



United Nations  
Peacekeeping Missions  
Military Riverine Unit  
Manual

September 2015

## **Preface**

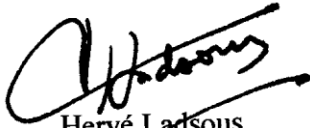
We are delighted to introduce the United Nations Peacekeeping Missions Military Unit Manual on the Riverine Unit—an essential guide for commanders and staff deployed in peacekeeping operations, and an important reference for Member States and the staff at United Nations Headquarters.

For several decades, United Nations peacekeeping has evolved significantly in its complexity. The spectrum of multi-dimensional UN peacekeeping includes challenging tasks such as helping to restore state authority, protecting civilians and disarming, demobilizing and reintegrating ex-combatants. In today's context, peacekeeping Missions are deploying into environments where they can expect to confront asymmetric threats from armed groups over large swaths of territory on land, and frequently in the riverine areas in which populations, commerce and communications concentrate. Consequently, the capabilities required for successful peacekeeping Missions may demand the application of a UN Military Riverine Unit.

UN peacekeeping operations are rarely limited to one type of activity. While deployed in the context of a political framework supporting a peace agreement, or in the context of creating the conditions for a return to stability, peacekeeping Missions may require riverine elements to perform challenging tasks involving the judicious use of force, particularly in situations where the host state is unable to provide security and maintain public order. To meet these complex peacekeeping challenges, military components often play a pivotal role in providing and maintaining a secure environment. Under these circumstances, the deployment of a UN Military Riverine Unit can contribute decisively towards successful achievement of the Mission's goals by monitoring cease-fires and conducting surveillance along inland waterways, enforcing UN sanctions and arms embargoes, and protecting the shipment of humanitarian supplies in transit.

As the UN continues its efforts to broaden the base of Troop Contributing Countries, and in order to ensure the effective interoperability of UN Military Riverine Units with the Mission's entire military component, there is a need to formalize capability standards. Together with the seminal work of military experts from numerous Member States, the Department of Peacekeeping Operations and the Department of Field Support have produced this Manual as a means of enhancing the preparation, operational readiness and performance of UN Military Riverine Units. In recognition of the work already done, and in anticipation of future improvements, we would like to express our sincere gratitude to the Member States who volunteered and devoted so much of their time, energy and expertise in the creation of this Manual. The result is a document that captures and consolidates the relevant dimensions of UN Military Riverine Units into a single, convenient reference.

The Department of Peacekeeping Operations and the Department of Field Support will continue to refine and update this Manual ensuring its relevance in the ever-changing operational environment. In the meantime we have every expectation that this document, especially with the concerted efforts of its intended readers, will contribute immensely to improving and enhancing our collective performance in the pursuit of peace.



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# Purpose and Scope

## General Description

This Manual describes the United Nations (UN) Military Riverine Unit, focusing on military riverine support to the military component of a UN Mission.<sup>1</sup> Always scalable in size, modular in function and Mission-tailored, the UN Military Riverine Unit's size and composition depend on the size, composition and requirements of the UN Mission it supports and the physical characteristics of the Force's area of operations. In UN Military Riverine Unit operations, a common understanding of terms, standards and procedures is crucial to Mission success. TCCs may already be familiar with national military riverine operations, but may not be familiar with the more specific standards and requirements when operating as an integral part of a UN military component. This manual is designed to meet that need.

## Benefit to Troop Contributing Countries

TCCs and their deploying contingents will benefit from this document (as will their national military staffs, schools and riverine elements) as they become better able to support the reorientation of their riverine elements from national tasks to UN operations. TCCs experienced in peacekeeping operations can use this Manual to supplement and complement their national manuals. TCCs that are new to UN peacekeeping or UN Military Riverine Units can use this Manual as a guide to build and field their own riverine elements. Nonetheless, it is not the intent of this Manual to override the national military doctrine of individual Member States or Troop Contributing Countries, nor is it the intent to impose requirements on national training, operations or structures. This Manual does *not* address national military tactics, techniques and procedures that remain the prerogative of individual Member States. Nor is it the intent of this Manual to serve as an instrument for UN Military Riverine Unit selection. Indeed, UN Military Riverine Unit structures will be adapted, ultimately, in accordance with any Memorandum of Understanding (MOU) negotiated between the UN and TCC. Instead, this Manual serves as a complement to existing or emerging TCC thinking on military capabilities and provides a guide for the specialized performance necessary for TCCs participating in peacekeeping operations.

## Benefit to Commanders

UN Military Riverine Unit Commanders and their subordinate leaders will find in this document the guidance they need for planning, preparing and executing their assigned tasks. Chapter 1 explains the concept of employing UN Military Riverine Units within the Mission's military component. Chapters 2 and 3 provide greater detail on the capabilities, tasks and organization of the UN Military Riverine Unit. UN Military

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<sup>1</sup> Throughout this document, a capital M in the word "Mission," as in, "the UN Mission," is used to distinguish the word as a UN peacekeeping *organization*; as opposed to a small "m," as in, "a military mission" indicating a *task or operation*.

Riverine Unit Commanders and staff can plan and manage their support requirements based on the information provided in Chapter 4, while Chapters 5 and 6 provide the training and evaluation guidance by which the UN Military Riverine Unit can achieve and maintain top operational performance.

### **Benefit to UN Planners**

In addition to being a guide for TCCs and their contingents, this Manual provides standardized guidance and information to UN Headquarters and field Mission planners on the employment of UN Military Riverine Unit capabilities and functions. This Manual is designed for use as a reference and initial starting point for UN planners developing the Force Requirement or Statement of Unit Requirement (SUR) that, together with the UN-TCC MOU, will form the basis for UN Military Riverine Unit deployment. The SURs at Annex A are illustrative samples of previously-issued requirements, and do not necessarily represent standards for all Missions. Nonetheless, UN planners may find helpful therein the descriptions of capabilities, tasks and organization of a UN Military Riverine Unit as they tailor the unit according to Mission requirements and the standards described elsewhere in this manual.

### **Benefit to All**

The broad range of tasks assigned to UN peacekeeping operations has expanded significantly in response to shifting patterns of conflict and emerging threats. As the nature and domain of armed conflict expands, so too must riverine operations be added to the full range of UN military options. As key centres of population and economic activity, the riverine environment is strategically important for monitoring arms embargoes and protecting borders. Riverine operations can significantly strengthen the security of the peace process, provide safety for shipping in transit, and help secure the efforts of humanitarian and development partners. The presence of a sustained riverine capability provides senior UN leaders operational flexibility and effective options for addressing peacekeeping challenges.

This Manual is primarily written at the operational and tactical levels. It is based on UN guidance reflecting lessons learned, feedback from field Missions and input from peacekeeping practitioners experienced in UN Military Riverine Unit peacekeeping operations. Workshops conducted by interested Member States and TCCs produced the original draft that was finalized after extensive coordination within DPKO and DFS. The result is a most comprehensive body of thought on the UN Military Riverine Unit designed to assist contingents in re-orienting their riverine forces towards interoperability in UN peacekeeping.

This Manual should be read in conjunction with relevant UN policies and other Military Unit Manuals, especially the UN Infantry Battalion Manual and UN Peacekeeping Missions Military Maritime Task Force Manual, in order to gain a more comprehensive understanding of UN standards, policies and procedures related to peacekeeping operations. Moreover, all aspects of the Mission concept can be more thoroughly studied in the UN Capstone Doctrine which, along with other important UN policy documents, is available at the following links:

“Policy and Practice Database,” accessible only to UN staff (including field Missions) on the UN network at:

[http://ppdb.un.org/Nav%20Pages/PolicyFramework\\_Default.aspx](http://ppdb.un.org/Nav%20Pages/PolicyFramework_Default.aspx)

and,

"Resource Hub," recently developed for Member States to access UN documents, including the Military Unit Manuals (such as this one) at:

<http://research.un.org/en/peacekeeping-community>.

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# Chapter 1

## Employment Concept for the UN Military Riverine Unit

### 1.1 The Riverine Environment

The riverine environment is an inland or delta area comprising both water and land where waterways are the primary lines of communication. These riverine areas, defined as waterways and rivers inland of the immediate coastline, facilitate the exchange of goods and people across the region, and are often the location of agriculture, livestock production and national or international development programs. Riverine areas are likely to have extensive water surface and inland waterways (including lakes) that provide natural routes for transportation and communication. See Annex B for additional information on the riverine environment.

### 1.2 Primary Role

1.2.1 UN riverine operations assist in the stabilization of riverine corridors, frequently home to a majority of the population and the main artery for local commerce. They can significantly contribute to Missions<sup>2</sup> whose main focus is the protection of civilians and human rights by creating an environment conducive to the cessation of hostilities, and assisting in securing international monitoring and verification activities, particularly with regard to arms embargoes. UN Military Riverine Units use navigable inland waters for rapid movement to populated areas, assisting in creating the security conditions that can prevent the return of negative elements and promote the delivery of humanitarian assistance.

1.2.2 UN Military Riverine Units achieve surface mobility by means of special river craft that can control water lines of communication, provide transport to UN Military Observers and ground forces and generally reinforce the UN presence in otherwise inaccessible locations.

### 1.3 Command and Control

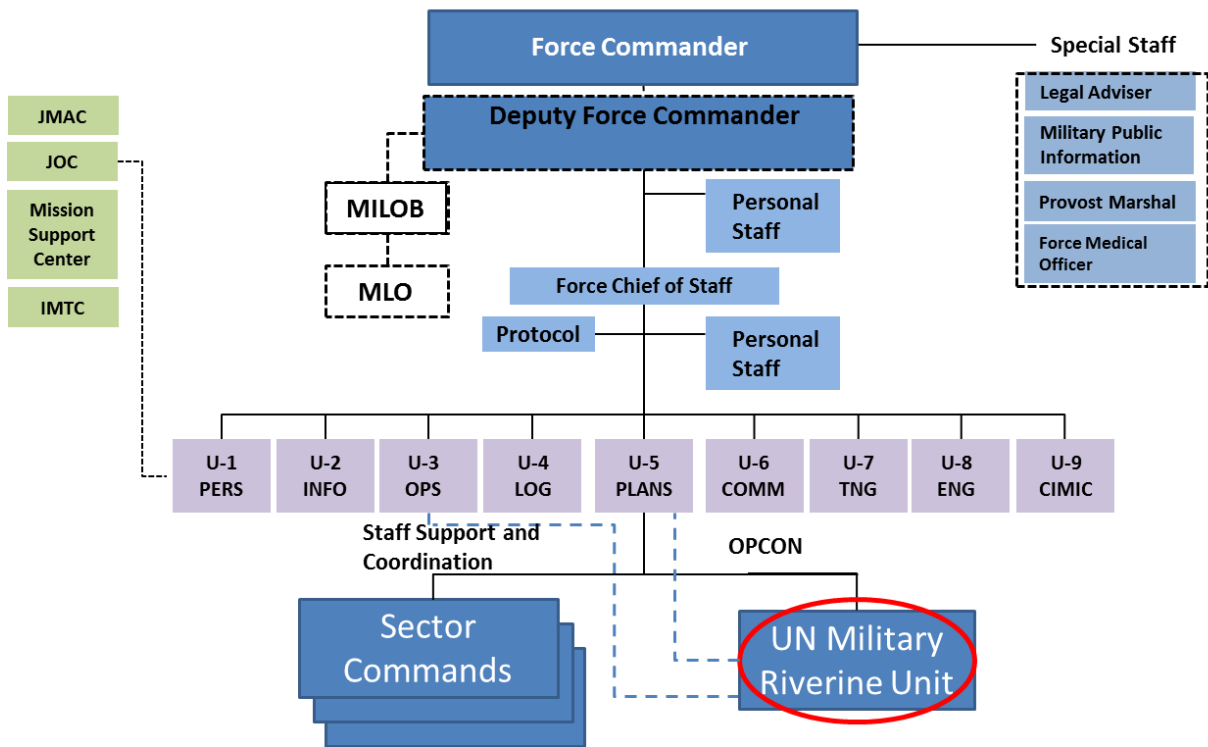
As illustrated in the following diagram, UN Military Riverine Units are typically deployed as Force-level assets operating under the Force Commander's direct operational control. Normally, the UN Military Riverine Unit has an Operations/Planning Coordination Cell at Force Headquarters U3/U5 (represented by the dashed blue line in the diagram below). Depending on Mission-specific needs and geographic dispersion,

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<sup>2</sup>See the SURs at Annex A

the Force Commander may also assign UN Military Riverine Units to Sector Commander control. The light infantry/marine element within the UN Military Riverine Unit has its own chain of command and control that is fully integrated into the overall UN Military Riverine Unit command and control structure.

### Generic UN Force Headquarters



## 1.4 Riverine Operations

1.4.1 Riverine operations provide the Mission’s military component additional options and flexibility for carrying out its UN mandate. Riverine operations are conducted by specially-trained personnel and units with unique capabilities (see Chapter 2). The primary advantage of riverine operations is the ability to integrate and employ various types of vessels, watercraft, weapons, waterborne and ground military forces for rapid deployment to centres of population and commerce threatened by negative elements.

Joint riverine operations may combine land, maritime and air operations adjusted to the nature of the local riverine area.

1.4.2 UN Military Riverine Units typically do not operate with movement restrictions within their designated area of responsibility, which usually includes all navigable waters and major tributaries within the area of operations.<sup>3</sup> Thus, riverine operations allow UN Missions to maintain operational depth, flexibility and agility, especially when used in conjunction with Force reserves. The combination of UN Military Riverine Unit vessels and UN ground contingent personnel provides a balance of tactical mobility and quick reaction force protection. Riverine operations integrate and employ various types of floating units that may include UN ground contingent personnel and Member State Military Observers organized as riverine forces to demonstrate UN presence and protection. The combination of UN Military Riverine Unit vessels (including organic light infantry ground troops<sup>4</sup> and Military Observers afloat provides a responsive base of operations and long-range surface mobility. This combination maintains situational awareness and rapid reaction by concentrating UN Forces in areas of potential or ongoing insecurity.

