns of the teams. A representative of the DPC was present during these meetings. Every day's USAR data were collated and analyzed by

information management staff in the OPC and, based on this; new assignments were prepared for the next day. Processed information was forwarded to the OSOCC on a daily basis.

During the first days after the earthquake, all communication technologies failed to provide constant or reliable communication. The initial attempt was to use iridium phones but since the media and the entire response community were relying on these devices, the satellite became saturated and no phone calls could be made or received. This incapacitated the constant communication with the teams working in the field and in many of the times the information about their progress or needs could not be obtained until they physically returned to the OPC. Constant, reliable communication with the teams in the field was not consistently achieved during the entire operation and this provided difficulties in planning, but more importantly it posed a threat since many teams could not notify the OPC of their whereabouts and/or any security threat

The security of the teams became of paramount importance from the beginning since the situation in Port-au-Prince was very unstable. The country was in UN Security Phase III before the earthquake and the rules and regulations pertaining to this phase were followed. Despite the fact that security situation did not deteriorate as forecasted, it always remained volatile and precaution had to be taken at all times.

Port-au-Prince was divided in green and red zones - areas which would require armed escorts. (See also Section 4.0.) No operations were initiated and facilitated by the OPC in red zones without permanent security escort on-site during the search and rescue operation. For other areas, security escorts were necessary during transport to and from the sites. USAR teams were also encouraged to work only during daytime due to security reasons, but exceptions were made for teams who could confirm the presence of live victims. In these instances efforts were made to provide security and this was accomplished most of the time. With time international teams were able to work in many areas without security concerns. Consequently, the application of security measures were slightly loosened for some areas considered as safe, thus increasing the operational capacity. It is worthwhile to note that only one security incident with no further consequences took place during the entire USAR operation. Three USAR teams working in Cité Soleil (red zone) were withdrawn on 17 January due to a cross fire between looting gangs in the proximity of the operational area. Apart from this incident, no teams faced any serious security incidents during USAR operations.

Acquiring security forces, transport and fuel for the USAR teams proved to be the biggest challenge throughout the USAR phase. The national authorities had no resources to support the operation. However, the UN Department for Peacekeeping Operations (DPKO) operating in Haiti with the MINUSTAH force had the resources to cover the needs for logistical and security support, but found themselves unable to support the international humanitarian community during the first period of the operation. Steps were taken to improve this and arrangements were negotiated on a case by case basis. The cooperation with MINUSTAH improved half way through the UNDAC mission following efforts from the Humanitarian Coordinator and a UN Security Council Resolution that changed MINUSTAH's mandate, but there is no doubt that the initial lack of support from MINUSTAH seriously hampered both USAR activities and other humanitarian interventions for the first 1.5 weeks of the operation. (See also Section 2.2)

In spite of these constraints, more than 50 USAR teams from 30 nations, responding with more than 1800 rescuers, 160 search dogs and highly sophisticated search and rescue equipment were involved in the operation. The OPC played a vital role in assisting the national authorities to ensure that search and rescue operations were conducted in accordance with INSARAG Guidelines. The active phase of USAR operations coordinated by the OPC lasted from 14-22 January when the Government of Haiti announced the official end of the search and rescue phase.

As of the end date, with many of the teams ending their operations and no live victims having been rescued within the last 48 hours, the OPC was closed and USAR operations continued with response to requests from reliable resources with a small Operations Cell at the main OSOCC. As of 23 January, international teams had located and rescued 132 people that were trapped under collapsed buildings based on the reports and information received from the teams. The outstanding efforts of the international USAR teams were highly appreciated by the GoH and the UN leadership. This was conveyed by the



UNDAC Members Nihan Erdogan and Rolf M. Bakken during briefing of Acting SRSG Edmond Mullet at OPC. Photo Olivier Bruyere

newly appointed Acting Special Representative for the Secretary General (SRSG), Edmond Mullet, who personally thanked the USAR teams during a visit to the BoO towards the end of the USAR phase. The UN Secretary-General Ban Ki-Moon also addressed the ongoing USAR operations calling it a *“monumental effort”* at a press encounter on Haiti in New York, 15 January.

2.2 Humanitarian Coordination

The UN Country Team and cluster lead agencies were severely affected by the impact of the earthquake. Not only had they lost family members, friend and colleagues, but their offices were damaged and forced the humanitarian agencies to move into makeshift shelters at the MINUSTAH logistic base. This had the advantage of placing all the major UN humanitarian agencies in one location. On arrival the UNDAC Team Leader made contact with the Humanitarian Coordinator and the cluster leads of the five activated clusters (shelter, food, WASH, health and logistics) and started coordination within the respective fields. While the activated clusters were working, they were not catering for or ready to receive the massive influx of relief organizations. During the first days some of the cluster leads insisted on conducting the coordination meetings in French, but were later forced to change into English to facilitate the participation of a high number of new actors. When it became apparent that the response would require a massive intervention not only in the field of shelter but also camp management, it was discussed but not decided to split the shelter cluster into camp management and shelter and ask the International Federation of Red Cross and Red Crescent Societies (IFRC) to provide leadership in the shelter cluster.

The traditional structure with the strategic cluster leads at capital/country team level and operational cluster at field level could not be effectively implemented due to the location of the earthquake in the capital. This severely influenced the effectiveness of the clusters, as the cluster leads were trying the impossible task of assuming leadership of a major relief operation while at the same time trying to develop strategies for the cluster leadership.

One key lesson learned is that the clusters coordinating lifesaving activities should have the capacity to become operational within hours after the onset of an emergency in order to effectively coordinate incoming relief organizations. This can not be done through daily meetings only, but would require hands-on coordination on-site. It was therefore left to the OPC to facilitate the arrival of incoming medical teams and field hospitals and point them in the directions of the national health authorities and/or the health cluster focal point. The global health cluster system could perhaps consider a network of field hospitals and medical teams similar to the INSARAG concept.

