Information Systems Coordination Committee

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Minimum Telecommunications Standards required to provide Safety and Security to Field Personnel

Recommendation from SIG-TAG for approval by ISCC
(Note: Approval by SIG-TAG via circulation still underway)

OVERVIEW

1. Communications is a key factor in the success of a mission and also to the survivability of the mission and its personnel. Communications requirements must be an integral part of the security plan for each mission. Communications capabilities must be sufficient to satisfy local, in-country, regional and international communications requirements. They will vary depending upon the mission situation and the resources available.

2. Due to the varied means of communicating from country to country and within a given mission area, extensive coordination throughout the planning phase is mandatory. The Designated Official should assign a lead agency to coordinate security communications among all UN agencies operating in the mission area and also, when feasible and desirable, among NGO's operating in the area. A Telecommunications Coordination Officer (TCO) should be appointed by the DO to ensure effective coordination of all communications requirements. This person can be separately assigned from external to the mission area or from one of the field agencies' communications operations or a local hire.

Coordination Protocols

3. It is the responsibility of the lead agency assigned by the Designated Official to coordinate security communications among all UN organizations operating within a

mission area in addition to the NGO's operating in the area when feasible. The Country Agency Head from each agency is responsible for communications within his or her own agency in the mission area as long as they conform to the guidelines provided by the Designated Official. The Country Agency Head, through his communications personnel, should also coordinate security communications with each implementing partner if this is provided for in the implementing agreements.

4. Field personnel from the lead agency assigned to coordinate security communications should, as feasible, also contact other NGOs operating in the area. While each agency retains the right to coordinate separately with the host government for establishing communications capabilities within the mission area, the lead agency should where practical do this for all UN agencies operating in the host country. This must include obtaining operating frequencies and licenses, whether or not the government is a signatory of the Tampere convention, and also obtaining customs clearance to import the required communications equipment.

5. In cases where coordination with the host country is not advisable or practical due to local conditions, standard UN procedures should be adhered to, keeping in mind that the safety and security of UN personnel is paramount.

Pre-planning

6. The initial mission plan must ensure that, in an emergency, personnel are able to reach help from any place under any circumstances. The plan must provide for adequate communications equipment and facilities. The necessary budgetary requests and the actual allocation of funds and resources must be included in the establishment of a mission. Agency telecommunications staff should be intimately involved in the planning process.

7. Agencies should follow the standards for field office communications equipment and staff requirements based on office type and size as per the minimum standards established by UNSECOORD. This will allow for establishing budget-planning guidelines and allow non-technical personnel the ability to integrate communications into their office plans. This information should form a part of the Consolidated Appeal Process (CAP) guidelines.

8. Each agency should put in place procurement procedures to allow for rapid procurement and deployment of communications equipment in an emergency. Emergency stocks of essential items should be on hand at agency headquarters or preferably at regional offices to enable quick deployment of a basic startup office or upgrade facilities if going to a higher phase. Each agency should maintain an updated set of guidelines for establishing security communications systems for the agency's field offices.

9. Coordination of telecommunications among all UN agencies should be ongoing to ensure that agency field offices can communicate with each other. The Security Management Team and the TCO should be utilized to accomplish this coordination at

the field level. Cost sharing of common resources should be considered wherever possible.

Assessment Mission

10. Communications planning/coordination must be a mandatory part of advance missions prior to establishment of field offices. This should include coordination, where practical, with the host government for operating frequencies, licenses, customs clearance and any operating restrictions. Considering local conditions, the safety and security of UN personnel must take precedence over any coordination requirements.

11. Assessment mission team membership must include a telecommunications professional. When establishing locations for offices and personnel accommodations, the ability to maintain communications with these locations should be considered.

12. A draft set of "Guidelines For Assessment Of Emergency Communications" is available from the Secretariat of the Working Group on Emergency Telecommunications (WGET); a final version will be published in early 2001.