1.4.3 Broadly speaking, there are three types of riverine operations: Security, Reconnaissance and Surveillance, and Supporting. These operations are briefly described below. The UN Military Riverine Unit's capabilities and tasks associated with these broad operational categories are described in Chapter 2.

## 1.5 Security Operations

Security Operations employ UN Military Riverine Units to ensure the safety and security of designated vessels and infrastructure as well as assigned personnel, objects and installations. Security operations may range from the provision of physical protection for shipping in transit (including protection of civilians if mandated), to the interdiction of suspicious vessels along the riverine area of operations. As such, UN Military Riverine Units must be able to employ credible deterrent and enforcement options to address the prevailing security challenges.

## 1.6 Reconnaissance and Surveillance Operations

Information gathering and analysis regarding waterway conditions and security are prerequisites to using these waterways for riverine operations. Important population and commercial centres, frequently adjacent to major rivers/lakes, are often targets of negative element hostility. UN Military Riverine Unit waterway reconnaissance and surveillance contributes to the Force's gathering of situational awareness and force protection information, thus enhancing the protection of civilians and the Force's own projection and protection.

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<sup>3</sup> See both SURs at Annex A. The UN Military Riverine Unit may integrate surveyors when there are no surveyed navigational charts for rivers and tributaries in a particular area of operation.

<sup>4</sup> In some cases, these ground troops are also called, "marines."

## **1.7 Supporting Operations**

UN Military Riverine Units may play significant supporting roles to land operations. Supporting roles enable land operations when waterway movements are more effective or the only option if ground or air mobility is restricted. Supporting Operations include military operations to protect and secure the riverine transportation of UN military and civilian personnel and supplies, tactical deployment of troops for ground operations, fire support to ground operations, support to explosive ordnance disposal operations, search and rescue, evacuation/humanitarian assistance and disaster response.

## Chapter 2

### Capabilities and Tasks of the UN Military Riverine Unit

#### 2.1 Overall Capabilities

2.1.1 Capitalizing on the mobility of its small boats in navigating shallow waterways, the UN Military Riverine Unit contributes to a more secure environment by providing a military presence throughout the Mission's riverine area of operations. It operates independently in potentially high threat level environments, and can deter and deny negative elements from using the Mission area's waterways and adjacent land. It can operate from a base of operations on land and/or afloat; and is capable of command, control and communications as well as long range surface mobility within the limitations of its communications equipment and logistical supply lines. During its operations, it collects and reports information that supports its own and the Force's current operations.

2.1.2 The UN Military Riverine Unit has unique personnel and watercraft enabling it to increase Force flexibility and operational reach. It provides a balance of tactical mobility, quick reaction and force protection for itself and supported units. It typically deploys as a company-size organization of approximately 140-200 personnel, depending on Force and Mission requirements. It may be equipped with a single type of water craft, or use a combination of different riverine-capable vessels such as Fast Patrol Boats and/or Rigid-Hull Inflatable Boats (further described below) from multiple floating bases of operation or land-based headquarters. Organized into floating units, UN Riverine Units may carry light infantry/marines in addition to their boat crews. When deployed with sufficient personnel (especially its integral light infantry/marines), boats and equipment, it can perform multiple operations simultaneously in different locations on a 24/7 basis. Equipped with sufficient boats and onboard capacity to accommodate all embarked personnel, it can self-sustain for the length of a particular operation for up to 30 days without resupply.

#### 2.2 Light Infantry/Marine Capabilities

2.2.1 The UN Military Riverine Unit's organic light infantry/marines provide amphibious operations capability. They are capable of operating from riverine craft in potentially hostile and arduous environments and must meet the same capability standards established for UN infantry in accordance with the UN Infantry Battalion Manual.<sup>5</sup> Integrated into the overall command structure of the UN Military Riverine Unit as a subordinate element, their baseline individual skills, knowledge and capabilities include, but are not limited to, basic field first aid, radio communications procedures, safe handling and use of personal side arms, rifles and crew-served weapons, limited

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<sup>5</sup> Available at: [http://ppdb.un.org/Nav%20Pages/PolicyFramework\\_Default.aspx](http://ppdb.un.org/Nav%20Pages/PolicyFramework_Default.aspx) and, <http://research.un.org/en/peacekeeping-community>.

Explosive Ordnance Disposal, Counter-Improvised Explosive Device (C-IED) procedures (primarily for their own force protection) and mission planning.

2.2.2 Beyond the basic infantry skills, the UN Riverine Unit's light infantry/marines are capable of performing land and riverine navigation, infantry operations in a riverine environment and those collective capabilities needed to carry out the required riverine tasks described later in this Chapter. Such capabilities include the skills and knowledge needed to use the appropriate equipment and armament required for operating from onboard boats and/or barges; and they are equipped with and capable of using crew-served weapons sufficient to neutralise targets out to 600 metres, or suppress targets out to 800 metres. Ideally, a cadre of the light infantry/marines are experts on river craft handling and have the necessary training and operational experience to operate from the type of boats on which they will serve while in the UN Mission. The light infantry/marines are required to be self-sustained for the duration of their onboard task/mission, up to a maximum of 30 days.

2.2.3 The numerical strength and capabilities of the UN Military Riverine Unit's light infantry/marines are determined by Mission-specific requirements and geographic challenges. Sufficient numbers of light infantry/marines are also required to give the UN Military Riverine Unit its capability to provide its own shore-side site security, firefighting, platform maintenance and administrative/sustainment support. (See also Chapter 3.)

### **2.3 Boat Crew Capabilities**

2.3.1 The number, qualifications, and experience of UN Military Riverine Unit boat crews insure that they are capable of conducting all required tasks on a 24/7 basis. Boat crews must be qualified and certified to operate their respective vessels in accordance with national standards and UN International Maritime Organization<sup>6</sup> safety standards for day and night operations. Crew members are trained on boat safety, navigation, night vision, communications, operator maintenance, high-speed maneuvering and handling, weapons and weapons employment (including crew-served weapons), and other individual and collective skills unique to riverine craft operating in a riverine environment.

2.3.2 Collective capabilities (trained together with the unit's organic light infantry/marines) include tactical boat operations involving movement techniques, formations, immediate action drills, troop insertion/extraction, weapons use and actions involving potentially hostile craft and troops. Crew members must remain current with all weapon systems onboard for the duration of their tour of duty in the Mission. Ideally, all UN Military Riverine Unit personnel should be qualified swimmers. Nonetheless, sufficient buoyancy aids must be provided for all personnel aboard boats.

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<sup>6</sup> As a specialized agency of the United Nations, the International Maritime Organization (IMO) is the global standard-setting authority for the safety, security and environmental performance of international shipping. Its main role is to create a regulatory framework for the shipping industry that is fair and effective, universally adopted and universally implemented. IMO has established the International Convention on Standards of Training, Certification and Watchkeeping (STCW) for Seafarers. The STCW Convention entered into force in April 1984. It established, for the first time, internationally acceptable minimum training standards for crews. IMO currently has 171 Member States and three Associate Members. The IMO website is available at: <http://www.imo.org/en/About/Pages/Default.aspx>.

## 2.4 Equipment Capabilities

### 2.4.1 Transportability

UN Military Riverine Unit equipment must be air transportable by either MI-26 or C-130 fixed-wing aircraft. All containers, including those used for general storage, refrigeration, ammunition, medical supplies, workshops, etc., must be no larger than the standard ISO 20 ft container.

### 2.4.2 Desired Technical Capabilities for All UN Military Riverine Boats and Barges

- UN Military Riverine Unit boats, both Fast Patrol Boats and Light Patrol Craft, are required to be equipped with fixed-mounted weapons stations. Boats should be either waterjet-propelled or have sufficiently powered outboard engines to achieve a speed of *at least* 35-40 knots. They must have day and night operations capability, radios with Marine bands such as HF, VHF and aircraft-band communications. Boats should have satellite communications capable of both voice and data, possess radar, GPS capability and echo sounding equipment.<sup>7</sup> UN Military Riverine Boats are also expected to be capable of providing limited CASEVAC capability when accompanying light infantry/marines.
- When operating from barges, the barges should have permanent firing points/weapons stations and fortified parapets installed by the Mission (see example in the SUR at Annex A). Subject to vessel/barge capacity, rigid accommodation, such as CORIMECs (ideally with air conditioning), should be installed onboard the vessel/barge for the light infantry/marines when not on duty. At a minimum, barges must have crew protection from small arms (*at least* 7.62 mm non-armour piercing ammunition), and must have defensive shields or sandbags around weapons stations.

### 2.4.3 Desired Technical Capabilities for Fast Patrol Boats

- Fast Patrol Boats may be required to have the capacity to transport and accommodate approximately 29 light infantry/marines for the duration of a particular task/mission, up to 30 days (see SUR at Annex A). Fast Patrol Boats must be equipped with at least one machine gun with 360 degree weapons coverage and a calibre of *at least* 23 mm, and sufficient to counter weapons being used by negative elements in the Mission area. Fast Patrol Boats should have a self-sustaining capability including a generator, automatic engine compartment fire extinguisher system and life rafts.

### 2.4.4 Desired Technical Capabilities for Light Patrol Craft (Including Rigid-Hull Inflatable Boats)

- Medium-sized Light Patrol Craft must be capable of providing a balance of protection, speed, agility and transport capacity. They are typically required to have a transport capacity of *at least* 10 fully-equipped light infantrymen/marines (or 1,800 kg) plus a boat crew of 2. Light Patrol Craft should have an operating range of at least 200 km with a full payload of 10 fully-equipped light

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<sup>7</sup>Echo sounding is a type of SONAR used to determine depth by transmitting sound pulses into water.



infantry/marines, and 250 km with a boat crew alone. Each craft should be equipped with crew-served weapons sufficient to neutralize targets out to 600 meters, or suppress targets out to 800 meters. The craft should have crew protection against small arms fire (*at least* 7.62 mm non-armour piercing; ideally using modular armour plate). At a minimum, the craft must have defensive shields around mounted weapons. Light Patrol Craft must be capable of being underslung by military utility helicopters (Mi-8/Mi-17) and have a total weight not to exceed 11,100 kg (24,470 lb). They must also be capable of being trailer-launched, and have a shallow draft of less than 1 meter.

## **2.5 Explosive Ordnance/Improvised Explosive Device Disposal Capabilities**

2.5.1 Explosive Ordnance Disposal (EOD) and Improvised Explosive Device Disposal (IEDD) Operations are of primary importance to peacekeeping operations. The UN Riverine Unit should have some capability to provide for its own EOD/IEDD protection while conducting its operations, often in remote areas far from other UN units or UN EOD/IEDD activity. EOD/IEDD Operations in relation to Riverine Operations include countering waterborne conventional mines and Improvised Explosive Devices in the waterways close to shore and inland. The UN Mine Action Service (UNMAS) has primary responsibility for establishing and managing response plans in explosive remnants of war, IED and mine-affected countries. These plans may be extended to the riverine domain, if required.

2.5.2 Given the inherent risk in EOD/IEDD operations, the size of the operating area and the EOD/IEDD resources available, the UN Military Riverine Unit commander may choose to conduct limited, counter-mine/IED operations in a narrowly defined area for the purposes of self-protection and timely mission accomplishment. It is therefore crucial that UN Military Riverine Units thoroughly gather and collate information on underwater topography,<sup>8</sup> types of explosive ordnance and IEDs used, and the location of mined areas to facilitate such decisions. Contacting the Mission's Mine Action Coordination Centre (MACC) is essential for UN Riverine Unit commanders. The MACC can provide information on civilian or other military units that may be deployed in the riverine area of responsibility with units and teams tasked with EOD/IEDD clearing. It is important to set up a communication link with the MACC in order to ensure the timely flow of information between any mine-clearing elements and the UN Military Riverine Unit.<sup>9</sup>

## **2.6 Tasks**

UN Military Riverine Units are tasked to display a UN show-of-force to deter/deny negative elements from using waterways in a Mission's area of responsibility and thus establish a safe corridor for riverine shipping. Their tasks include:

- Waterborne Security

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<sup>8</sup> Underwater topography, or "hydrography," tasks include gathering detailed information on the width and depth of waterways, bottom characteristics, gradient of possible river landing sites, condition of the banks, location of debris, vegetation, obstacles, water velocity and the nature of currents and tidal changes. A standard survey team, with the required water craft and specialized survey equipment, is essential to carry out these tasks. Including this expertise with the UN Military Riverine Unit should be considered if warranted by Mission requirements.

<sup>9</sup> From the UN Infantry Battalion Manual, Volume I, August 2012, paragraph 2.26.

- Reconnaissance and Surveillance
- Security for Shipping in Transit
- Support to Ground Forces
- Search and Rescue
- Personnel Relocation, Humanitarian Assistance and Disaster Response

### 2.6.1 Waterborne Security

UN Military Riverine Units enhance security and freedom of movement along waterways by conducting security patrols that can deter the actions of negative elements. UN Military Riverine Units provide security by openly patrolling along the waterways, conspicuously anchoring in plain sight of all waterway users and being seen as providing riverine security. If properly trained in law enforcement procedures (conducted in strict compliance with Mission Rules of Engagement (ROE) and subject to TCC approval), the UN Military Riverine Unit can conduct interdiction operations along waterways, stopping and/or warning vessels suspected of engaging in illegal activity. Such interdicting security tasks may include random stop and search, establishing waterborne guard posts at choke points and key locations, visual and audio hailing of vessels, warning/warding off vessels suspected of illegal activities using flares and/or guns, intercepting suspicious vessels, Visit, Board, Search and Seizure (VBSS)<sup>10</sup> of suspected vessels and engaging opposing vessels and hostile ground elements.