The UNDAC team assisted the cluster leads in the information management process and provided logistical support, e.g. meeting facilities and announcement of the various meeting arrangements. It was at an early stage decided to request OCHA's Humanitarian Coordination Support Section (HCSS) to deploy expertise within the field of inter-cluster coordination to facilitate the inter-cluster coordination process and provide assistance to the cluster leads.

The UN integrated mission, MINUSTAH, was left somewhat crippled by the earthquake. Not only did it suffer from the loss of a high number of staff members and their relatives, including the SRSG and the Deputy SRSG, but also key installations and equipment were destroyed by the earthquake. It seemed during the first days after the earthquake very difficult for the mission and its staff to change direction from its original mandate and provide effective support to the humanitarian relief operation. As previously mentioned, several requests for logistical support for the relief operations were turned down arguing that it was not within MINUSTAH's mandate to utilize DPKO assets for non-DPKO operations. It was also experienced that assigned national UNPOL contingents were redrawn to provide support for relief teams from their own nations. The support provided during the first days was primarily thanks to individuals who stepped up and took responsibility. The visibility of the many UN-marked resources which were needed for logistics and security of international USAR and relief teams without being utilized lead to massive frustration among international responders. Consequently, the authority/accountability of the UN leadership in the relief operation was questioned by many, including major donors.

The situation improved with the appointment of a new Acting SRSG and, subsequently, the adoption of a new UN Security Council Resolution which amended MINUSTAH's mandate, but these new priorities/objectives of the mission only slowly trickled down in the organization. However one need to acknowledge that such a dramatic change of MINUSTAH's mandate needs time to be implemented. Just like a ship that will not turn immediately after the captain orders it, a large organization like MINUSTAH can not change course just with the stroke of a pen. This became an issue at field level where deployed relief teams were turned away when approaching MINUSTAH contingents for support.

MINUSTAH had as part of their emergency procedures, activated the Emergency Joint Operations Group, E-JOG to facilitate the coordination of activities related to the emergency operations. It soon became clear, though, that this mechanism was inadequately mandated to handle the situation and towards the end of the mission the Deputy SRSG requested the

UNDAC team to assist with the development of a new mechanism to not only task the MINUSTAH military assets, but also assets made available by incoming foreign military forces. The Joint Operations and Tasking Cell, JOCT was developed as a concept to be a single point of contact for requesting and tasking of the military assets to support the humanitarian operations. The JOCT became operational on 26 January working under strategic guidance of the GoH, MINUSTAH and the Humanitarian community and with a management component consisting of senior staff from these entities.

2.3 Support to OCHA Sub Offices in Jacmel and Leogane

After aerial and ground assessments estimated large portions of infrastructural damage and a high number of people being homeless living in makeshift sites with very limited access to shelter, food, and WASH, it was decided to open two OCHA Sub-offices in Jacmel and Leogane. On 24 January, two teams of 6 (OCHA/UNDAC, UNDAC Support, and EU CPT) deployed and established contacts with MINUSTAH in the two towns.

The two teams had very different welcomes from the MINUSTAH contingents. In Jacmel, the team was welcomed and managed to secure office space in the WFP compound, using an unused UNFPA building. In Leogane, however, the MINUSTAH was reportedly uninformed of the arrival of the team, and clearly unfamiliar with the nature and mandate of OCHA. Furthermore were they unaware of the recent change in MINUSTAH's mandate and priorities. (See also Section 2.2.) Nevertheless, the team managed to negotiate establishment of OCHA office logistical base within the MINUSTAH base - the only suitable place in Leogane compliant with MOSS in Security Phase III. The operational base was to be established closer to national authorities in Leogane town, in a more accessible place for the local authorities, humanitarian organizations and general public than the MINUSTAH base. This office, however, had to be vacated during the curfew hours for security reasons

UNDAC team members remained in Leogane and Jacmel until January 26th in the morning to be replaced by longer term OCHA staff. In Leogane two EU CPT members and one UNDAC Support staff remained and supported the office. The need for coordination structures in the devastated towns was clear. UNDAC/OCHA started to map the various actors and initiate coordination meetings, both general and cluster specific, but the lack of support from cluster representatives in the field was noticeable. The local authorities were in need for support from the cluster leads and several international humanitarian organizations on the ground also asked for more operational coordination.

2.4 Assessments

The provision of high-level situational analysis to support the timely and effective allocation of humanitarian aid remained the goal of the three-person UNDAC/EU CPT rapid assessment team throughout the mission. The team was later strengthened by experts from the American Center for Disease Control, CDC. Assessments in the initial phase focussed on Port-au-Prince with the first assessment being conducted just 24 hours after the earthquake. Later, the team moved out from the capital to assess other impacted areas in the Ouest and Sud-Ouest departments. This was done commune by commune beginning near the epicentre, and with focus on several/all cluster areas. The results were reported back immediately after each field mission. Following rapid assessment of the immediately affected areas, the team conducted further missions in the north and west of Port-au-Prince to assess the impact of IDPs moving out of the most devastated areas.

The assessment mission reports were inputted daily into OCHA situation reports and provided a basis for humanitarian response gap analysis. The results were posted to the Virtual OSOCC and shared daily with the clusters, NGOs, and donors on the ground. The results were also presented to the humanitarian community at certain meetings.

The success of the rapid field assessments was largely due to the integration of non-UNDAC members into the assessment teams. Each day, team members were recruited based on the type of mission planned, e.g. on the cluster-focus of the assessment. This played a key role in the team's ability to gather valid information in a short amount of time. In particular, the EU CPT's provision of an assessment team member greatly enhanced UNDAC's assessment capacity. In addition, significant contribution in terms of assessors and logistics support were made by WFP, IOM, Swiss Humanitarian Aid, the UK's Department for International Development, the American Center for Disease Control, the United States Army, and needs assessment experts deployed through the Assessment Capacities Project (ACAPS) who assisted to refine the methodology and reporting format.

2.5 Assessment activities

In the early evening of 13 January, UNDAC members and members of the ICE-SAR team conducted a rapid assessment in Port-au-Prince. The assessment confirmed that no suitable OSOCC location existed in the main city (any existing open spaces were too small and full of injured and displaced people). At 03:00 hours (14 January) UNDAC reported significant damages and need for USAR assistance in Port-au-Prince. Also confirmed were significant casualties, large-scale displacement, and logistics challenges.