Equipment Uses

13. While communications equipment may vary widely by frequency and capabilities from country to country and agency to agency, interagency operability in security telecommunications is a must. The following list provides an overview of appropriate areas of use for various types of equipment.

    a. **VHF** – VHF radio communications are confined to short distances (a few kilometers) unless rebroadcast repeater stations are being used. Repeaters may need to be equipped with access control (CTCSS). VHF is used for local communications using hand-held walkie-talkies or low powered mobile/base installations.

    b. **Multiple Repeaters/Interconnects** –Multiple repeaters or various channels allow for increased system capacity. This allows for additional working (talking) channels and keeps traffic on the security channel to a minimum. Interconnects may allow connection between the radio networks and local PSTN.

    c. **HF** – HF communications, voice and data, provides medium and long-range (hundreds to thousands of kilometers) connectivity depending upon propagation resulting from the time of day, frequency and sunspot activity.

    d. **Satellite** – Satellite communications systems provide connectivity between field missions and headquarters in some configurations even with multiple simultaneous voice and data channels. They are very important for secure point-to-point communications. Reliability rates of 99.5% are common. Costs of operations ($2,000 terminals and $2-3 per minute connection charges)

preclude routine use of these systems on an operational basis, but in an emergency they can be the only means of long distance communications.

e. **Data Communications** – As exchanging of data between computers becomes more prevalent, the media to accomplish this exchange becomes more critical. The majority of data communications is accomplished via hard wire systems or wireless microwave systems. Data can also be exchanged at high speed via satellite systems and via HF/VHF radios. Data exchanges amongst different agencies are frequently handled through the agencies' Internet gateways. Data exchanges amongst different agencies must use Internet Protocol (IP).

f. **GPS** – Hand held or mobile mounted satellite receivers that can provide locating information accurate to within a few meters. This information may then be relayed via voice or data to headquarters should staff personnel come under threat or attack.

g. **Vehicle tracking** –All vehicles must include a tracking system, used to report back to a central location. Such a tracking system must be either procedural (password protected) or integrated with a vehicle's communications systems, radio or cellular (available only in limited areas). These systems can be implemented using a continuous link, a dispatcher request, a periodic check in, or a driver panic button activated method.

h. **Broadcast Band Radios** – Battery operated AM and FM radios, and vehicle mounted AM/FM radios are an essential method of obtaining information during an emergency.

i. **Emergency power/batteries** – Public power utility networks are often not available during emergency situations. All communications equipment must have alternate means of power provided by generators, solar panels and/or batteries. Periodic testing and re-charging of batteries are essential to maintain their reliability and should be included in maintenance plans as well as the overall security plan. When relying on batteries for back up, multiple batteries should be available for each handheld radio or sat-phone and a means of charging them must also be provided.

Mission

14. In addition to the host nation's public communications systems which may be used during normal operations, the UN missions require additional capabilities to provide for the safety and security of personnel in residence, personnel traveling in the host country, personnel located at remote missions and with headquarters located outside the host nation during emergency conditions.

15. **International** – During routine operations, connectivity with agency headquarters and UN headquarters can be maintained via host nation public access networks. However during emergencies, these networks might not be available, so alternative

connectivity must be available via satellite, sat-phones or HF systems.

16. **Remote locations** – Connectivity with remote locations during routine operations can be maintained via host nation public access networks if available with satellite systems and HF radios for backup. In emergency conditions, when the public access networks are not available or reliable, satellite systems and HF radios will be the primary means of communicating with remote personnel.

17. **Hazardous locations** – The safety and security of United Nations Staff members, particularly if working in hazardous locations, depends on local data and/or voice telecommunications capabilities. These need to be independent of the local public telecommunications infrastructure. Such communications may be provided by VHF and HF radios for local communications and by HF radios and Satellites (sat-phones) for long distance (International/remote missions) communications. A planning matrix for various emergency situations is provided in Attachment I. A minimum security telecommunications matrix for UN Security conditions is provided in Attachment II.

Operations

18. The requirements for communications and the establishment of communications networks vary greatly and are dependent upon the size, location, and hazards within the mission area. Regardless of the requirements for normal operations, minimum standards must be adhered to in providing for the safety and security of UN personnel.

19. When multiple UN agencies are operating in the same area, there must be as a minimum one common security VHF/UHF channel that all the agencies can coordinate on during an emergency. This may be a special channel or it may be a channel currently in use by one of the agencies and designated as the mission security channel. Depending upon the number of UN personnel/agencies in the area, it may be necessary to have the security channel be the default monitoring channel (so any alerts are heard by all) for initial calls/alerts, and secondary channels can be assigned as working channels. This may require some agencies to purchase additional equipment to operate on the designated channel.

20. Communications monitoring is a necessity in order to hear and respond to distress calls. While in security phase I, a switchboard operator, if available, may be utilized for the monitoring of communications. Vehicle drivers may be used if a switchboard operator is not available. However, as of security phase II, dedicated full-time monitoring of the security channel is mandatory. In all cases the personnel monitoring communications must be trained and have appropriate response matrixes established for all contingencies.

21. Larger agency field operations (above approximately 15 total personnel) should have, as a minimum, one full time communications operator, supported by a technician, preferably shared among agencies, who would be responsible for maintaining, and programming mission radios. This person would also be responsible for training other personnel in the operation of the radios.