### 2.6.2 Reconnaissance and Surveillance

- Reconnaissance and surveillance provide UN commanders a more accurate and timely sense of situational awareness regarding threats and the condition of the area of operations. Understanding local communities and the overall security atmosphere is vital to risk mitigation. UN Military Riverine Units are tasked to interact with the local shipping community to develop an understanding of typical riverine traffic and activity patterns that help identify threats and abnormal or illegal activity, such as violations of arms embargoes. This level of situational awareness directly relates to force protection, protection of civilians and assists UN commanders in determining operational plans and objectives. Reconnaissance and surveillance tasks are essential in mitigating waterway threats and are not limited to water-based observation. Reconnaissance and surveillance tasks can also be executed by UN ground forces inserted from riverine craft.
- Reconnaissance and Surveillance tasks are not limited to information on human activity. Topography and hydrology are important in riverine operations and can

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<sup>10</sup> Visit, Board, Search and Seizure (VBSS) is an internationally recognized term used by police and military forces, including but not limited to navies, marine and maritime services, for actions and tactics designed to secure hostile vessels engaged in terrorism, piracy and smuggling; as well as to conduct customs, safety and other inspections. VBSS is conducted without the suspicious vessel Master's consent. When interdicting vessels of interest, UN Maritime and Riverine Units use VBSS tactics only when specifically authorized by the Force Commander, Mission Rules of Engagement and mandate. See also the UN Maritime Task Force Manual chapter regarding tasks associated with protecting shipping in transit.

be controlling factors in any UN military concept of operations. However, accurate information concerning terrain and hydrological conditions may be lacking in UN Missions. The physical characteristics of a Mission's riverine environment are not usually stable due to changes in water courses, weather conditions, tides and sedimentation. Consequently, reconnaissance of the Mission area is vital when planning riverine operations. Tasks include gathering detailed information on the width and depth of waterways, bottom characteristics, gradient of possible river landing sites, condition of the banks, location of debris, vegetation, obstacles, water velocity and the nature of currents and tidal changes.

### 2.6.3 Security for Shipping in Transit

- UN Military Riverine Units are frequently tasked with establishing a safe corridor for riverine shipping. Protection of shipping in transit ensures the safety and security of vessels as they travel through waters where threats are known to exist. Ships are attractive targets for negative elements with the goal of restricting the UN's freedom of movement, taking possession of supplies and materiel as well as kidnapping UN personnel for economic or political gain. These attacks may result in the loss of life, physical harm or hostage-taking. They disrupt commerce and navigation, prevent humanitarian assistance and increase the cost of future shipments to the affected areas. Shipping security is especially significant when UN logistical mobility must rely on these waterways for sustaining ongoing operations or the resupply of UN sites.
- UN Military Riverine Unit tasks focus on gaining comprehensive situational awareness, as well as monitoring known locations where hostile activities frequently originate. To enhance situational awareness and information sharing, UN Military Riverine Units engage with the local shipping community, encouraging them to adopt effective security practices. Riverine patrol craft may be tasked to patrol within identified shipping areas, with the main purpose of showing UN presence to deter illegal activities, or they may be tasked to respond to distress calls or reports of suspicious craft. UN Military Riverine Unit patrol craft may also be required to provide armed escort to assigned transport vessels, including UN barges, in order to secure movement of UN supplies, equipment and personnel along riverine routes. Escort operations can be augmented by dispatching light infantry/marines (sometimes called "Vessel Protection Detachments") onboard assigned vessels or barges. Patrol craft should be equipped with crew-served weapon systems sufficient to neutralise/suppress targets at tactical distances including targets ashore,<sup>11</sup> and be capable of being

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<sup>11</sup> Each vessel Protection Detachment (VPD) should be equipped with crew-served weapons sufficient to neutralise a target out to a range of 600 metres, or suppress a target out to 800 metres. Permanent firing points or weapon stations, as well as fortified parapets, should be installed on-board the patrol craft. At a minimum, all craft should have crew protection from small arms (up to 7.62 mm non-armour piercing), and defensive shields around weapon stations. If required, the VPDs will be accompanied by a Small Boat Group, comprising at least two patrol craft and crew. These craft are required to be armed and highly maneuverable to add to the VPD's firepower and provide emergency relief, such as CASEVAC extraction, if required.

under-slung by standard military utility helicopters and towed by medium-size vehicles when trailer-mounted.<sup>12</sup>

- UN Military Riverine Units can also be tasked to protect designated ports and riverine infrastructure, operating in harbours and pier areas using security zone patrols involving phased security measures beginning at great distances from a designated protected area. As a potentially negative craft passes through the security zones getting closer to the designated protected area, the UN Riverine patrol applies increasing levels of security in accordance with the applicable Rules of Engagement.
- Interdiction operations can be either random during routine patrolling, or deliberate as tasked by Force Headquarters. Interdiction operations identify and prevent prohibited activities in the riverine area. The UN Military Riverine Unit may be tasked to interdict prohibited activities in order to demonstrate capability or intent, act as a general deterrent in the area or act upon specific information in response to reports of prohibited activities such as drug smuggling or arms dealing. Deliberate waterway interdiction operations generally follow a set sequence of events consisting of planning, movement towards the area of operations, patrolling/surveillance, target interdiction and then return to the operations base.
- UN riverine escort operations secure and ensure smooth movement of one or a group of vessels from a designated start point to an intended destination. Escort tasks are military operations that can involve the riverine movement of deploying troops (insertion and extraction operations) and select, designated officials such as Very Important Persons and local government authorities in specifically authorized cases.
- The UN Military Riverine Unit may be specifically tasked (see the SUR at Annex A) to provide physical protection and/or armed escort for designated UN vessels/facilities. As directed by Force Headquarters and accompanied by riverine patrol craft, the UN Military Riverine Unit and its light infantry/marines can secure the movement of UN supplies, equipment and personnel along river routes.

#### 2.6.4 Support to Ground Forces

With its light infantry/marine personnel, the UN Military Riverine Unit is also capable of contributing to a secure environment in the vicinity of designated landing zones/beaches where ground operations take place. UN Military Riverine Units have the means to withdraw and redeploy ground troops according to their vessel capacity, can assist with protecting designated ports and riverine infrastructure, serve as, or in support of, a blocking force and can provide tactical deployment and fire support to UN ground forces.

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<sup>12</sup> See the requirement for this vessel's transportability in both SURs at Annex A.

- **Tactical Deployment of UN Ground Forces**

As specified in the SURs at Annex A, UN Military Riverine Unit craft are capable of tactically moving UN troops to specified areas, depending on the vessel size and the number of troops involved. In Mission areas where air support is minimal or not otherwise available, this riverine capability may be the only way to transport ground forces in the time required. If needed (as in the UN Mission in South Sudan), the UN Military Riverine Unit may be equipped with sufficient boats to give it the capability of transporting a company-size light infantry/marine unit. This tactical transport capacity may also include the ability to deploy light armoured vehicles and medium utility vehicles without the aid of a wharf or crane facility (i.e., the UN Riverine Unit could include a tactical “drop ramp” capability). UN Riverine Unit vessels should therefore also have shallow draught and flat hulls compatible with shallow water operations. Related to this type of Supporting Operation, the UN Military Riverine Unit may be tasked to establish a secure environment in the vicinity of the designated landing zones/beaches where ground operations will be conducted, or to serve as a water-based blocking force supporting ground operations.

- **Fire Support to Ground Operations**

Fire support is defined as the application of weapons fire, coordinated with the manoeuvre of UN forces, conducted in compliance with Mission Rules of Engagement to achieve a specified effect. Effective fire support ensures that the right targets are adequately engaged to achieve the commander’s intended goals. As such, fire support seeks to create a local effect for a specific period of time without collateral damage. Fire support can be divided into the following tasks:

- Direct/Indirect Fire Support. UN Military Riverine Units may be tasked to provide direct/indirect fire support to own or supported forces. This support must be carefully coordinated with the UN Military Riverine Unit commander and the ground force commander.
- Dynamic riverine patrolling can also be carried out in support of UN Forces during ground operations to dominate the waterway and protect against negative forces.

### 2.6.5 Search and Rescue

A Search and Rescue (SAR) Operation is the search for and provision of aid to people in distress or imminent danger within a riverine area of operations. SAR Operations may occur on an ad-hoc basis, but UN Military Riverine Unit commanders are strongly encouraged to make SAR Operations an integral part of contingency planning and training. SAR Operations usually occur in four broad phases: detection, localization, identification and rescue. The assets involved in SAR (not all necessarily belonging to the UN) can range from riverine patrol craft to auxiliary support vessels, commercial rescue vessels, fixed-wing aircraft and helicopters. With additional assets augmenting existing forces, there is a need for clear command and control and efficient use of resources to ensure an effective and timely search and rescue. Riverine Search and Rescue Operations may include emergency towing and assistance to vessels in distress.

### 2.6.6 Personnel Relocation, Humanitarian Assistance and Disaster Response

- UN Military Riverine Unit tasks may also include protecting civilians and humanitarian personnel under imminent threat of physical violence and emergency relocation of persons in danger. They may be required to conduct humanitarian assistance missions to coordinate the riverine transportation of humanitarian supplies, and establish a secure environment on the riverward side of designated beachheads across which humanitarian supplies will be distributed.
- In the event of conflict or disaster where the Mission area has been severely damaged, or lives are imminently threatened, UN Military Riverine Units may be tasked to relocate personnel to temporary sites or permanent safe havens. UN Military Riverine Units may receive this task when environmental and operational factors are not conducive to the use of air assets. Personnel relocation may also occur under high threat scenarios where UN forces may have to conduct tactical military operations to relocate personnel. Depending on the size of the operation, the riverine assets required should be scaled to extract, transfer and accommodate the affected personnel.
- Similarly, episodic natural or man-made disasters in the Mission area can result in catastrophic levels of human suffering and destruction of vital installations and infrastructure. The UN Military Riverine Unit can sometimes provide an effective means of providing humanitarian assistance/response and provide mobility support, medical assistance, tactical lift as well as security assistance. UN Military Riverine Units can also be tasked to establish a secure environment on the riverside of designated beachheads to permit the flow of humanitarian supplies.

# Chapter 3

## Organization of the UN Military Riverine Unit

### 3.1 Intent

This chapter provides a brief outline of the organization and core subordinate elements of the UN Military Riverine Unit. More detailed descriptions of the unit's role, employment, command and control, capabilities and tasks are covered in Chapters 1 and 2. The core subordinate elements of the UN Military Riverine Unit are not intended to be all inclusive. Any additional capabilities, such as Explosive Ordnance Disposal, diving and salvage and underwater survey cells can be added by planners in accordance with Mission requirements.

### 3.2 Size and Composition

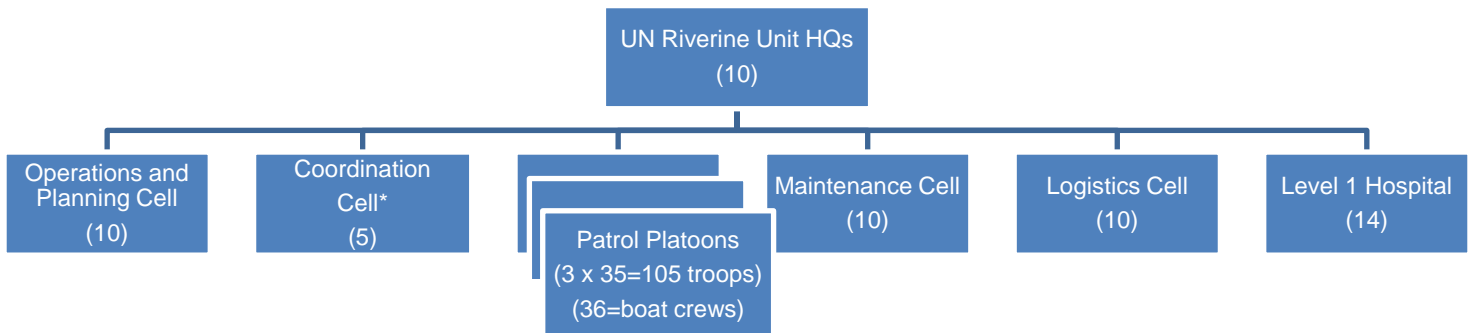
Current UN Mission requirements are met by company-size Military Riverine Units<sup>13</sup> varying in strength from approximately 140 to 200 personnel (see the two SURs at Annex A). However, the *actual* size and composition of a UN Military Riverine Unit will be determined by Mission-specific requirements, the characteristics of the riverine area of operations and the capacity of negative elements. Planners should ensure that UN Military Riverine Units have sufficient personnel and equipment to support their operations and maintenance on a 24/7 basis, and can provide for their own base security and logistical sustainment in accordance with the SUR, MOU and Letter of Assist (LOA)<sup>14</sup> between the UN and TCC. See the sample table of equipment at Annex C. A typical UN Military Riverine Unit has the following composition:

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<sup>13</sup> Such as those deployed in the UN Missions in Haiti (MINUSTAH); the Democratic Republic of Congo (MONUC/MONUSCO); Darfur, Sudan (UNAMID); South Sudan (UNMISS) and Mali. See the SURs at Annex A.

<sup>14</sup> See the discussion of LOAs in Chapter 4.

**Generic UN Military Riverine Unit**  
**Company-Size**  
 As Shown: Approximately 200 Persons  
 Personnel Strength Varies According to Mission Requirements



\*The Coordination Cell is co-located with the appropriate unit headquarters (either Force, Sector or Battalion), especially when conducting integrated operations, or when UN Military Riverine Unit operations are launched within a Sector or Battalion area of responsibility.

### 3.3 Subordinate Element Descriptions

#### 3.3.1 Military Riverine Unit Headquarters

The UN Military Riverine Unit Headquarters provides operational command, control and administration of unit personnel. The Unit Commander is assisted in his/her operational and administrative command responsibilities by the Second-in-Command/Executive Officer (2IC/XO), Logistics Officer, Technical Officer/Senior Warrant Officer (SWO)/Junior Commissioned Officer (JCO), Communications Officer/SWO/JCO and a Sergeant Major/SWO/JCO also known as a Coxswain.

#### 3.3.2 Operations and Planning Cell

The Operations and Planning Cell is the nerve centre of the UN Military Riverine Unit. It plans, organizes, directs and controls unit operations and establishes the UN Military Riverine Unit Command Post, which can be either land-based or afloat. Through its communications network, the Command Post provides situational awareness by processing and analysing information shared by the Force Headquarters, as well as reports provided by patrolling UN Military Riverine Unit craft. Command Posts afloat must be aboard a vessel or craft with sufficient space and communications equipment



suitable for the purpose. Vessels hosting Command Posts afloat must be large enough to contain a headquarters and staff for sustained periods on a 24/7 basis.