On the second day of the UNDAC mission, a three-person rapid assessment team was formed. With USAR teams deploying into Port-au-Prince and assessing damages, the UNDAC rapid assessment team launched two ground missions to the west of Port-au-Prince to assess the areas nearer the epicentre – Carrefour, Gressier, Leogane, Grand Goave and Petit Goave. These missions revealed widespread damage in some areas and were key in moving response teams and aid west. A third mission then travelled by helicopter to the south to assess Jacmel and remote communes in the mountains and along the southern coast. The assessment missions focused on assessing each commune in the affected area. The aim was to ensure that no commune with significant needs was missed. While almost all communes were assessed early in the UNDAC mission, some could not be assessed until later due to logistics and security challenges.



EU CPT member Terry Webb and UNDAC member Mike Morton in Petit Goave. Photo Roberto Mendez

On 20 January, the UNDAC/EU CPT assessment team (joined by AST-staff) deployed to assess any damaged related to a reported 6.1 magnitude aftershock near Petit Goave. The team arrived by helicopter four hours after the quake and was able to confirm that few additional damages had occurred. UK I-SAR conducted a USAR assessment of the city core and a Polish medical team remained on site

for 24 hours to treat people injured during the 12 January earthquake. While on the ground the team conducted a more detailed humanitarian assessment of Petit Goave.

On 20 January, the UNDAC assessment team was also part of a UN mission to do more in-depth assessments in Jacmel and Leogane. The assessments reports were shared with OCHA and contributed to the decision to open OCHA sub-offices in both cities. (See also Section 2.3)

Following rapid assessment of the earthquake zone, the team then focused on assessing the impact of IDPs moving out of the Ouest Department. The team, joined by OCHA staff and other partners, conducted road and helicopter assessments to the east and north. The mission reports confirmed movement of people, but noted that most people were moving into family homes. Immediate health cluster needs were also identified.

The utilization of UNDAC rapid assessment teams can provide important situational awareness in the early stages of a large-scale disaster. This is especially true when local government infrastructure is severely damaged/not functioning. If reported in a timely manner, rapid assessment results can play an important role in the allocation of response resources and humanitarian aid. Consequently, assessment information needs to be processed and reported on as soon as possible – ideally at the end of each day's mission. This allows immediate inclusion into situation reports for the next morning. Given this, UNDAC rapid assessment teams should be a priority for staffing and logistical support following a wide-area disaster. They should then work from an assessment mission plan and assessment tool as outlined in the UNDAC Field Handbook.

Multi-cluster/joint assessment missions can be carried out in the very early stages of a disaster. Specialists drawn from sectors most affected can provide important insights. Ideally representatives of the national authorities could join each assessment team, although this was not possible in Haiti due to their lack of capacity in the early stages of the disaster. Regardless, it is important that the government receive assessment results in a timely manner. In Haiti, this was done by providing the UNDAC Governmental-liaison officer with results each night.

3.0 Information Management

UNDAC and OCHA, with partners initiated information flow and produced various key products for various audiences and uses, at field and global level. The integrated team was able to set these in motion relatively quickly. Although hampered by poor connectivity and communications challenges, products and systems supported operational decision-making within 24 hours. Information services and products also supported the development of coordination and relationships with essential partners such as MINUSTAH and the GoH, as well as donors, media and the broader humanitarian community. Existing structures and templates were adapted to support the extreme, complex operational situation and exceptional coordination structures arising from the magnitude of the disaster.

3.1 Information Input and Throughput

As any other UNDAC mission a generic email was established at the beginning of the mission as a central point for collection and dissemination of information (undac.haitieq@gmail.com). A standardized file folder and naming conventions were established immediately to standardize the management of incoming and outgoing information. The email was widely

disseminated and used by all humanitarian actors, OCHA headquarters, regional office, the OPC, cluster leads, volunteers, civil society, community organizations, religious organizations, MINUSTAH, etc. The email was monitored and staffed by the OSOCC Reception. At the peak, the inbox averaged 1 mail per minute which all required replying, or forwarding, to relevant entity for immediate action. The table below summarizes the types of inputs received (and their source), the focal point of collection and how the information was processed and used.

Types of inputs	Source of inputs	Focal Point	Frequency	Throughput (Processing)
USAR arrival and activities	RDC OSOCC Reception USAR teams Ad hoc emails Official requests	OPC with support of MapAction	Scheduled	USAR teams' arrival and departure, their capacity, their daily activities were processed by the OPC and used for planning
Situation reports and other updates	Clusters Government MINUSTAH	OSOCC Reception via email	Scheduled & ad hoc	Some was processed by the reporting officer who reviewed reports to capture information about needs and response.
Assessment reports	UNDAC/OCHA/ACAPs/EU assessment missions Clusters Government MINUSTAH	OSOCC Reception via email	Scheduled and ad hoc	OCHA/UNDAC assessment team compared, verified, and compiled the information to produce situational overview and analysis to highlight gaps
Incoming assistance and actual response	USAR, Governments & embassies, organizations (formal and non formal)	OSOCC Reception and EU CPT	Ad hoc	The information was compiled in a spreadsheet that could be filtered by date, source and cluster.
Outcome of cluster meetings and Humanitarian Forum	Clusters OCHA focal points for each cluster	Reporting Officer OSOCC Reception	Scheduled	The Reporting Officer used the official minutes of cluster meetings (if available) and key points provided by cluster focal points, as input for the OCHA sitrep.
Contacts	Individuals	OSOCC Reception	Ad hoc	Information about organizations and individuals were collected and compiled at OSOCC Reception, and updated contact list was provided on daily basis
Maps	Government Assessment missions MINUSTAH Other sources	OSOCC Reception MapAction IM cell	Scheduled	Collected by OCHA and MapAction to provide new products on daily basis.
Miscellaneous information	Community based organizations Civil society MINUSTAH HQ	OSOCC Reception	Ad hoc	Various requests, appeals and inquiries were directed to the OSOCC Reception. The information was collected in the spreadsheet – by date, source, type of information, and cluster it belonged to. A summary was then shared with cluster leads at the inter-cluster meetings for follow-up and action.
Logistical, Admin & Operational	OCHA and UNDAC staff, OPC, OSOCC Reception	OSOCC Reception Admin	Ad hoc	Processed and followed up by admin and support staff.