22. In each mission area, at least one agency must maintain a 24-hour, 7 day per week, communications center to monitor the security channel and provide communications outside the mission area. When several UN agencies are operating in the same area, consideration should be given to establishment of a shared 24-hour, 7 day per week, communications center. As the center serves the entire UN community, the cost may be shared and savings may be redirected to other communications needs.

23. All international staff and key national staff members should have hand-held VHF radios with chargers and spare batteries and must be instructed on their use. A repeater system should be installed in a safe location and with emergency power, to cover residential areas when personnel are located beyond the limited range of VHF radios.

24. Vehicles used in the local mission should be equipped with VHF radios, if the whole area they travel to is covered by a VHF repeater. If the area they travel to is not covered by a repeater they should also have HF radios. If feasible, a vehicle tracking system should also be installed but as a minimum, a procedure for routine location reporting back to the communications center should be established.

25. Vehicles that are designated for use in an evacuation should be equipped with HF and VHF radios and GPS units.

26. When multiple vehicles are traveling in convoy, at least two of the vehicles should be equipped with both HF and VHF radios. All other vehicles should have VHF handheld radios or mobile VHF radios to maintain internal convoy communications. A procedure for routine location reporting back to the communications center should be established.

27. Portable satellite systems should be provided for the responsible representative from each agency, at each agency field office. Additional units should be available for use in emergencies.

Training

28. Training is the key to success when an emergency situation arises. The best way to train is to utilize the emergency systems on a routine basis as part of daily operations. If HF communications are used routinely to communicate to a remote mission, then HF communications can be used successfully to communicate to the remote mission in an emergency. Most personnel who need to use communications in an emergency are non-technical personnel. They need to be trained on the use of all communications equipment that is available for them to use.

Standardization

29. When establishing a mission/agency communications system, standardized UN call signs, frequencies, and communications protocols should be adopted. Set procedures within operating agencies should be established to ensure maintenance and testing of equipment, including battery charging, is accomplished. Where possible, VHF and HF

radios should be capable of common operation between agencies but at a minimum they must be compatible within agencies.

30. Whenever different technical or operational requirements do not allow the use of the same communications modes or protocols, a Gateway needs to be established.

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Attachment I - Emergency and Field Security Telecommunications Planning Matrix

Type of Risk	Risk Situation	Minimum Advisory	Communications Functional Requirement	Telecoms Technical Requirement	Recommended Action to be taken
Major natural disaster in duty station or outside duty station: Earthquake, Hurricane etc	Office communications fail as a result of disaster, Staff have to work at location without regular communications.	Alternate source of electric power and communications back to office, regional office and HQ probably is required.	Voice, Fax and email back to RO, HQ	Satphones for office and/or vehicles. HF radios for routine voice communications. Internet access provided by public networks, satphones and HF data links..	Procure additional Satphones HF radios for voice. Country offices to insure that phones are charged and critical staff know how to use them.
Emergency incident in remote location	Any kind of life threatening incident, e.g. road accident, security incident, etc	Adequate emergency communications and support for staff travelling to field / remote location.	SOS Call to best resource for help, home office, FSO, OPSCEN, Ambulance, Police, …	Satphone and/or HF, VHF/UHF radio on vehicle (or in office) GPS position locator in (latitude/longitude) device strongly recommended for mobiles.	Equip each vehicle with suitable VHF/UHF or HF or portable satphone with external magnetic mount omnidirectional antenna
Extended operations in an emergency situation.	Maintaining continued but economical operational communications in an emergency	Phase out reliance on cellular phones (limited coverage areas) or satphones with radio (HF/VHF/UHF) for operational communications in longer-term emergency operations to reduce costs.	Usiing radio communications for operations between operational theatre and home office to lower cost of sole reliance on Satphones *Note: Confidential communication should NOT be transmitted over radio.*	Options include Cellular Phones (limited coverage areas), HF and/or VHF/UHF radio and repeater(s) where required to extend VHF/UHF coverage area. Implementation of vehicle tracking systems.	Equip each vehicle with HF radio, Put local RadioOp in UN Comms Center, Install Telephone Interconnect
Working in, travelling in, or have an office in unstable duty stations	Common crime, armed threats, altercations in a traffic incident, riots, etc	Being able to immediately alert office, security officer, and directly or indirectly through the office / FSO, the police.	An emergency and security radio network (interagency a good choice) with communications not dependant on local infrastructure.	Options: Cellular phones (limited coverage areas), HF and/or VHF/UHF radios, Repeater(s). *Note: Carrying a GPS (Global Positioning System) to know exact location is advised.* Implementation of vehicle tracking systems are also recommended	Review requirements, particularly for interagency emergency and security communication opportunities, proceed with procurement and upgrade.
Undertaking an early assessment mission in an emergency situation	Visiting potentially dangerous areas where clear risks are not yet well defined	Ability to talk to and send reports or messages to outside world	Communications with outside world (voice, fax, email) and quick communications among team members.	Emergency power (Chargers from car/truck batteries), Battery powered laptops Satphones, GPS units, handheld radios, possibly a repeater	Procure needed kit, reconfigure what can be (e.g. laptops), make certain of equipment availability (e.g. batteries charged) and staff ability to use.
Undertaking an evacuation	Coordinating staff for emergency evacuation	Ability to contact all staff to be evacuated during the evacuation process	Local communications may not be possible. Prior to such a threat, a well functioning radio network should be in place.	Radio network (preferably interagency), Repeater(s) in secure locations, Handheld radios with staff members.	Identify telecommunications capabilities needed in case of an evacuation. Procure and distribute equipment, develop a reliable communications network able to be relied upon in the evacuation process.
Working in a refugee or IDP situation	Mission has to operate in an IDP or refugee area, communications infrastructure is unreliable	Ability to talk to and send reports and messages to outside world	Local, in-country, regional and international communications: Voice, Fax, Email	Laptops, Satphones, Handheld radios and Repeater for local area communications. Network operator (radio operator) advisable.	Identify telecommunications capabilities needed. Procure and distribute equipment, develop a reliable communications network.
Coping with local civil strife	Office and staff are at safety risk	Ability to talk to and send report messages to outside world	Independent local area communications for staff moving about; reliable access to the PSTN	Laptops, Satphones, Handheld radios Repeater	Same as above