### **3.3.3 Coordination Cell**

This cell coordinates with the Force Headquarters staff and other military component units to synchronize riverine operations with those of other Force elements. The Coordination Cell should be collocated with the appropriate unit headquarters (either Force, Sector or Battalion), especially when conducting integrated operations, or when UN Military Riverine Unit operations are launched within a Sector or Battalion area of responsibility.

### **3.3.4 Patrol Platoons**

The UN Military Riverine Unit is capable of detaching task-organized portions of its structure for limited periods of time in support of other Force elements. For example, a generic UN Military Riverine Unit with twelve patrol craft could deploy three subordinate platoon-equivalents (with 4 patrol craft in each platoon-equivalent) simultaneously in three separate locations. Each craft typically has a crew of 3 personnel, depending on the type of craft. In this example, the Patrol Platoons have approximately 105 organic light infantry/marine personnel onboard to conduct Waterborne Security, Reconnaissance and Surveillance, Security for Shipping in Transit, Support to Ground Forces, Search and Rescue, Personnel Relocation, Humanitarian Assistance and Disaster Response (see paragraph 2.6 for a detailed description of Patrol Platoon tasks/operations).

### **3.3.5 Maintenance Cell**

The UN Military Riverine Unit must be logistically self-sufficient, except for periodic re-supply and major maintenance. Its Maintenance Cell must be capable of carrying out all necessary routine maintenance and recovery support for the unit's vessels, vehicles and support equipment, as agreed in the MOU/LOA. It should have a fully independent boat maintenance capability to carry out essential logistics, scheduled maintenance and repairs. The Maintenance Cell must be sufficiently staffed to ensure maintenance requirements are satisfied in capacities and capabilities needed for day and night operations, done in compliance with applicable standards. The Maintenance Cell should possess all required equipment, tools, maintenance manuals and specialist documentation for at least the maintenance of engines, hulls, gearboxes/transmissions, hydraulics, electrical systems, instruments and weapons, as well as spare parts storage, and engineering records keeping.

### **3.3.6 Logistics Cell**

The Logistics Cell ensures the UN Military Riverine Unit has the wherewithal to logistically sustain itself for up to 30 days without resupply. The cell coordinates the UN Military Riverine Unit's provision and stocking of all categories of supplies, including general stores, ammunition, rations and repair parts. The cell ensures proper maintenance, serviceability and inspection of both UN-Owned and Contingent-Owned Equipment, including the installation and maintenance of electronic counter-measure (ECM) systems especially on patrol craft, as well as counter-mine equipment/measures.

### 3.3.7 Level I Hospital

The UN Military Riverine Unit should have a Level 1 Hospital capable of providing first line medical care, specialized first aid, triage, resuscitation and stabilization. It should also be capable of *coordinating* surface and air evacuation of casualties. The Level 1 Hospital should have the capacity to deploy at least one Forward Medical Team either on board or ashore as required.

## **Chapter 4**

### **Support for the UN Military Riverine Unit**

#### **4.1 Support Expectations**

The UN Military Riverine Unit is expected to meet the standards of self-sustainment according to the terms of the Statement of Unit or Force Requirement, UN-TCC MOU and Contingent-Owned Equipment (COE) Manual. The deploying UN Military Riverine Unit is also required to have and maintain the necessary resources and personnel to support itself administratively and logistically for the duration of the Mission (apart from where supplemented by the UN). To avoid having troops arrive unprepared to sustain themselves or their operations, TCCs and their contingents must be clear on what support will be provided by the UN, and what support they must provide for themselves. See Annex A to this manual for examples of typical and specific initial provisioning and self-sufficiency support requirements. The specifics of what to expect are provided in key documents such as the Statement of Unit Requirement and any UN-TCC MOU or Letter of Assist. It cannot be over-emphasized that special attention must be given to the detailed requirements for rations, water, shelter, medical support and supplies.

#### **4.2 The UN Military Riverine Unit Commander's Role**

Before deploying to the UN Mission's operational theatre, the UN Military Riverine Unit commander must ensure that he or she can deploy, sustain and regenerate his or her force. He/she should consider the implications of casualties, consumption, materiel losses and resupply lead times; and then plan, allocate and balance resources accordingly. A UN Military Riverine Unit commander should also evaluate the risks to, and security of, his/her sustainment equipment and capabilities, communication nodes and links; and adapt his/her plan to reduce the impact of unavoidable constraints on the resources readily available. The commander should carefully consider UN and TCC guidelines for determining further sustainment requirements.

#### **4.3 Major Engineering Support**

Before deployment, UN-TCC negotiations should include any UN Military Riverine Unit requirement for major engineering such as secure vehicle parks, vessel storage and harbour facilities and physical barriers for force protection. Early identification of major engineering requirements is essential to reach full operational capability as soon as possible, especially when UN Military Riverine Units are establishing their facilities in new locations. Major engineering tasks are a Mission responsibility and included in the Mission's master engineer plan.

#### 4.4 Self-Sustainment of the UN Military Riverine Unit

When the UN Military Riverine Unit arrives in the Mission area it is responsible for meeting all its own needs for rations, water, petrol, oil, etc. for the first 30 to 90 days, depending on the terms of the MOU and Statement of Unit Requirement. Typically, equipment is deployed for the duration of the Mission and troop rotations occur every 12 months. Subject to MOU negotiations, the UN Military Riverine Unit may be required to self-sustain in the following areas:

- Catering
  - Communications<sup>15</sup>
  - Office
  - Electrical
  - Minor engineering
  - Explosive Ordnance Disposal<sup>16</sup>
  - Laundry and cleaning
  - Tentage (see immediately below and the sample SURs at Annex A)
  - Accommodation
- **Initial Accommodation:** The UN Mission will prepare green field sites under austere conditions at the deployment location. The contingent will need to deploy with sufficient tentage for all accommodation, storage, offices, ablutions and workshops, etc. Water sources will be arranged by the UN Mission; the contingent will deploy sufficient water purification units to produce and consume its own purified water. The Mission will provide Field Defense Stores (FDS) and additional FDS kits for use in mobile operations.
  - **Permanent Accommodation:** The UN Mission will strive to provide rigid or semi-rigid accommodation after the initial six-month period in Contingent-Owned Equipment tentage; failing which the UN Mission will pay a penalty rate of reimbursement until pre-fabricated accommodation can be provided.
  - **Deployable Accommodation:** The contingent must deploy with a sufficient quantity of tentage necessary for short-term operational and tactical deployments.
  - **Tentage Structure:** Tentage must include flooring and the ability to heat and cool as appropriate; and netting at doors, windows and the inner/outer fly of tents. Double-layered tents with metal pipe frames are

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<sup>15</sup> Internal communications within a contingent are a TCC responsibility. Contingents should come with suitable equipment for their internal communications establishing contact from their highest contingent headquarters to their respective countries and each of their subordinate Sections, Teams, Detachments, Companies and Battalions. TCCs are also responsible for providing email and Internet access for personal or welfare purposes. The UN provides only strategic communications support between the Mission, Force and Sector Headquarters; and subordinate units of the Sector that are not organic to that Sector Headquarters, such as Battalions provided by another TCC and independently deployed units.

<sup>16</sup> For the UN military unit camp's internal area only. Does not apply to mine clearance activities.

recommended due to conditions in the field. It is also recommended to mount the tents on cement or wooden foundations to ensure their stability. (Deployable accommodation noted in the paragraph above is excluded from this requirement.)

- Basic fire-fighting equipment
- Fire detection and alarms
- Medical: observation and treatment identification
- Defence against Chemical, Biological, Radiological and Nuclear Weapons<sup>17</sup>
- Field defines stores
- Miscellaneous general stores
- Internet access
- Unique equipment
- Welfare items

#### **4.5 Force and Mission-level Sustainment Support for the UN Military Riverine Unit**

4.5.1 Sustainment support for UN Military Riverine Units is coordinated through the Sector<sup>18</sup> and Force Headquarters. The UN Military Riverine Unit must therefore liaise with both the Sector and Force Headquarters logistics structure (DCOS Operations Support, U-4 LOG, U-1 PER), the Office of the Chief, Service Delivery and the Mission Support Center (formerly the Joint Logistics Operations Centre (JLOC)). Operations planning will determine the specific logistics requirements and the associated military logistics command and control structures for each operation when the UN Military Riverine Unit is committed. Following the initial period of self-sufficiency and in addition to TCC support obligations to their deployed contingent, all other UN Military Riverine Unit life support and operational requirements are satisfied by the Mission's Director or Chief of Mission Support through the Office of the Chief, Service Delivery.

4.5.2 The UN provides the following items and services:

- Food rations (storage, cooking and sometimes transportation are a contingent responsibility)
- Bulk raw water (or access to bulk raw water). TCCs are responsible for purification, storage and transport)
- Bulk fuel
- Strategic movement of Contingent-Owned Equipment and personnel from the home country to the Mission area of operations

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<sup>17</sup>To date, UN peacekeepers have not been subjected to a nuclear or biological warfare environment. However, they have had to work in a chemical warfare environment. It is therefore important that some elements of the CBRN threat be covered in training to include the characteristics, symptoms, precautions and use of protective clothing and detection monitoring equipment for all types of CBRN threats. If time is constrained, military units should concentrate on detection of and protection from chemical weapons. –*United Nations Peacekeeping Training Manual, Training Guidelines for National or Regional Training Programmes*, undated, page 28, published by DPKO: [http://ppdb.un.org/Policy%20%20Guidance%20Database/MAN\\_UN\\_PEACEKEEPING\\_TRAINING.pdf](http://ppdb.un.org/Policy%20%20Guidance%20Database/MAN_UN_PEACEKEEPING_TRAINING.pdf)

<sup>18</sup> When deployed in support of the Sector.

- Main supply route, road/other infrastructure upkeep and mine clearing. Minor engineering and routine upkeep is a TCC responsibility. (See the applicable MOU.)
- Blood and blood products
- Casualty Evacuation/Medical Evacuation (CASEVAC/MEDEVAC) <sup>19</sup> transportation and support for movement of sick and wounded personnel to appropriate medical facilities.<sup>20</sup>

## 4.6 Medical and CASEVAC/MEDEVAC Support

### 4.6.1 Medical Capability

UN Military Riverine Units typically deploy with their own integral Medical Level 1 Hospital. Higher levels of medical support are a Mission responsibility provided through CASEVAC/MEDEVAC. Each UN Military Riverine Unit (company equivalent) may deploy elements within the Mission area with an attached medical element subject to availability, if required. The ability to evacuate UN Military Riverine Unit casualties to Level 2 or 3 hospitals must be pre-arranged and verified before each UN Military Riverine Unit mission.

### 4.6.2 CASEVAC/MEDEVAC Planning and Training

During the planning phase of each operation, special attention must be given to available CASEVAC/MEDEVAC capabilities, procedures <sup>21</sup> and timing with the appropriate staff officers at Sector or Force Headquarters. UN Force/Mission MEDEVAC/CASEVAC assets and Level 1/2/3 Hospitals will provide medical support and should train with the Mission's Military Riverine Unit. CASEVAC/MEDEVAC training is aimed at interoperability with enablers, such as air assets, and other Force elements such as the Quick Reaction Force. When aerial CASEVAC/MEDEVAC assets are not available or appropriate, alternate CASEVAC/MEDEVAC is arranged using Force or Mission assets and procedures. UN Military Riverine Unit CASEVAC/MEDEVAC typically involves making use of all available Force and Mission assets.

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<sup>19</sup> Casualty Evacuation (CASEVAC) entails the evacuation (by air or land) of a casualty from the site of injury to the closest medical facility. This category of patient transfer shall be conducted within 1 hour of injury. Medical Evacuation (MEDEVAC) entails the evacuation of a casualty between two medical facilities; either within the Mission area (in-theatre) or out of Mission area. MEDEVAC should be conducted depending on the medical urgency. See the newly-revised UN Medical Support Manual, 2015, Chapter 10, paragraphs 9.a. and b.

<sup>20</sup> For comprehensive guidance on medical operational, logistical and administrative guidelines for Member States, UN Headquarters and field Missions, consult the Medical Support Manual for United Nations Peacekeeping Operations, which will be available at: [http://ppdb.un.org/Nav%20Pages/PolicyFramework\\_Default.aspx](http://ppdb.un.org/Nav%20Pages/PolicyFramework_Default.aspx)

<sup>21</sup> All planned aviation-related activities, such as transportation by air (including casualty and medical evacuation), reconnaissance, selection of temporary helicopter landing sites, etc., must be coordinated with the Mission Aviation and Movement Control elements in order to meet specific requirements stipulated in the respective Aviation, Movement Control and Aviation Safety policies, manuals and SOPs. See also the DPKO *Aviation Manual*, 2005 for specific requirements to transport weapons on board UN-chartered aircraft.

## **4.7 UN Headquarters Staff Support to the UN Military Riverine Unit**

4.7.1 The Department of Field Support (DFS) at UN Headquarters provides dedicated support to peacekeeping field Missions in the areas of logistical support services, communications and information technology and financial reimbursement. Overall logistical and general administration support to field Missions and TCCs is delivered through DFS and its Mission Directors/Chiefs of Mission Support and their subordinate staff.

### **4.7.2 Logistical Support Services**

The DFS logistics plan is the basis for identifying resources that may be re-deployed from other locations (e.g., UN Logistics Base Brindisi or other field Missions) to support Mission deployment. Additionally, the DFS logistics plan forms a basis for negotiations with potential TCCs on provision of COE that each individual troop contributor is required to bring to the Mission along with applicable self-sustainment services.