The OSOCC Reception and the UNDAC Haiti email proved to be successful and became the principal point of information collection and dissemination. It served to provide information about cluster and coordination activities, situation updates, and logistical and operational

updates. Considering that most staff and offices were displaced in various locations, the daily updated contact list served as an essential tool helping to connect people and organizations.

The Information Management function received considerable staff support from the OCHA Emergency Response Roster early in the operations, however largely focused on production of outputs, and perhaps not sufficient to support the collection and processing of inputs. With increasing flow of inputs, it became more and more difficult to process the information without a dedicated person. If possible staff should be assigned to deal with processing various inputs, and to task and follow-up when necessary. Furthermore, in large operations with rapid influx of assistance, it is crucial to establish a strong focal point for information management within each cluster at an earliest possible stage to collect and process incoming information relevant to each cluster.



UNDAC member Tatiana Garakani manning OSOCC Reception.
Photo Olivier Bruyere

3.2 Information Output

Outward information flow and products included assessments and analysis reports, to daily situation reports, maps at the OSOCC Reception, to daily media briefings, coordination of public information and information services to the affected population. As previously mentioned, a large Information Management cell was set up with reinforcements arriving through the first week, complemented by the services of MapAction, ACAPS, iMAP and others. The table below shows various outputs and their utilization

Output	Source / info flow	Audience	Utilization
Assessment and analysis reports Location specific Sector specific Multi-sectoral	Assessment group >	Humanitarian community globally and locally	Decision-making political Decision-making financial Decision-making operational
Situation reports OSOCC daily update OCHA field inputs to overall sitrep	Reports officers > OCHA HQ > Reliefweb (public domain)	Humanitarian community global Humanitarian community local MINUSTAH Media	Decision-making political Decision-making financial Decision-making operational Media storylines
One Response website Updated info, contacts ...	IM >	Humanitarian community global Humanitarian community local MINUSTAH Media	TBD > still in process

Maps Impact Damage Needs Relief – coverage, location	IM/MapAction/I-MAP >	Humanitarian community global Humanitarian community local MINUSTAH Media	Decision-making political Decision-making financial Decision-making operational Media storylines
Meeting schedules, 3W, contact lists	IM >	Humanitarian community local	Local coordination
OSOCC Reception	UNDAC/OCHA >	Humanitarian community locally Media	Local coordination Local operations Media support

3.3 Public Information

The magnitude of the disaster, in terms of massive destruction, high casualties and losses sustained by the GoH, UN and other humanitarian agencies in-country, as well as highly complex operational difficulties, attracted intense media interest and blanket coverage by global 24/7 media in the first week-10 days, as well as regional and national broadcast and print media. OCHA initially deployed three Public Information Officers (PIOs) in support of the UNDAC team, one spokesperson, one reports/PI coordination officer, and one videographer, to manage public information coordination and output. The aim was to coordinate public information and strategy at field level in support of global efforts by OCHA, DPI and DPKO.

Much of the coverage was negative, with a focus on slow arrival of supplies, poor coordination and bureaucratic bottlenecks. However, the USAR phase provided opportunities to highlight exceptional achievements and the capacity to film USAR operations and upload footage swiftly to UNIFEED and other channels helped to balance coverage. The OCHA spokesperson established daily joint press briefings from day 5 with the MINUSTAH spokesperson, which alongside strategic interviews and support to the HC, meant that media received constant flow of information on the humanitarian response. Cluster lead/partners were also invited to provide operational updates, to ensure balance between clusters and UN/non-UN partners.

UNDAC/OCHA facilitated coordination of PIOs within the humanitarian community as well as with MINUSTAH, GoH, donors and the media. Due to earthquake losses, this necessitated physically finding PIOs who were spread out in various locations with poor communications, and pulling together a group to work on coherent messaging and strategic handling of difficult issues at regular meetings. Outputs and concerns were shared with New York by DPKO and OCHA. Other key services provided by UNDAC/OCHA to both communications officers and to media covering the emergency included building and maintaining contact lists, regular coordination and strategy meetings, and sharing key information and messaging documents. This coordination mechanism also ensured constant info flow to media, avoiding information vacuum and providing updated details of SAR and relief operations and coordination.

4.0 Safety and Security

Deployment of a large UNDAC team after a 7.2 M earthquake in a Security Phase III country proved to be quite a challenge. All UN staff in Haiti had been affected by the earthquake either directly or indirectly and it was clear from the beginning that the deployment and the coordination of a huge number of USAR teams would not be easy.

The early deployment of an UN DSS, UNDAC trained member was an added value to the mission as he was immediately able to liaise with the security and safety team in country. The UN DSS team in Haiti had been seriously affected by the earthquake with the loss of members of the team in different affected areas, and the loss of their offices including the operational control centre. In spite of the staffing situation, the Head of UN DSS in Haiti did deploy a senior security advisor to act as the UN DSS liaison officer at the OPC to ensure constant security updates and briefing of the USAR teams as well as facilitating coordination of transport and security escorts for USAR operation.

Port-au-Prince was already before the earthquake divided in green and red zone (areas which would require armed escorts). Mainly the harbour area, from Cité Soleil towards the south and Carrefour, was considered a red area where military escort was necessary. This had a huge impact on the USAR operations, as there was insufficient capacity in UNPOL and MINUSTAH to facilitate the required deployments in the red zones.



Security forces outside USAR BoO. Photo: Pablo O'Farrill

Mains actions conducted in Haiti regarding the security and safety of the UNDAC/OCHA team.