Attachment II - Minimum Security Telecommunications for the UN Security Phases

Phase I and above – Precautionary

Country Offices	Field Offices	Vehicles	Individual Staff	Procedures	Staffing
Security Channel established in each operational area utilizing VHF repeater	Security Channel established in each operational area utilizing VHF repeater		All Intl Staff and Key national staff issued Handheld VHF Radios	All Comm. Equip (including charged batteries) checked for proper ops.	
HF Comm. Channel with dedicated Net Control when operations beyond VHF range possible	HF Comm. Channel with dedicated Net Control when operations beyond VHF range possible			Emergency power systems for repeaters & common radio rooms checked for proper ops	
24/7 common UN radio room established to monitor security channel				Conduct weekly radio checks	
Sat Phone in each UN Agency country office					

Phase II and above – Restricted Movement

Country Offices	Field Offices	Vehicles	Individual Staff	Procedures	Staffing
Dedicated 24/7 security radio room per operational area.	Dedicated 24/7 security radio room per operational area.	All vehicles have VHF radios (if traveling in area covered by repeaters)	Every UN staff member (national and Intl) maintain radio comms when outside of local area	Vehicle tracking system mandatory for all UN vehicles	Dedicated Radio Tech available (on shared basis) to all agencies in area.
Every operational area has VHF repeater coverage	Sat Phone in every field office	All vehicles have HF radios (if traveling in an area outside of VHF repeater area)		Central radio room and all agencies/field offices conduct weekly mandatory radio checks with staff issued VHF radios.	
Agency Country Heads and other key individuals have Sat Phones.	Every field office has HF radio link with their vehicles and with central UN radio room				
	Every operational area has VHF repeater coverage				

Attachment II - Minimum Security Telecommunications for the UN Security Phases

(Continued)

Phase III and above - Relocation

Country Offices	Field Offices	Vehicles	Individual Staff	Procedures	Staffing
Radio rooms consolidated to reduce unnecessary personnel	Radio rooms consolidated to reduce unnecessary personnel			Daily radio checks between UN central radio room and all operational locations	

Phase IV and above – Program Suspension

Country Offices	Field Offices	Vehicles	Individual Staff	Procedures	Staffing
				Communications limited to mission critical communications.	

Phase V – Evacuation

Country Offices	Field Offices	Vehicles	Individual Staff	Procedures	Staffing
		Convoys consist of a minimum of 2 vehicles equipped with satellite and HF communications		All convoys maintain communications links with headquarters and pass locating information on periodic basis	
		VHF handheld and mobile radios in all vehicles to maintain internal convoy communications			
		GPS units issued to each convoy to maintain route safety and to enable passing current locating information to headquarters			