### **4.7.3 Communications and Information Technology Support**

Equipment for communications between the Force or Sector Headquarters (if appropriate) and the UN Military Riverine Unit is provided as UN-Owned Equipment (UNOE). UNOE ensures that the UN Military Riverine Unit has integral, secure, military-grade communications within the Force's communications network. At the Mission-level, the UN establishes strategic communications links, providing geospatial information and enabling information exchange throughout the respective Mission. The UN Mission also provides access to the UN network and telephone system at the contingent headquarters level. National, operational and internal tactical communications within a national contingent, and any welfare IT such as internet, is provided by Contingent-Owned Equipment and is the responsibility of the TCC and its contingent, as defined by the respective MOU between the UN and TCC.

### **4.7.4 Financial Reimbursement**

- The determination of financial reimbursement to UN Member States for COE is established through the COE Working Group and UN legislative bodies. The details of this reimbursement at the contingent-specific level are included in the MOU, which is the primary reference for contingent logistics support (including support for the UN Military Riverine Unit) for each specific peacekeeping Mission. Equipment, if not in the COE Manual, will be treated as a “specialized use equipment” if the situation requires. Maintenance of this special use equipment is a TCC responsibility if the equipment is under wet lease. (See paragraph 4.8 below for an explanation of wet and dry leases.) In accordance with the COE Manual, any special minor equipment or consumables not covered by the standard self-sustainment rates may be categorized as “unique equipment.” These items will be reimbursed according to bilateral special case arrangements between the UN and TCC.
- It is essential to coordinate the force generation process with logistics planning. This coordination occurs once troop contributors have been identified. Problems

that troop contributors may face in equipping or supporting their contingents are identified and staffed for resolution at UN Headquarters. Problems are assessed based on a combination of the data given by the TCC and inspections carried out by DPKO and DFS personnel. The UN Department of Field Support recognizes that many Member States do not possess all of the equipment needed for a particular UN Mission and have therefore put in place mitigating arrangements such as the purchase of UN-Owned Equipment and/or “wet and dry” leases (see paragraph 4.8), Memoranda of Understanding (paragraph 4.9) and Letters of Assist (paragraph 4.10).

#### **4.8 Wet and Dry Leases**

In order to ensure that personnel and equipment being offered by Member States come with the required capability, there are a number of options for the provision of equipment and its support. These options come under the headings of “wet lease” and “dry lease” and the option chosen is directly linked to the rate of reimbursement.

##### **4.8.1 Wet Lease**

Under wet lease arrangements, a contingent deploys with its COE and is responsible for its maintenance and support. This arrangement can be achieved in one of two ways:

- The TCC provides the vehicles and equipment, related minor equipment, workshop support, spares, and maintenance personnel. The TCC is reimbursed at set rates.
- One TCC provides the equipment and a second party, under a bilateral arrangement, provides the support. In this case, the TCC deployed to the Mission area and operating the equipment is reimbursed by the UN. The second party is reimbursed, if at all, by bilateral arrangement without UN involvement or responsibility.

##### **4.8.2 Dry Lease**

Under dry lease arrangements, a contingent deploys with its COE but the UN arranges for its support. This arrangement can be achieved in a number of ways:

- Under the first, the TCC provides the equipment and the UN takes responsibility for the support, spares and maintenance. The TCC receives reimbursement, but at the dry lease rate.
- The TCC provides the equipment and the UN arranges for another Member State to provide the support. The former receives reimbursement at the dry lease rate and the latter on scales laid down for maintenance and support.
- The TCC provides the equipment, receives reimbursement at the dry lease rate and the UN provides the support via commercial contractor.

#### **4.9 Memorandum of Understanding**

The MOU is designed to cover reimbursement for (a) personnel costs, (b) equipment and (c) self-sustainment costs. Under the MOU, liability is borne by the UN.



The COE manual states that in the case of loss or damage of equipment due to hostile action or force abandonment, the UN is responsible for reimbursement to the Member State in cases where the loss or damage exceeds \$250,000. Where the loss or damage is less than \$250,000, the Member State assumes responsibility.

#### **4.10 Letter of Assist**

4.10.1 The UN may satisfy specific support requirements not already included under an MOU or available through commercial contract. These support requirements may be met by a contracting method known as a Letter of Assist, by which the UN acquires special supplies or services from a Member State. LOAs are used when:

- A TCC deploys, rotates or repatriates its personnel and equipment using its own capacities.
- A special need arises for essential equipment or services that are not available through normal sources of supply.
- The items or services required by the Mission are not covered by an MOU.
- A TCC contributes aircraft or vessels to a Mission.

4.10.2 The LOA is intended to cover items like vessels, aircraft or radar systems that are not listed as standardized items in the COE manual. The LOA stipulates that liability is borne by the TCC. The procedure to establish the LOA ensures that the UN Procurement Service and the Headquarters Committee on Contracts have the opportunity to evaluate the reimbursement rates offered to the contributing country and determine whether they can be considered as “fair market prices.” The LOA is specific and time bound with any changes requiring an amendment to the original LOA. The LOA is reviewed by the UN Headquarters Committee on Contracts before approval by the UN Controller.

#### **4.11 Pre-Deployment Visits**

In view of the financial and operational significance of ensuring that contingents are correctly equipped, DPKO and DFS conduct Pre-Deployment Visits (PDVs)/inspections before deployment. PDV’s are usually conducted once the troop contributor and UN Headquarters reach an MOU agreement. The MOU covers personnel,<sup>22</sup> equipment, self-sustainment and Mission factors, and is a contractual statement of what each of the respective parties will provide.

#### **4.12 Status of Forces Agreement**

4.12.1 From a logistical perspective, the Status-of-Forces Agreement (SOFA) specifies the terms of support provided by the host state to the UN Mission, as well as the legal rights of the UN Mission’s personnel and operations. DPKO, in coordination with DFS at UN Headquarters, is responsible for negotiating SOFAs with the host state.

4.12.2 SOFAs codify relations between the UN Mission and host state describing “the rights, privileges and immunities of the Mission and its personnel and the Mission’s obligations to the host government.”<sup>23</sup> SOFAs govern the legal status of military and

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<sup>22</sup> The MOU also contains articles on discipline and investigations promulgated by the UN Conduct and Discipline Unit at UN Headquarters.

<sup>23</sup> *Handbook on United Nations Multidimensional Peacekeeping Operations*, published by DPKO Peacekeeping Best Practices Unit, December 2003, p.13, available at:

civilian personnel deployed to the Mission in the host state, and specify the legal immunity for UN personnel with regard to the settlement of claims, the modalities for the exercise of civil and criminal jurisdiction over military and civilian Mission members, as well as provisions relating to freedom of movement, taxes, customs, immigration controls, radio frequencies, flight clearances and permission to wear uniforms and carry weapons. Under the typical terms of a SOFA, “military personnel are immune from criminal prosecution by the host state for crimes committed on its territory, but may still be subject to the criminal jurisdiction of their national authorities.”<sup>24</sup>

#### 4.13 National Support Elements

4.13.1 With prior UN approval, Member States providing military and/or police personnel to UN Missions may augment those personnel with a National Support Element. Member States may choose to organize National Support Elements to provide their deployed contingents administrative and logistical services with national standards of support that may exceed or differ from the stated UN requirement. A National Support Element includes personnel and equipment *in addition* to those agreed to by the UN and Member State under the terms of the applicable MOU, and/or as described in the Statement of Unit or Force Requirement for the specific field Mission.

4.13.2 As this augmentation is over and above UN requirements, the UN offers no reimbursement or financial liability for National Support Element costs, rotation or self-sustainment. Nonetheless, for purposes of legal status, National Support Element personnel are considered part of the Member State’s military or police unit contingent. The total personnel strength of the National Support Element will be specified in the applicable MOU between the UN and Member State, and shall be reasonably proportionate to the strength of the contingent.

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<http://www.peacekeepingbestpractices.unlb.org/Pbps/library/Handbook%20on%20UN%20PKOs.pdf>

<sup>24</sup> Office for the Coordination of Humanitarian Affairs (OCHA) *Glossary of Humanitarian Terms in Relation to the Protection of Civilians in Armed Conflict*, 2003, available at:

<http://ppdb.un.org/Policy%20Guidance%20Database/Glossary2004.pdf>

# Chapter 5

## Training for the UN Military Riverine Unit

### 5.1 Intent

This Chapter is intended to assist UN Military Riverine Unit commanders and leaders in their professional obligation to achieve the training and operational readiness of the personnel under their supervision. The following paragraphs contain brief explanations of training responsibilities and expectations, training requirements and professional military training recommended for emphasis. The UN fully recognizes TCC sovereignty and prerogatives when it comes to the military training of their personnel and units. TCC military training is the foundation upon which UN Military Riverine Units can then add and adapt to the UN peacekeeping context. The training requirements mentioned in this Chapter are task-oriented and not necessarily UN peacekeeping unique. The intent is to provide contingent commanders and subordinate leaders with a consolidated list of important topics as they prepare their units for and during UN deployment. Commanders and subordinate leaders should develop these training topics in greater detail to suit the needs of their units. To meet the need for greater detail in UN Mission-specific training, specialized training materials (STMs) are being developed by the Department of Peacekeeping Operations to provide peacekeeping training goals for TCCs participating in UN operations.

### 5.2 Training Responsibilities and Expectations

Training, regardless of subject, is a command responsibility at every organizational level. Military commanders and supervisors have a professional, legal and moral obligation to ensure their personnel and units are properly trained to accomplish their missions. UN Military Riverine Units are normally composed of personnel from a single TCC, but may occasionally include elements from other TCCs. National military training is ideally within the parameters set by the UN as articulated in this Manual (to promote effectiveness and interoperability), and therefore may only require a deploying unit to undergo some additional training to gain greater familiarity with UN peacekeeping and the specific requirements of a particular Mission. DPKO's Integrated Training Service (ITS), part of the Policy, Evaluation and Training Division of DPKO at UN Headquarters, provides this type of UN Mission orientation training material. ITS has developed Mission-specific training modules that, when applied, help transform and realign UN military units to the tasks and challenges of peacekeeping operations. ITS is responsible for providing peacekeeping training standards for all phases of training, based on departmental priorities and policies, lessons learned and best practices. ITS disseminates required standards to all peacekeeping training partners, including Member States and field Missions. Planners should take into consideration training requirements as they develop timelines for deployment and troop rotation so that units can receive the necessary training before they deploy. Upon arrival in the Mission area, the Force

Headquarters is responsible for producing train-the-trainer courses for induction training conducted under contingent arrangements. Individual and especially collective UN Military Riverine Unit training should also focus on interaction with different Mission elements, partners and other actors present in the area of operations. Contingent Commanders are responsible for the planning and conduct of individual and collective refresher training when in-theatre.

### 5.3 Training Requirements

5.3.1 UN Military Riverine Unit training should be based on Mission requirements contained in the Statement of Unit Requirement, CONOPS, etc.

5.3.2 The UN Infantry Battalion Manual (UNIBAM) discusses common UN military unit training at length and should be studied by all units deploying for peacekeeping Missions.<sup>25</sup> Key professional qualities worthy of TCC training emphasis include military planning, the ability to integrate and orchestrate diverse sources of specialist personnel and equipment, communication skills (both oral and written), the development of a versatile and flexible mind-set, cultural awareness and sensitivity, language skills, and knowledge of the UN communications and information technology system. Communications and information technology training is given by the Information, Communications and Technology Division of the Integrated Training Service in the Department of Field Support. This training includes intensive system and technology-specific training on UN-provided equipment.

5.3.3 Descriptions of generic UN peacekeeping training, including the various training phases such as Pre-Deployment Training, Induction Training, Ongoing or In-Mission Training (a command responsibility vital to ensuring the maintenance of operational effectiveness) and on-the-job training are covered in the UN Infantry Battalion Manual. The overarching principles of UN peacekeeping described therein are applicable to all military units regardless of specialty.

5.3.4 While military training may vary according to national goals and resources, there are fundamental training requirements that should be addressed when preparing to deploy to a peacekeeping Mission. Training requirements of particular note for UN Military Riverine Units include:

- Mission Rules of Engagement.
- Protection of Civilians.
- Human Rights and Due Diligence Policy.
- Mission-specific equipment and SOPs.
- Mission-specific geographic and environmental conditions whose unique physical and operational characteristics present certain operating challenges for effective communications.

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<sup>25</sup>The Infantry Battalion Manual, Volumes I and II, can be found at:  
<http://www.un.org/en/peacekeeping/documents/unibammanualvol1.pdf> and  
<http://www.un.org/en/peacekeeping/documents/unibammanualvol2.pdf>.

- Mission-specific guidance obtained from documents issued by DPKO's Office of Military Affairs, such as the Statement of Unit Requirement and Guidelines to TCCs; the Integrated Training Service's Pre-Deployment Information Packages; and field Mission documents such as the Force Commander's Training Directive.
- Observations resulting from reconnaissance by the incoming UN Military Riverine Unit commander and staff to the Mission area.
- Lessons learned from the outgoing UN Military Riverine Unit.
- Mine and Explosive Ordnance Awareness Training.
- Awareness training on asymmetric threats, particularly the use of IEDs.
- Military EOD/IEDD Search Training specifically tailored for landings.

#### **5.4 Professional Military Training Recommended for Emphasis**

There are a number of professional military training subjects TCCs should emphasize as they prepare their personnel and units for UN peacekeeping operations. Knowledge of the UN command and control and logistics systems (particularly as explained in this Manual's 1<sup>st</sup> and 4<sup>th</sup> Chapters) is essential for contingents to operate effectively within the integrated UN field Mission. TCCs are encouraged to develop leaders who are capable of working within a civilian-managed Mission support structure while remaining responsive to supported military units and the Force's military chain of command. Beyond mastering specific technical subjects, UN Military Riverine Unit leaders should be capable of orchestrating all military unit functions to achieve a coordinated application of unit assets. The ability to work with other nationalities is a fundamental requirement in UN operations. Language training and Mission-specific cultural familiarization could be incorporated into the TCC's long-term professional military curriculum, not just its pre-deployment training. Since English and French are the two languages most frequently required in UN Missions, it is highly desirable for UN Military Riverine Unit personnel to be proficient in English and/or French languages (written and oral). Preparing key contingent members to communicate in the English and/or French languages allows them to integrate their unit into the overall Mission. Moreover, it would be invaluable to assign at least two bi-lingual UN Military Riverine Unit persons to radio rooms. TCCs are encouraged to work with DPKO's Integrated Training Service to develop classroom instruction and command post exercises that will provide UN peacekeeping orientation that can then be added to TCC-specific military professional training.