- Security briefing regarding the situation for UNDAC members, OCHA Staff, partners, e.g., TSF, MapAction, EU CPT, and NGO's security focal points
- Insurance of ID badges for UNDAC/OCHA and partners
- Daily update regarding the security and safety to the team
- Participation to the Security Management Team meetings (SMT)
- Participation at the security cell, daily meeting chaired by the Chief Security Advisor (CSA)
- Security assessments on request
- Liaisons with the UNPOL Commander
- Liaisons with the United Nations Medical Emergency Response Team (UNMERT) deployed
- Liaisons with the transport and logistics MINUSTHA section in order to get transportation means and logistical support for the USAR operations.
- Check the compliance of OCHA vehicles regarding the MOSS requirements
- Security and safety plan for the OSOCC
- Preparation of options and plans regarding the establishment of Humanitarian part of the MINUSTHA Log Base
- Security clearance for all UNDAC /OCHA members to fly in helicopters and others transportations means
- Support to the team

- Tracking of individuals and vehicles
- Tracking of deployed USAR teams when possible
- Advice and support to local and international OCHA staff based in Haiti.

The UNDAC experienced excellent cooperation with the UN DSS Chief Security Advisor (CSA) from the beginning of the operation. This also included full support from the UN Fire Marshall, the UN DSS liaison officer that was assigned to the OPC, and the close protection team (QRF). In spite of the security situation in Haiti, no USAR or medicals teams were targeted during the operation and none of their team members were injured. In a few cases, USAR teams were recommended by their security escorts to withdrawn in order to prevent any problems. (See also Section 2.1.)

The NGO umbrella organization InterAction deployed a security officer a few days into the emergency. This provided the OSOCC with an opportunity to channel all the NGO security concerns to that specific person, who also took on coordinating other issues such as registrations and access to the UN compound.

5.0 Administration and Logistics

Huge logistic constraints characterized the first days of UNDAC Mission. The Admin/Log function concentrated its initial tasks in ensuring basic logistics for the UNDAC team mainly from the existing MINUSTAH resources.

For this purpose, in the absence of systems that could ensure MINUSTAH support for the ongoing humanitarian actions, separate arrangements were fostered, initially for the provision of trucks, and afterwards to secure food rations and water from MINUSTAH. These supplies served to sustain UNDAC members as well as USAR and assessment teams. The Admin/Log function also achieved a specific arrangement for the provision of gasoline and diesel for generators and two vehicles. Although the Admin/Log function contributed to create a small response infrastructure in order to meet needs, the lack of support from MINUSTAH necessitated that arrangements had to be negotiated on a case by case basis. This situation also required several innovative logistical arrangements through the use of personal networks of individual UNDAC members.



UNDAC members Sergio Solis and Pablo O'Farrill have managed to secure a truck. Photo Olivier Bruyere

During the first 3 days, a serious constraint existed in communication infrastructure. These constraints made the communication difficult among the UNDAC, RDC and external agencies. The difficulties were addressed partially through the provision of equipment and radios by the IHP and later by TSF and the Admin/Log function by the acquisition of cell phones that were available when the National Mobile service was re-established on day 5 after the earthquake. However, up to the end of the mission, the local mobile connectivity remained unstable.

Another component of the Admin/Log function included securing spaces in the passenger MINUSTAH service flying to Santo Domingo. Bookings had to be followed closely due to the constraint that the MINUSTAH and Secretariat personnel had booking priority over other UN Agencies, thus making difficult the planning of the arrivals or departures to and from Port-au-Prince for UNDAC, OCHA and the supporting agencies. It is important to mention the importance of the link with Santo Domingo UNDP office for logistic purposes which can be strengthened specially for arranging support for incoming teams and follow up of cargo arriving to Haiti.

The Admin/Log function also tried to facilitate improvement of the living conditions for UNDAC by the acquisition of materials for the premises, e.g., chairs, tables, water filters, stationary, coffee machines, tarpaulin, laundry services, etc. At the end of the mission, however, OCHA staff was still installed in tents with scarce sanitary and bathing facilities.

5.1 UNDAC Support

Given the size of the mission a rather large support team was deployed by several partners. Support for the UNDAC mission was given by the following organizations that together formed the UNDAC Support Team:

- Americas Support Team (VATF1/USAID)
- IHP (MSB, Finnrescue, Estonian Support Team, and Norwegian UNDAC Support)
- MapAction
- Telecom Sans Frontières

In the post mission analysis the UNDAC Support Team noted numerous failures and areas with scope for improvement. These all had operational implications that acted as an impediment to the operational effectiveness of the UNDAC team. Haiti was burdened with a poor telecommunications infrastructure before this emergency. The earthquake rendered all systems in the Port-au-Prince area totally inoperative within an hour of the quake, and mobile telephony did not recover until after the formal end of the USAR phase of the operation.

In addition this emergency had several unique characteristics that made supporting the operation especially difficult:

- **Logistical Constraints:** The disruption or destruction of most in-country logistical support; the nearest stable base of operation was Santo Domingo, 40 minutes flight time away. Incoming teams were also severely restricted in what could be brought in by the damage to the cargo handling capability of Port-au-Prince and the need to share flights with USAR teams which deployed with multiple tonnes of equipment, leaving little capacity for UNDAC support equipment.
- **No clear ICT leadership:** There was no clear early leadership of the ICT function within the UNDAC Support Team in the early stages of the emergency deployment. This left each base to effectively fend for itself and may have resulted in the inappropriate allocation of resources. This improved later as the operation transitioned into the humanitarian phase of operations, and bases were shut down and functions consolidated
- **Internet connectivity:** This proved problematic throughout the deployment in all locations to which the UNDAC Support Team were deployed. The massive media coverage in the USAR phase and the subsequent massive humanitarian response effectively resulted in almost immediate saturation of the available un-allocated

bandwidth of available satellite communication systems in common usage by the UNDAC support. At the height of the USAR operation, the OPC, was reduced to using very old systems such as Mini-M which had fallen out of general usage in the wider community as high capacity, but contended, systems such as BGAN became saturated and failed operationally. Later on the OSOCC was moved onto a VSAT, but this was prone to failure, and at one point was down for some hours as the provider decided to do Satellite software maintenance. The backup system was BGAN based and this also failed due to the previously mentioned bandwidth saturation issue.

- **Radio Communications:** For reasons that are still not clear, VHF range was dramatically curtailed in the vicinity of the airport. This made the use of VHF handsets to communicate between the RDC, OPC and OSOCC almost impossible. This could have been remedied with the use of repeaters, however none were deployed in the support kits
- **Noisy Environment prohibiting the use of VHF:** For operational and security reasons it was decided to base the whole operation at Port-au-Prince airport. This resulted in an extra-ordinarily noisy operating environment at the RDC that was based airside outside the terminal building, which had been rendered unstable by the earthquake. The noise made the use of normal VHF handsets almost impossible when they did work, as they were impossible to hear over the aircraft noise (aircraft were required to keep one engine running at all times as there was no ground start capability extant immediately after the earthquake)
- **WiFi Radio Channel Saturation:** Early on in the deployment, all available radio channels allocated for 802.11b/g/n became saturated in the vicinity of the OPC and OSOCC. This made WiFi very slow and unreliable, when it worked and resulted in routers and access points frequently crashing as their various error logs, and collision tables filled up, forcing frequent restarts. Coupled with the heat and unstable power, this contributed to unacceptably long downtime periods. In addition, the OSOCC grew so fast that the single Access point and routers quickly became overwhelmed. Most equipment deployed was small business or domestic grade and it was only until the deployment of the MSB HIC module that some of the core infrastructure was properly populated with business grade equipment
- **Groove:** The OSOCC rapidly encountered problems with the Groove tool. The spotty internet connectivity meant that changes pushed to cloud based servers, were only applied locally when the internet came back up, saturating both the limited internet bandwidth and saturating the WiFi network when the internet connection was active, as peers on the wireless LAN all tried to push their data to each other simultaneously. The OSOCC rapidly outgrew the small workgroup environment the Groove tool seems to have been designed for, and small errors like the accidental inclusion of one staff member's music collection in the workspace, despite it's rapid rectification, had operational consequences as the network frayed under the strain of transmitting sequential changes to the workspace involving the exchange of gigabytes of data over the stressed Wireless LAN
- **Administrator Rights:** Many machines were deployed with no way to access Administrator rights under Windows. This exacerbated the existing interoperability problem, as site technical support found it impossible to apply solutions, install software or change settings. This was especially true of those machines deployed with OCHA staff deploying to the field with their corporate laptops used in their daily office environments
- **Viruses and Malware:** Almost every USB memory device and laptop deployed ended up with a virus problem by the end of the second week of the emergency. MINUSTAH

already had a long-standing computer virus and malware problem, and this contributed to the inevitable problems expected when large groups of disparate organisations of varying levels of computer security awareness start swapping data. Some USAID provided laptops shipped with invalid trial licences for the installed Anti-Virus software. The high levels of work activity meant there was not time to start to systematically start scanning all USB data sticks and memory cards, and the spotty internet connectivity meant that even when users had effective anti-virus, their definitions were out of date, reducing the effectiveness of the protection.

- **Lack of Tropical Tentage:** Many of the tents and portable shelters used at all locations were deployed from locations that did not have the same tropical conditions experienced in Haiti in January. Accommodations had to be borrowed from USAR teams and others as the OSOCC and OPC rapidly outgrew their initial accommodations. ICE-SAR was instrumental in this regard, loaning their medical tent for the OPC element. These facilities later went on to house the OSOCC, which subsequently experienced many of the same problems. Operations were conducted in tents designed for winter conditions in the northern latitudes whilst being almost on the equator. In the resulting heat people fatigued quickly and equipment rapidly deteriorated. At various points temperatures in the OPC, and later the GIS and Office tents at the OSOCC soared to over 43°C, equipment became too hot to touch and some plastic components actually began to soften as a result of intensive use and overheating.
- **Staff Management and Staffing levels:** Given the size of the emergency, support teams deployed fairly lightly, and although reinforcements were rapidly ordered to mobilise, logistical problems prevented their rapid deployment in theatre. This understaffing resulted in massive workloads for all the teams, with almost everyone working 22-23 hour days in the first week of the emergency at the RDC and OPC. Staff under these conditions became fatigued and less effective as the operation wore on. As a result, some staff burned out, becoming less and less responsive to requests for services and fixes.
- **Generators and Power Infrastructure:** Power proved to be an ongoing problem during the early phases of the operation. The earthquake destroyed mains power, and consequently the entire operation was forced to run on whatever generating capacity could be imported, scrounged or later borrowed from whatever host facility was available. Throughout its existence the RDC suffered intermittent power as the airport generators experienced problems. This forced the RDC to effectively run on batteries, severely limiting communications and information handling capabilities. The massive influx of equipment from around the globe and the borrowed nature of much of the equipment also led to problems with disparate voltages which resulted in some non-auto switching equipment to be destroyed and almost caused a fire at the OPC, when a 110V only charging unit was plugged into a 220V circuit with US type B sockets (usually 110V only). This led to an electrical discharge and smoke, which was rapidly dealt with, but is illustrative of the problems experienced in this regard. UNDAC staff did not deploy with plug converters, which led to support teams having to donate plug adapters to string together the disparate bits of equipment to make them interoperable.

However, it should be noted that in all cases the UNDAC Support Team was able to improvise and overcome these challenges and at no point did the work of the UNDAC team or their operations stop because of technical failure. The UNDAC Support Team was superb, action and solution-oriented operators. They were constantly looking for ways to improve the

conditions at the OSOCC, BOO, and RDC, making use of whatever resources they could find or scrounge in order to keep the operation going.

Even where the technology failed in the face of the harsh conditions and circumstances, the same cannot be said of the staff and users. Even in the harshest conditions, the UNDAC Support Team remained cheerful, hard working and dedicated to the success of the mission. As a consequence, there were no massive ICT failures that halted operations. Other than the Internet connection, everyone was always able to work, even though at times the Wireless LAN was slow. Every failure was addressed within minutes of it being noticed and the ICT support process



TSF working on VSAT outside the main OSOCC. Photo: Pablo O'Farrill

generally functioned smoothly. Furthermore has the Support Team appraised UNDAC and OCHA staff as easy customers. At no time was there any impatience or lasting anger directed to any ICT support staff in spite of the difficult conditions. This contributed to the smooth running of the ICT support functions.