# Chapter 6

## Evaluation of the UN Military Riverine Unit

### 6.1 Evaluation Criteria

6.1.1 Evaluations are extremely useful to TCCs, their contingent commanders and UN planners and Mission leadership to organize, train, equip, deploy and employ military personnel. TCCs conduct their evaluations (reinforced by Force and Sector Headquarters evaluations) to assess and monitor the state of individual and collective training, and to check the maintenance and performance of equipment. Above all, the purpose of formal evaluations is to assist TCCs and military contingents in meeting national and UN standards of performance and interoperability.

6.1.2 A military contingent's operational readiness is evaluated based on distinct criteria such as Mission requirements, organizational structure, operational standards, the capability to perform mission essential tasks, standards achieved in training, as well as administrative and logistics standards. This evaluation should analyse task-oriented activities at each level within the military contingent to include individuals, task-oriented groups and commanders. The evaluation checklists at Annex D include broad peacekeeping evaluation criteria, as well as those that are more UN Military Riverine Unit specific. For a comprehensive set of UN commander's evaluation checklists, see the Chapter on Peacekeeper Capability Standards in the UN Infantry Battalion Manual.

### 6.2 Independent Evaluation Support

TCCs can authoritatively determine how well their personnel, units and equipment are prepared for peacekeeping duties by conducting independent evaluations using special evaluation experts from national training centres and personnel with previous peacekeeping experience. Adequate resources in terms of training areas, ammunition for live firing, classrooms and equipment oriented to the Mission environment will significantly improve preparation and evaluation exercises. Any gaps in capability can be corrected by TCC-appropriate action to make the necessary improvements. Additionally, the UN Force Headquarters will conduct its own assessment of Force units once they deploy. In this way, multiple evaluations contribute to higher states of operational readiness and performance.

### 6.3 Conducting Evaluations

Formal evaluations during mission rehearsals and exercises are highly encouraged. Evaluation criteria should be based on measurable and quantifiable standards that are specific, achievable, realistic and time-bound in nature. Evaluations may be conducted in a graduated manner by level (from individual soldiers to commanders) and activity (Crew, Section, Platoon, Company, Battalion or Sector) to

systematically build expertise and integrate capabilities for collective application. In addition to national training standards, further guidance on conducting evaluations is available in the sample evaluation checklists at Annex D, and the links and references provided throughout this manual regarding UN policies, directives, SOPs and guidelines.

## 6.4 Pre-Deployment Evaluations

6.4.1 A military contingent is expected to be well trained and qualified in basic military skills and conventional military tactics, techniques and procedures according to specific national military standards prior to concentration for peacekeeping training. DPKO/DFS-organized pre-deployment visits (PDV) offer a level of independent evaluation prior to a contingent's deployment to the Mission area. Pre-deployment evaluations by the TCC and DPKO/DFS may include validation of the contingent's ability to:

- Ensure timely assembly, grouping, and equipping of the UN Military Riverine Unit in accordance with the SUR and MOU.
- Conduct Mission-specific, task-oriented, individual and collective tasks/capabilities.
- Identify shortcomings and take corrective measures for capability enhancement.

6.4.2 Prior to a UN DPKO/DFS PDV, a well-prepared UN Military Riverine Unit may undertake the following activities:

- Raising and establishing a Military Riverine Unit in accordance with the Mission-specific UN Statement of Unit Requirement.
- Training in accordance with standard UN Military Riverine Unit tasks and operational demands. See Chapter 2 for a detailed discussion of UN Military Riverine Unit tasks.
- Developing *Mission-specific*, task-oriented, individual and collective expertise and capabilities.
- Identifying shortcomings and taking remedial action to improve capabilities.
- Making timely adjustments and mid-course corrections.
- Utilizing experienced trainers from other Military Riverine Units to train the new Military Riverine Unit awaiting deployment.
- Final pre-deployment inspection and rehearsal of the Military Riverine Unit by national peacekeeping experts under troop contributing country arrangements.

## 6.5 In-Mission Evaluations

In-Mission evaluations should include:

- Conducting the first in-Mission evaluation in the second month of deployment to validate and match the standards achieved prior to deployment. This can be followed by quarterly/half yearly evaluations in accordance with Mission norms.
- Continuously and simultaneously monitoring and reviewing performance in-Mission by the military contingent command element.
- Identifying potential weak areas and instituting periodic selective evaluations to administer corrective actions.

- Reassessing capabilities and skills when the Mission's operational situation changes, or when there is a gap between requirements and performance.
- Taking note of clearly visible performance capability gaps during critical times and adverse situations, and addressing them expeditiously.
- Validating key appointments in command and staff channels to verify ability and responsibility, and providing guidance and support where required.
- Hosting visiting TCC teams of military officials and peacekeeping experts who monitor and validate unit performance.

## 6.6 UN Assistance

DPKO/DFS and the Mission leadership play a key role in guiding and facilitating TCC achievement of evaluation and operational readiness. In addition to this manual, numerous references offer guidelines and standards by which UN Military Riverine Units can evaluate their operational readiness. See Annex E. The nature of UN assistance is described below:

### 6.6.1 DPKO/DFS Assistance

DPKO/DFS promote evaluation, operational readiness and commitment to UN standards with a flexible and accommodative approach by:

- Guiding, assisting, facilitating or supplementing TCC efforts in evaluation.
- Providing training assistance through the Integrated Training Service.
- Providing the Mission and TCC strategic guidance and oversight by:
  - Conducting a pre-deployment visit (for initial deployments mainly) to verify that provisions of the SUR/MOU are met.
  - Guiding and assisting emerging TCCs (and other TCCs on request), focussing on relevant military training and technology-related issues.
- Providing an Operational Advisory Team from DPKO/DFS to guide and assist emerging TCCs (assistance on request for other TCCs).

### 6.6.2 Mission Leadership Assistance

The Mission leadership supports evaluation by coordinating and providing the following assistance:

- Informs TCCs of performance goals for the Military Riverine Unit, pre-deployment preparation requirements and Mission-oriented task requirements.
- Coordinates pre-deployment reconnaissance, organizes in-Mission induction training through Integrated Mission Training Cells (IMTCs), provides the train-the-trainer courses (a Force Headquarters responsibility), provides Mission Military Riverine support and defines unambiguous operational tasks, roles and responsibilities for the Military Riverine Unit that provide a basis for evaluation.
- Carries out in-Mission operational performance and capability evaluation of the contingent as and when required. Provides and coordinates the required resources and staff to conduct evaluations and centralized, technical on-the-job training to strengthen evaluated shortfalls.



- Guides and supports TCCs and Military Riverine Units to improve shortfalls, adopt mid-course corrections and take action with the Mission command and staff on evaluation findings. Develops a Mission-specific Military Riverine training plan and oversees the required training to improve the evaluated operational readiness.
- Performance Evaluation Forms (PEFs) of commanders.

### **6.7 Collective Responsibilities**

TCCs are encouraged to modify and formalize the evaluation methodology, criteria and procedures presented herein to suit their needs in conducting their evaluations. For TCC contingents deploying to UN Missions, the development and use of detailed standards and checklists, focusing on peacekeeping and UN Military Riverine preparedness, will yield great benefits in terms of operational readiness and early identification of unit capabilities that need improvement. Early identification allows personnel or equipment shortfalls to be addressed before they cause problems. TCCs that lack the financial or technical ability to support their deploying units with the resources needed to meet national or UN standards should discuss their needs with DPKO/DFS at UN Headquarters. Every effort will be made to assist the TCC with its requirements, either by expert assistance from UN Headquarters or through third party support.

## **Sample Statements of Unit Requirement**

**Important Note:**

The following extracts of two actual Statements of Unit Requirement (SUR) are provided for illustrative purposes only.

Any references to the unit composition and strength described in these SURs are unique to the Missions for which they were created. Specific planning strength figures, weapons, equipment and organizational structure for a UN Military Riverine Unit in other Missions should be based on Mission requirements and the guidance in this Manual, not necessarily the SURs in this annex.

In the event that the Force Commander is also the Head of Mission, the roles and responsibilities of the UN Military Riverine Unit are not altered.



**United Nations Multi-Dimensional Integrated Stabilisation**  
**Mission in**  
**(XXX)**  
**Statement of Unit Requirement for the Riverine Unit**

**Department of Peacekeeping Operations**  
**Office of Military Affairs**  
**Military Planning Service**

Approved by

June 2013

Review Date: when required  
Drafted by: Military Planning Service  
Contact: Riverine Planning Officer/African Team II

***This document Constitutes the Statement of Unit Requirement (SUR) for a riverine unit with XXX boats. It enumerates the capabilities that are required for optimizing the unit's effectiveness in the conduct of riverine operations as mandated for the Mission. The Military Strategic Concepts of Operations (CONOPs) and any future adjustments to the CONOPs may place additional and more specific requirements on the riverine unit. It should be noted that the associated Memorandum of Understanding (MOU) will be negotiated based on the capabilities outlined in this document. The Troop Contributing Countries (TCCs) are expected to comply with the CONOPS, Statement of Unit Requirement, Rules of Engagement (ROE) and the Department of Peacekeeping Operations (DPKO)/Department of Field Support (DFS) Policy on Authority, Command and Control in the United Nations Peacekeeping Operations. The provisions in such MOUs or TCCs guidelines shall neither supersede the capabilities sought in this document nor affect the planned employment of this capability once deployed. If any discrepancy or disagreement on interpretation of the document arises among concerned parties, the interpretation solely by the Military Planning Service (MPS)/Office of Military Affairs (OMA) is deemed valid and any other interpretation is pre-empted.***

**References:**

- A. Security Council Resolution XXX dated 25 April 2013.
- B. XXX Military Strategic Concept of Operations (CONOPS) dated June 2013.
- C. Rules of Engagement (ROE) for the Military Component of XXX, dated June 2013
- D. UN Policy on Authority, Command and Control in United Nations Peacekeeping Operations, dated 15 February 2008
- E. Generic Guidelines for Troop Contributing Countries Deploying Military Units to United Nations Peacekeeping Missions, March 2008
- F. The United Nations Manual for Contingent Owned Equipment (COE Manual), October 2011.

**Overview of Strength and Deployment Locations**

<b>Force Description</b>	<b>Approx. Strength</b>	<b>Deployment Locations and AO (See Note 1 below)</b>	<b>Remarks</b>
XXX Riverine Unit	XXX	<ul style="list-style-type: none"> <li>• Able to conduct riverine operations along the XXX River and its tributaries between XXX and XXX.</li> <li>• Unit shore-based in XXX (TBC after recce).</li> <li>• Possibility to be permanently shore-based in another location in XXX River after consultation with the TCC.</li> </ul>	<ul style="list-style-type: none"> <li>• XXX x mother ship (TBC) which could be either COE or UNOE (See Note 1 below).</li> <li>• XXX x RHIBs and 3 x fast patrol boats (COE).</li> </ul>

**NOTE 1:** XXX Riverine operations in full concept integrate and employ various types of floating units –COE and UNOE– and Contingent Forces and Naval MILOBs organized as a mobile riverine force (MRF), in a concerted effort to accomplish the objectives of a riverine operation as mandated for the Mission, capitalizing on mobility through the waterways to show the UN Flag. The MRF is considered to be a joint task force. The Riverine COE and Contingent Forces provide a balance of tactical mobility and quick reaction/force protection whilst the Riverine UNOE and Naval MILOBs provide an afloat base of operations and long-range surface mobility. Therefore, the actual strength, composition, availability of military contingents (Forces and COE) and deployment locations are subject to Troop Contributing Country (TCC) negotiations with DPKO. Initial MRF deployment locations may be temporarily adjusted for the longer term by the Force Commander (FC), in consultation with the USG DPKO, SRSB and Contingent Commander to address particular emerging or prevailing operational needs.

**1. BACKGROUND.**

- a. **Situation** Following a XXX insurrection in northern XXX and coup d'état that split the XXX, XXX authorities lost control of northern XXX to a combination of illegal armed; religious extremist terrorist and international criminal networks prior to the XXX-led intervention operation and XXX deployment. The major movements consist of Islamist terrorist, separatist and transnational criminal groups. The main XXX terrorist groups are XXX in the XXX. The secessionist groups are the XXX. The XXX is a transnational criminal group. The relationships between the groups are fluid.

The groups have engaged in terrorism, narcotic and human trafficking, hostage taking (for ransoms), smuggling of arms, drug route protection, currency exchanges and control of local economies. These activities generate income used for arms procurement, insurgency costs, recruitment of new members, spares and supplies and vehicles as well as other ancillary needs. Weapons available to the groups include rifles, heavy weapons, surface-to-air missiles, anti-aircraft guns, rockets, mortars, light armoured vehicles, mines and IEDs. Presidential and legislative elections due to be held in XXX are an important milestone in the re-establishment of the Government of XXX throughout the entire territory of XXX.

- b. **Force Concept** XXX will establish its FHQ in XXX with two multinational deployable sector / XXX areas. Each Sector will have its own tactical reserve drawn from its assigned battalions and will keep the Force Commander informed of the status of their reserve forces.

The XXX military component is to deploy to the main centres of population to provide protect civilians and prevent the return of armed elements to enable stabilisation of the XXX state and support the extension of state authority in order to enable the XXX authorities to fulfil and develop capacities for their national responsibilities for the population and the State.

Responsiveness will be ensured by maintaining situational awareness and reacting rapidly by concentrating forces in areas of potential or ongoing violence. XXX will maintain operational depth, flexibility and agility through the use of reserves able to deploy throughout the AOR.

- c. **End State** The territorial integrity of XXX is restored, with the threats from terrorist and affiliated groups, and transnational criminal activities, reduced. A sufficiently secure environment is maintained by an operationally capable XXX Defence and Security Forces XXX for the consolidation of State authority, maintenance of territorial integrity and the protection of the population; and the conditions are established for the restoration of basic services, social amenities and the return of the population.