6.0 Handover and Exit

Introduction of the OCHA Emergency Response Roster has dramatically improved OCHA's capacity to quickly deploy staff to sudden on-set disasters. Within the first week of the earthquake, OCHA staff deployed to Haiti, ready to work alongside and, eventually, take over for the UNDAC team. This led the UNDAC team being able to end their mission two and half weeks after the earthquake without leaving a gap in the services to humanitarian community. However, more work is needed to ensure proper planning of the arrival of incoming staff to make sure that all posts are filled in a prioritised manor. There is a need to ensure that incoming staff have the required skills needed for the particular emergency and also have awareness of working in a sudden on-set emergency environment under harsh field conditions.

7.0 Lessons Identified for UNDAC Methodology

In summary, the following lessons have been identified as an update of the UNDAC methodology:

- The use of the GDACS Framework including the Virtual OSOCC is vital during the emergency response phase. The system offers a secure, open information sharing platform which enable key responders to communicate in real time. The importance of one single information sharing platform should not be neglected in the eagerness of the humanitarian community to develop new and more sophisticated information management tools. Furthermore, it is interesting to notice that a reliable tool for voice communication during the emergency operation was Skype. This not only enable one-to-one-calls, but also makes it possible to link several key actors in different locations together the same time.

- As in any other major emergencies, the travel with commercial flights was disrupted and FCSS therefore very early requested the USAR teams planning to deploy to take UNDAC members along either at departure airport or transit airport. For this reason it was decided to not set a team of available UNDAC members on standby, but see what possibilities there were to get UNDAC members on the ground before final composition were decided. Furthermore, is it clear that it is vital to compose the team of members who has prior experience from the affected areas and/or from this type of emergency. The team was further strengthened with UNDAC members already in country and benefited from the network of UNDAC trainees deployed with other entities.
- When deploying to areas with high Security Phases it is a major benefit from having UN DSS staff members on the team.
- FCSS should make an effort to get the global cluster leads to nominate candidates for UNDAC training as the UNDAC team often will be the entry point for arriving relief teams until the clusters becomes fully operational.
- The establishment of contacts and liaisons with national authorities, HC's office and other key actors is vital for a mission of this size. By having an UNDAC member dedicated to following up national authorities a level of trust was established early on and key information could easily be communicated to the international humanitarian community. Furthermore, as the UNDAC Team Leader developed close contacts with high level decision makers early on, the UNDAC team played a role in developing overall strategies for the humanitarian operation.
- A separate INSARAG lessons observed on the emergency response is needed to further improve the INSARAG methodology, but also to ensure much closer links and increased awareness with the smaller teams from the Americas region. Also, it should be further investigated to see how the INSARAG methodology could be utilized as a model to strengthen response in other sectors of humanitarian activity.
- The current support modules needs to be revised to see how they can be adjusted to further facilitate effective communication between locations where the team is operating.
- The UNDAC team today depends on a number of partners providing support in various technical fields and these partnerships are secured through MoUs. These MoUs should also address transition phases and define how these partners would/could support the establishment of an OCHA office following the departure of the UNDAC team.
- The inclusion of ACAPS proved fruitful and it should be further investigated how partners with such specific expertise could contribute to further develop UNDAC methodology.
- In large scale disaster with a large number of incoming NGOs, deploying support from NGO networks as InterAction and ICVA should be encouraged as soon as possible. This presence is necessary to help coordinate and manage NGO activities, and to support their participation in the clusters in a more organized and structured approach, and hopefully contributing to reducing the initial chaos at cluster level.
- Considering the high volume of inputs and inquiries, it would be helpful to establish a channel at headquarters to screen and prioritize inquiries. With only one person monitoring and responding to the UNDAC Gmail account on-site, in addition to the frequent interruptions in internet connectivity, a back log of hundreds of emails was built up in few hours. At the beginning of the operation, inquiries came from many different people from headquarters, both in New York and Geneva, working in different capacities but frequently with similar questions. In such a large scale operation, with limited capacity and communication problems, it will be helpful to have one focal point only at headquarters to filter the inquiries to the field. This will minimize the volume of inquiries and help identify priority issues.

Annexes

Annex 1 - Timeline and First Actions

12th January

- 7.2 Earthquake struck Haiti at 22:53, Geneva Time (16:53 Local Time)
- Head of OCHA alerted CRD/OCHA about the earthquake who forwarded message to FCSS. Automated GDACS alert followed shortly after and UNDAC M1 was issued.

13th January

- A team was composed based on availability to travel fast to Haiti and Nihan Erdogan travelled with the Swiss advance team, but due to airport capacities in Port au Prince the plane had to divert to Santo Domingo, Dominican Republic instead of Port au Prince.
- Ramiro Galvez, Mike Morton, and Americas Support Team (AST) arrived with USAID USAR team and Icelandic Search and Rescue (ICE-SAR) team who landed within minutes of each other. The airport was severely affected by the earthquake and there was neither air traffic control nor ground services fully functional. The Icelandic plane was initially refused to land, but as the runway was clear the pilot insisted and took down the plane without incidents.
- ICE-SAR with Mike Morton was first on the ground around 16:00 hrs, less than 24 hours since the impact. The ICE-SAR team were able disembark first as they had ladders in the passenger cabin and could therefore get on the ground without support from ground services
- Mike Morton accidentally met a representative from the DPC and the Minister of Interior at the airport and quickly negotiated the establishment of an RDC. This was, however, not appreciated by airport security staff who several times through the next hours tried to move the RDC out of the premises.
- Ramiro Galvez with support from AST and UNDAC trained ICE-SAR members set up the RDC, while Mike Morton went on a reconnaissance through the city. The RDC had limited connectivity, but managed to get the message out that the airport could be used.
- The reconnaissance showed that there was widespread destruction, but also that there was no obvious place for the setup of an OSOCC or a USAR BoO. A meeting with DPC in Port-au-Prince proved fruitless as it was apparent that they had no resources or plans for the response. It was decided to organize the initial USAR response from the RDC and ask USAR teams to either establish themselves with their embassies or at the airport. ICE-SAR identified an area adjacent to the runway that could be used as a BoO.
- Mike Morton went to the MINUSTAH Logistics Base to make contact with the Humanitarian Country Team, while Ramiro Galvez remained at the airport to continue RDC operations and tasking of incoming USAR teams.

14th January

- Jesper H. Lund, Rolf M. Bakken and Olivier Bruyere together with the EU CPT landed with the flight from B-FAST in the early morning. A Plan of Action (PoA) had been outlined on the plane. Jesper H. Lund and Olivier Bruyere went immediately to the MINUSTAH base, while Rolf M. Bakken and the EU CPT remained at the airport to finalize the PoA with the first arriving team members.

- Sergio Solis arrived with the next USAID flight and was assigned to replace Ramiro Galvez at the RDC. Tatiana Garakani, Nihan Erdogan, and Borja Miguelez arrived shortly after with helicopters from Santo Domingo.
- Upon arrival at the MINUSTAH base, Jesper H. Lund made contact with the Humanitarian Country team. However, as several key figures were either dead or missing the HCT was unable to reach any major decisions. Jesper Lund also approached the Force Commander of the MINUSTAH who was temporarily in charge as the SRSG and the Deputy SRSG had been killed in the earthquake. The message from MINUSTAH was that the humanitarian situation was not recognized as a priority and that DPKO assets could not be used for non-DPKO operations.
- Olivier Bruyere went to meet with UN DSS and also made an attempt of securing transport from a MINUSTAH contact. He was refused sufficient support and when Rolf M. Bakken also tried to approach the same contact the phone was hung up in mid conversation.
- Nihan Erdogan, Ramiro Galvez, and Borja Miguelez with support from TSF and ICE-SAR established the Operations Cell of the OSOCC at the airport. ICE-SAR set aside a tent for this use in their camp and as the BoO rapidly expanded ICE-SAR also took on the responsibility as BoO Camp Management.
- As a consequence of the lack of support from MINUSTAH, USAR teams were congested at the airport. Ramiro Galvez tried to negotiate directly with transport assets at the airport and managed to secure some assets for transport but not in sufficient numbers.
- Adriano Kupfer arrived with Swiss Team and was assigned to the OPC. Pablo O'Farrill arrived with the Mexican team and went to MINUSTAH base to join the UNDAC team.
- Mike Morton and Terry Webb (EU CPT) were tasked to head up the assessment team and started to plan their first mission.
- The logistical problems also affected bringing the AST OSOCC module from the airport to the MINUSTAH base and team members at this location had to operate from borrowed office space.

15th January

- First part of IHP support arrived together with USAR.NL shortly after midnight and were assigned to OPC and the team at the MINUSTAH base. Second part of IHP support arrived later the same day.
- Jesper H. Lund met with the cluster-leads. Five clusters had been activated, but they were primarily focused on the organizations they had cooperated with before the disaster and didn't easily grasp the huge influx of organizations that this earthquake would generate which would have to be coordinated by the clusters.
- Amanda Pitt, Raul Salazar and Roberto Mendez arrived and was assigned roles according to the PoA
- It became clear that bringing the AST OSOCC module from the airport to the MINUSTAH base was going to be problematic. Pablo O'Farrill was tasked to do nothing else than finding available logistics means to get it transported and set up

16th January

- RDC staff was rotated and Sergio Solis was tasked to liaise with MINUSTAH logistics and work with Pablo O'Farrill on logistical issues for the UNDAC team and the USAR operation. RDC was staffed by EU CPT members Arthur Weber and Gert Teder, and IHP support staff Lei Wall for the remainder of its operational period.
- The AST OSOCC Module arrived from the airport and was established in the evening

Annex 2 - Roles and Responsibilities – UNDAC team and Partners

Role	Name	Country/Organization	Team
Team Leader	Jesper H. Lund	OCHA	UNDAC
Dep TL/OSOCC Manager	Rolf M. Bakken	Norway	UNDAC
Operations Cell/RDC	Nihan Erdogan	OCHA	UNDAC
	Ramiro Galvez	USA	UNDAC
	Borja Miguelez	ECHO	UNDAC
	Adriano Kuepfer	Switzerland	UNDAC
	Angela Iglesias	Spain	EU CPT
	Arthur Weber	Austria	EU CPT
	Gert Teder	Estonia	EU CPT
	Mike Morton	Canada	UNDAC
Assessment	Roberto Méndez	Switzerland	UNDAC
	Terry Webb	UK	EU CPT
Security	Olivier Bruyere	UN DSS	UNDAC
Liaison (Government)	Erdem Ergon	World Bank	UNDAC
Liaison (CMCoord)	Ronaldo Reario	OCHA	UNDAC
Logistics	Sergio Solis	USA	UNDAC
	Pablo O'Farrill	OCHA	UNDAC
Administration	Raul Salazar	UNDP	UNDAC
Information Management	Tatiana Garakani	Canada	UNDAC
	Amanda Pitt	OCHA	UNDAC
	Nigel Snoad	Microsoft	UNDAC
	Sofia Albrechtsson	Sweden	EU CPT

UNDAC Support Team

Organization	Name
Americas Support Team	Joe Kratochvil Roderick Schmidt Kevin Edwards
International Humanitarian Partnership	Kari Kumpulainen Per Hallenborg Karri Nieppi Indrek Juhanson Leif Wall Vegar Skildheim (RDC, Dom Rep)
Telecom Sans Frontières	Simon Genin Anthony Lhoro Sebastian Lannes Sebastien Latoille Benoit Chabrier Pascal Villeneuve Lester Flores
MapAction	Emese Csete Hamish Pritchard Naomi Morris Emerson Tan Anne Frankland James Steel Lynne Kirkham Darren Connaghan Tom Howden