## 2. MISSION.

The XXX Riverine Unit will conduct UN presence, riverine security and surveillance operations, and supporting tasks on the XXX River and its tributaries in order to contribute to a secure riverine environment, and to deter and deny the use of the waterways by negative elements.

## 3. EXECUTION

- a. **Organisation.** The Riverine Unit is to consist of up to XXX personnel and X floating units, and X self-propelled afloat bases of operations (mother

ships). The Unit must include, but is not limited to, the following capabilities: provide fire support; deny negative elements the use of waterways; perform security missions; conduct surveillance operations; conduct supporting operations; conduct waterborne reconnaissance; provide C2 and communications elements, be within operational and communication range of deployed MRFs and facilitate their logistic support (distance of the area of operation from the riverine base, and of the base from its sources of supply is still to be determined as the UN logistic bases locations are unknown so far); collect intelligence information; perform escort for movement of logistic boats; conduct insertion and extraction of landing troops; perform damage control, river salvage, and EOD operations; provide medical support on board and in the shore base; conduct waterborne MEDEVAC/CASEVAC as well as search and rescue tasks. If the shore base in XXX does not include a helicopter landing capability, the base must be located adjoining a land area suitable for staging and loading helicopters. The Unit must have sufficient personnel, boats crews and equipment to support operations and maintenance requirements to operate 24/7. Personnel and assets assigned to the riverine base of operations must be capable of providing security to the base as well as performing all essential logistic functions, so that the MRFs are logistically self-sufficient except for periodic resupply and major maintenance. The Unit must be able to operate in high threat level environment.

- b. **Manning and Composition of a Patrol:** a Riverine Patrol will consist of XXX Fast Patrol Boat (FPB) and at least XXX RHIBs will accompany each FPB at all times. The manning composition on board of each Patrol during any mission will be as follows:
  - (1) The FPB's crew of X personnel and the FPB's Commanding Officer (CO) identified as Patrol Commander (total X).
  - (2) The RHIB's crew of X personnel each (total X).
  - (3) Response Team: up to XX embarked Marines, including one officer, equipped for highly mobile operations (total XX).
- c. **Self-propelled Afloat Base of Operations:** each MRF must have XX afloat base of operations for embarkation of personnel and equipment in order to meet the tactical requirement of the MRF. The afloat base's crew is X personnel. In the case that the afloat base is UNOE, its manning composition could be Naval MILOBs (TBD).
- d. **Resources and Manning of the MRF 1:** the resources are X RHIBs and X x fast patrol boats, and the afloat base of operations. Total manning: XX.

**Resources and Manning of the MRF 2:** the resources are X RHIBs and X x fast patrol boats, and the afloat base of operations. Total manning: XX.

- e. **Area of Responsibility.** The XXX Riverine Unit will not have specific movement restrictions applied to its riverine operations in X River. The AOR of the Riverine Unit will include all possible navigable waters of the X River between X and X, and the major tributaries within established ranges. For operational control, the following AOs are in effect for riverine operations:
- (1) **X:** The X River and navigable tributaries between X and X (XXX towards SW along X River and tributaries).
  - (2) **X:** The X River and navigable tributaries between X and X (692 km off XXX towards XXX along XXX River and tributaries).
  - (3) **Other Considerations:**
    - (a) The area should be thoroughly reconnoitred.
    - (b) The location/anchorage of self-propelled afloat bases of operations should permit safe passage of other waterway traffic.
- f. **Tasks.** The unit will have the following key tasks, missions and operations, all of which could be conducted either in support of the MDSF or independently in accordance with the CONOPs, Mission PLANOPs and ROEs. This list of tasks should not be considered as exhaustive; other tasks may be requested by the Force Commander within the limitations of national constraints:
- (1) **Operational Tasks:**
    - (a) Conduct show-of-force in order to deter negative elements movement through waterways.
    - (b) Conduct riverine security operations, including waterway surveillance, in order to deny the use of the waterway system to the insurgency.
    - (c) Establish a safe corridor for riverine shipping in the XXX River and its tributaries.
    - (d) Conduct waterborne reconnaissance.
    - (e) Collect and report any intelligence which would support the current operations of the Force.
    - (f) Provide fire support to ground forces.
    - (g) Be prepared to establish a secure environment in the vicinity of designated landing zones/beaches where ground operations will be conducted.
    - (h) Be prepared to withdraw and redeploy ground troops. (Insertion/Extraction Ops)



- (i) Be prepared to act as, or in support of, a blocking force.
  - (j) Be prepared to conduct interdiction operations along with MDSF and warn vessels engaged in illegal activities in the AO (The Unit must be specifically trained in law enforcement activities and procedures, but may also be prevented from participating in the interdiction mission by their home country's guidance).
  - (k) If the situation arises, protect civilians and humanitarian personnel under imminent threat of physical violence.
  - (l) Be prepared to carry out any other task on order.
- (2) **Secondary tasks for the unit can include (but are not limited to):**
- (a) Conduct waterborne MEDEVAC/CASEVAC.
  - (b) Be prepared to accomplish Humanitarian Assistance missions if and when required, to include:
    - (i) Coordinate the transportation on board of humanitarian supplies within the AO.
    - (ii) Establish a secure environment on the riverward side of indicated beachheads, across which humanitarian supplies will be distributed ashore.
  - (c) Be prepared to facilitate and protect the movement of assigned MILOBs, Military Personnel and other UN Personnel.
  - (d) Be prepared to transport and/or escort UN cargo as directed by FHQ.
  - (e) Be prepared to transport troops.
  - (f) Conduct Riverine Search and Rescue Operations (SAR) when directed, and if the situation demands carry out emergency towing, assistance to distress vessels, and emergency evacuation of passengers in danger.
  - (g) Provide support to demining/EOD/IEDD operations conducted by qualified personnel.
- g. Technical requirements for FPBs will be as follows:**
- (1) Day and night capability to operate on XXX River.
  - (2) Capacity to accommodate all embarked personnel (XX) for the length of the operation. Otherwise, an afloat base of operations is required.
  - (3) Speed boat equipped with at least one machine gun with 360 degree weapon coverage and calibre of at least 23 mm, draft.
  - (4) Radios with Marine bands as appropriate.
  - (5) SATCOM: capable of both voice and data.

- (6) Radar and GPS capability.
- (7) A maximum speed of 35 knots.
- (8) Sophisticated navigation and excellent self sustained capability (including generator, automatic engine compartment, fire extinguisher system, higher stability, life rafts for emergency lifesaving).

**h. Technical requirements for RHIBs will be as follows:**

- (1) Day and night capability to operate on XXX River.
- (2) Transportation capacity for up to XX persons.

**i. Boat Crew requirements.**

- (1) The number, qualifications, and boat experience of the crews must be sufficient to insure that all the requirements are fulfilled in capacities and capabilities, for day and night operations, 24/7. Weapons currency is a national responsibility. Crewmembers must be current with all the weapon systems on board for the duration of their tour of duty in the mission without the need of refreshing.
- (2) Suggested FPB Crew numbers: x
- (3) Suggested RHIBs Crew numbers: x
- (4) Suggested Response Team numbers: x

**j. Maintenance Requirements.**

- (1) Maintenance activities: It is an essential requirement for the unit to include a fully independent boat maintenance component, capable of routinely carrying out all necessary scheduled maintenance and defect rectification. This component should include all required equipment, tools, maintenance manuals and specialist documentation for the following activities:
  - (a) Engine maintenance
  - (b) Gearbox/Transmission maintenance.
  - (c) Hydraulics maintenance.
  - (d) Electrical maintenance.
  - (e) Instrument maintenance.
  - (f) Weapons maintenance.
  - (g) Spare parts storage.
  - (h) Engineering records.
- (2) Maintenance Personnel: The number and qualifications of the maintenance personnel must be sufficient to insure that all the requirements are fulfilled in capacities and capabilities for day and night operations in compliance with the applicable standards.

- k. Fire Fighting.** The unit must provide its own fire detection and alarm, and basic firefighting equipment and capabilities.
- l. Equipment Requirements.** Equipment requirements are at Annex A. Additional requirements are as follows:
  - (1) All equipment must be transportable either by MI-26 or C-130 aircraft.
  - (2) All containers, including for general storage, refrigeration, ammunition, medical, workshops, etc. are to be no larger than the standard ISO 20 ft container.
  - (3) All minor equipment, spare parts and consumables are supplied by the TCC under wet lease arrangements.
- m. Other Requirements.** The unit should be placed within the perimeter of a guarded location (base or compound) and will be capable to provide its own protection/defence. Protection requirements should be confirmed during the reconnaissance visit to XXX.

#### 4. ADMINISTRATIVE REQUIREMENTS

- Administration and discipline. Administration and discipline are a national responsibility.
- Language The official language of XXX will be English. The official operational communications of the Battalion with the Sector HQ will be in English. The operational radio communications will be in English. The presence of French speakers in the troops is recommended to enable effective communications with the local population.

#### 5. LOGISTICS:

- a. General.** Logistic Support for these units is provided by the Mission. The support sites are identified as: XXX and XXX. Arrangements for logistic support are laid down in the COE manual. The provision of rations, raw water and fuel to the unit deployment locations will be a UN responsibility.
- b. Transport.** Transport of all commodities from the designated UN point of delivery, forward is the responsibility of the TCC. Hence all equipment, stores, ammunition and supplies should be planned to be handled and moved by COE. In cases where the UN provides resources which exceed the normal cargo handling capability of the Unit, the UN will assist, within reason, to distribute to a forward location. Where a detachment is deployed away from the unit's area of responsibility, the UN will provide rations, raw water and fuel to the new location.
- c. Catering.** Self-sustainable for kitchen, deep freeze and cold & dry food storage, hot dishwashing capabilities, cooks, mobile cold storage devices, etc. Cookers must be diesel-operated.

- d. **Office.** Self-sustainable for furniture and supplies, electronic data processing and reproduction capability including necessary software, etc.
- e. **Electrical.** Self-sustainable for electrical requirements. Main generators should have capacity of generating minimum of 1 KVA per person. The unit must deploy with 100% back-up power generation capability.
- f. **Minor Engineering.** Capacity to handle minor electrical repairs, to undertake non-field defensive minor construction, etc. The unit must deploy appropriate number of small generators with a capacity of up to 20 KVA.
- g. **Laundry & Cleaning.** The unit will provide laundry for all military and personal clothing, including dry-cleaning of operationally-required specialist clothing, camp cleaning unit, etc.
- h. **Tentage.** Tentage with metal pipe frames is recommended. Tentage includes flooring and the ability to heat and cool as appropriate, netting at doors and windows and outer fly for tents. It is required for the whole unit for its initial and subsequent deployments (To be confirmed during the recce visit).
- i. **Field Defense Stores.** UN will provide identification and field defense stores. There is no requirement for NBC protection.
- j. **Miscellaneous General Stores.** Self-sustainable in terms of bedding, furniture, welfare equipment & amenities, etc.
- k. **Days of Supply.** Mission direction on quantities and days of supply will vary with operational requirements. Reserve stocks are not considered within the normal replenishment model. Days of Supply relates to those consumables to be used by the unit and are separate from dedicated reserve stocks. Units will be capable of carrying one day of supply for all combat stores (water, food, fuel and ammunition) and will hold a total of three days of supply at each level as normal operating stock. Repair parts holdings are to be sufficient for one month's normal operations without resupply.
- l. **Self Sufficiency.** The unit is required to remain self-sufficient in all categories.
  - (1) **Water.** The unit must bring drinking water for the first 30 days after deployment. (The unit can also initially draw drinking water from available UNCOE using its own water carriage/storage equipment, in the interim period prior to establishment of its own water purification plant).
  - (2) **Rations.** Unit must bring rations for the first 30 days (composite / de-hydrated / tinned).
  - (3) **Supply.** The unit is to be fully self-sufficient for all supply categories, except fuel, for the first 6 months after deployment.
- m. **Medical.** Level 1 Medical support is the unit responsibility. The following additional medical facilities are available:
  - (1) **Level 2 Hospital.** XXX , XXX, XXX and XXX.
  - (2) **Level 3 Hospital.** Outside Mission Area.
  - (3) **Level 4 Hospital.** Outside the Mission Area.
- n. **Welfare Facilities.** Welfare facilities, such as internet access and recreational items, are to be provided by the unit.
- o. **Port Facilities.** The mission will lease port facilities as required. The Riverine Unit HQ is to maintain constant liaison with the Mission Administration on the

issue of employing appropriate berth facilities along all rivers and will establish a reporting mechanism to ensure port information, points of contact and emergency facilities are kept for all locations along the rivers.

## 6. COMMAND AND CONTROL

- a. The Riverine Unit will be under Operational Control (OPCON) of the Force Commander. OPCON allows the Force Commander to assign separate tasks to units and sub units within the military component, as required, within the mission area of responsibility, in consultation with the senior national officer of the affected unit/sub-unit, who is responsible for administrative control of the unit/sub-unit. The Force Commander may delegate OPCON to subordinate levels.
- b. The Contributing Member State retains 'administrative control' over non-operational administrative issues over deployed military personnel and units. Administrative control is exercised by a senior national officer of a contributed military contingent within a mission area. This authority is limited to administrative matters such as personnel management, supply and services. Military personnel assigned to serve under UN operational control shall not act on national direction or instructions if those instructions may result in actions contrary to UN policies or adversely affect implementation of the mission's mandate.
- c. **Communications.** The Riverine Unit HQ in coordination with the XXX FHQ U6 branch, will promulgate a COMMPLAN as appropriate for Riverine Operations and in accordance with the following guidelines:
  - (1) Each Patrol (X FPB + X RHIBs) is to be equipped with SATCOM capable of both voice and data, one HF radio set and at least three VHF handsets for onboard communications
  - (2) All deployed assets will pass the daily SITREP at X hrs and immediately following anchoring, or at last light, through the Riverine HQ. Additional SITREP will be sent for routine special reporting or in case of emergency.
  - (3) All deployed assets are to maintain a permanent link with the Riverine HQ in XXX.

Annex:  
List of Equipment

## List of Equipment

Item	Number required	Remarks
<b>Personnel</b>		
Strength ceiling	X	Including X Level I Hospital and Dental Clinic
<b>Naval Vessels</b>		
<b>Fast Patrol Boat (FPB)</b>		
Crew	X	
Radar	X	
VHF/HF Comms		
Satellite phones	X	X per Patrol + X at Shore-Based Coy
23 mm or larger machine gun	X	X per boat
Speed		30 knots
Range		150 nm at 10 knots
Capacity to accommodate	X	If this requirement is not met, an afloat base of operations or mother ship will be required
Propulsion	X engines	Driven by X fwd/reverse engines
Hull		Reinforced
<b>Rigid-Hull Inflatable Boat (RHIB)</b>		
Crew	X	
Capacity	X	
Handling		Exterior Life Lines
Main Power	80 HP	Outboard motor
<b>Miscellaneous Equipment</b>		
Data acquisition & processing system		
Hydrographic echo sounder		
Mooring buoy		
Geodetic GPS Receiver		
Counter-mine equipment	X	
<b>Self-Propelled Afloat Base of Operations</b>	X	<b>COE or UNOE</b>
<b>Containers</b>		
Other containers	X	
<b>Support Vehicles (Commercial)</b>		
Truck, water (over 5,000 and up to 10,000 litres)	X	All with pumps
Truck, tanker (over 5,000 and up to 10,000 litres)	X	All with pumps and flow meters.(for diesel )
Truck utility/cargo (2.4 to 5 tons)	X	
Truck utility/cargo (6 to 10 tons)	X	
Ambulance (4x4)	X	
Truck maintenance heavy	X	
Truck maintenance medium	X	
<b>Support Vehicles (Military Pattern)</b>		
Jeep 4x4	X	With military radio

Item	Number required	Remarks
<b>Trailers</b>		
Light cargo single axle	X	
Heavy cargo multi axle	X	
<b>Other Equipment</b>		
Tentage	For X	As required equipment/in case of establishment of temporary detachments
<b>Engineering Equipment</b>		
Water treatment plant, up to 2,000 lph, storage up to 5,000 litres	X	Reverse osmosis unit capable of producing drinking water according to WHO guidelines
<b>Electrical – Generators – Stationary and Mobile</b>		
Generator 51-75 KVA	X	TCC need to select generator sizes to match specific loads. Generators are to be used in pairs and include synchronizing control equipment for parallel running.
<b>Logistic Equipment</b>		
Water Bladder (up to 10000 ltrs)	X	Collapsible, specially certified for water storage.

Note: Actual composition of the equipment is subject to TCC negotiations with DPKO.



**United Nations Mission in XXX**  
**(XXX)**  
**Statement of Unit Requirement**  
**for the Force Marine Unit**  
**(FMU)**

**Department of Peacekeeping Operations**  
**Office of Military Affairs**  
**Military Planning Service**

Approved by

August 2014

Review Date: When required  
Drafted by: Military Planning Service  
Contact: MPS / Africa Team I



*This document constitutes the Statement of Unit Requirement (SUR) for a Force Marine Unit with X boats. It enumerates the capabilities that are required for optimizing the unit's effectiveness in the conduct of riverine operations as mandated for the Mission. The Military Strategic Concepts of Operations (CONOPs) and any future adjustments to the CONOPs may place additional and more specific requirements on the riverine unit. It should be noted that the associated Memorandum of Understanding (MOU) will be negotiated based on the capabilities outlined in this document. The Troop Contributing Countries (TCCs) are expected to comply with the CONOPS, Statement of Unit Requirement, Rules of Engagement (ROE) and the Department of Peacekeeping Operations (DPKO)/Department of Field Support (DFS) Policy on Authority, Command and Control in the United Nations Peacekeeping Operations. The provisions in such MOUs or TCCs guidelines shall neither supersede the capabilities sought in this document nor affect the planned employment of this capability once deployed. If any discrepancy or disagreement on interpretation of the document arises among concerned parties, the interpretation solely by the Military Planning Service (MPS)/Office of Military Affairs (OMA) is deemed valid and any other interpretation is pre-empted.*

**References:**

- A. UN Security Council Resolution X, dated 8 July 2011.
- B. UN Security Council Resolution X, dated 11 July 2011.
- C. UN Security Council Resolution X, dated 11 July 2013.
- D. UN Security Council Resolution X, dated 23 December 2013.
- E. UN Security Council Resolution X, dated 27 May 2014.
- F. Standard Operation Procedure, Inter-Mission Cooperation, Reinforcement for Field Missions, dated 26 February 2007.
- G. Department of Peacekeeping Operations/Department of Field Support Policy on Authority, Command and Control in the United Nations Peacekeeping Operations, dated 15 February 2008.
- H. Generic Guidelines for Troop Contributing Countries Deploying Military Units to the United Nations Peacekeeping Missions dated 2008.
- I. Manual on Policies and Procedures Concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors Participating in Peacekeeping Missions (COE Manual), dated 27 October 2011.
- J. Rules of Engagement for the Military Component of XXX, dated August 2014. (still in the process of approving)
- K. Strategic Military Concept of Operations for XXX, dated 18 July 2014.

**Overview of Strength and Deployment Locations**

<b>Force Description</b>	<b>Strength</b>	<b>Deployment Locations and AO (See Note 1 below)</b>	<b>Remarks</b>
XXX Force Marine Unit	X	<ul style="list-style-type: none"> <li>• Able to conduct protection tasks and recce patrols along the XXX and if required, River XXX as well as River XXX.</li> <li>• FMU HQ in XXX, Unit is to be able to operate three balanced sub-units concurrently in three separate locations.</li> </ul>	<ul style="list-style-type: none"> <li>• Up to X x Light Patrol Crafts (COE).</li> </ul>

**NOTE 1:** The main focus of the Mission under SCR X is the protection of civilians, human rights, and contributing to the creation of security conditions conducive to the delivery of humanitarian assistance, as requested and within capability, as well as supporting the implementation of the Cessation of Hostilities Agreement by securing XXX Monitoring and Verification activities. XXX Marine operations will supplement these tasks by providing Protection Measures to transport barges and conducting Security Patrols on the waterways. The actual strength, composition, availability of military contingents (Forces and COE) and deployment locations are subject to Troop Contributing Country (TCC) negotiations with DPKO. Initial deployment locations may be temporarily adjusted for the longer term by the Force Commander (FC), in consultation with the USG DPKO, SRSG and Contingent Commanders to address particular emerging or prevailing operational needs.

**7. Background.**

a. **Situation.** XXX is increasingly forced to utilise the XXX as a transportation and supply route for both logistics items and humanitarian stores. Recently, XXX’ ability to negotiate the XXX has been disrupted; the armed attack on an XXX barge convoy on X 2014 is a recent example of a new and evolving threat. Urgent action is required to address this matter so that resupply missions along the river can continue unimpeded. A specialist maritime infantry unit (trained and equipped with light maritime patrol-craft) needs to be deployed to XXX as quickly as possible.

b. **Unit Concept of Employment (CONEMP).** The FMU will operate as a specialist tactical unit under command of FHQ (due to the unique inter-sector aspect of its CONEMP).

(1) At the initial stage the FMU will provide security to transport barges by dominating the waterways and the vicinity immediately around and ahead of transiting convoys as well as conduct reconnaissance patrols in direct support of the transit to contribute to the Force's information collection and to enhance XXX' visibility on the waterways.

(2) In the longer term, based on lessons learned and operational requirements, there should be scope to refine both the way in which the Force Marine Unit operates and the equipment and crafts that are used.

c. **Main effort.** The main effort at this stage will be the physical protection of the cargo by deploying armed blue helmets (Autonomous Vessel Protection Detachments - AVPD) on-board the assigned barges and accompanied by a small group of maritime patrol craft.

## 8. EXECUTION

a. **Organisation.** The FMU will comprise naval/maritime forces with a specialist amphibious and marine infantry background. The unit has to be trained and equipped for operating in a hostile and arduous maritime environment. The unit is to consist of up to XXXX personnel with up to X Light Patrol Craft (LPC) and with the capability to deploy three X balanced sub-units (Platoons) concurrently in three separate areas. A small cadre of the FMU should be experts on river craft and LPC handling. The FMU should also have an integral repair and maintenance capability for the LPCs. Shore-side manpower is to be available for site security, platform maintenance and administrative/sustainment requirements. The Unit must have sufficient personnel, boat crews and equipment to support operations and maintenance requirements to operate 24/7. Personnel and assets assigned to the marine bases of operations must be capable of providing security to the bases as well as performing all essential logistic functions, so that the unit is logistically self-sufficient except for periodic resupply and major maintenance. The Unit must be able to operate in a high threat level environment. Additional safety equipment should be provided by the FMU conforming to international legal standards sufficient for crew and maximum passenger complements for each craft.

b. <b>Manning. Overall strength:</b>	X
(1) FMU HQ:	X
(2) Ops Cell:	X
(3) Force Liaison Cell	X
(4) X x FMU sub-units:	X Sailors/Marines

(5) X x X LPC per FMU sub-unit (Crew X)	X
(6) Maintenance cell:	X
(7) Logistics cell:	X
(8) Level 1 Hospital:	X

**c. Manning and Composition of a Protection Detachment:** Sub-units are to provide Autonomous Vessel Protection Detachments (AVPD) with appropriate equipment and armament for operating on-board the barges. These detachments need to be self-sustained for the duration of the assignment, up to a maximum of 30 days operation. If required the detachments will be augmented and accompanied by a small boat group (SBG), comprising of at least X Light Patrol Craft (LPC) and crew. The LPCs will be armed and highly manoeuvrable to add to the firepower of the AVPDs and to provide emergency relief such as CASEVAC extraction if required.

- (1) Composition of the protection team (AVPD) will be according to operational requirements and threat assessments. Each AVPD is to be equipped with crew-served weapon system(s) sufficient to neutralise a target out to a range of X metres or to suppress a target out to X metres.
- (2) Where possible, permanent firing points / weapon stations and fortified parapets need to be installed on-board the barges by Mission Support Division. Hard walled accommodation (ideally with air conditioning) such as CORIMECs should also be installed on-board the vessels for the AVPD members when not on duty. As a bare minimum, all barges are to have crew protection for small arms (up to 7.62 mm non-armour piercing), and there must be defensive shields or sandbags around weapons stations.
- (3) The LPCs will each be deployed with a crew of three (3). The boats will be able to respond to emergency situations and provide a light CASEVAC capability when accompanying the AVPDs. Transport capacity will be at least for X fully equipped soldiers (in order to allow for evacuation of the barges). Composition of the accompanying Small Boat Group depends on operational requirements as well as the number of assigned barges (e.g. convoy operations).

**d. Manning and Composition of a Reconnaissance Patrol:** a Reconnaissance (Recce) Patrol will consist of at least X Light Patrol Craft (LPC). The manning composition on board of each patrol during any mission will be as follows:

- (1) The LPC's crew: X personnel.
- (2) Response Team: up to X embarked marine troops per LPC, including one officer, equipped for highly mobile operations (total X).
- (3) Routinely, Recce Patrols should be capable of operations at no-notice for up to 48-hours with no further support (X x DOS aboard at all times).

**e. Resources and Manning of a Sub-Unit.** The resources for each sub-unit will be based on operational requirements. The FMU should be able to conduct three different tasks concurrently in three different locations (e.g. two sub-units as on-board Protection Teams and one sub-unit conducting Recce Patrols). Sustainment is to be provided by shore-based elements as afloat support vessels or self-propelled platforms will not be part of these requirements. Harbour infrastructures may be augmented by pontoons with mooring devices.

**f. Area of Responsibility.** The XXX Force Marine Unit will not have specific movement restrictions applied to its riverine operations on the River Nile and major tributaries. The AOR of the Marine Unit will include all possible navigable waters of River X between X and X, and the major tributaries within established ranges. For operational control, the following AOs are in effect for marine operations:

- (1) XXX: The XXX and navigable tributaries between X and X and if required, River X.
- (2) X: The XXX and navigable tributaries between X and X and if required, River XXX.

**g. Tasks.** The unit will have the following key tasks, missions and operations, all of which should be conducted independently in accordance with the CONOPS, Mission OPLANs and ROEs. This list of tasks should not be considered as exhaustive; other tasks may be requested by the Force Commander within the limitations of national constraints:

**(3) Operational Tasks:**

- (a) Provide armed escort to UN barges in order to secure movement of UN supplies, equipment and personnel along the river routes between XXX and XXX and between XXX and XXX.
- (b) Collect and report any intelligence which would support the transit of the barges as well as current operations of the Force.
- (c) Be prepared to conduct medical evacuation for the assigned Protection Teams and where other assets are unavailable or unsuitable.
- (d) Be prepared to assist with protecting designated ports and riverine infrastructure.
- (e) Be prepared to provide fire support to ground forces.

**(4) Secondary tasks for the unit can include (but are not limited to):**

- (a) Be prepared to assist with limited logistic resupply without the dependency on contracted civilian river vessels.
- (b) Be prepared to conduct search and rescue operations (SAROPs) to assist any person or vessel in distress along navigable waterways in the XXX AOR.
- (c) Be prepared to provide riverine transport to MLOs and representatives of other UN pillars (and stores / equipment) in accordance with priorities set by the Force Commander.
- (d) Provide support to demining/EOD/IEDD operations conducted by qualified personnel.

**h. Technical Requirements for Light Patrol Crafts will be as follows:**

These requirements aim at medium sized crafts with a balance of protection, speed, agility and transport capacities. The LPC should have an operating range of 200 km, with a full payload of X passengers (increasing to 250 km with boat crew only). Each LPC is to be equipped with crew-served weapon system(s) sufficient to neutralise a target out to a range of X metres or to suppress a target out to X metres. Ideally, all LPC are to have crew protection against small arms fire (up to 7.62 mm non-armour piercing; ideally modular armour plates), as a minimum there must be defensive shields around mounted weapons. Other technical specifications are as follows:

- (1) Able to underslung by MUH (Mi-8/Mi-17). Total weight not to exceed 11,100 kg (24,470 lb).
- (2) Able to be trailer-launched
- (3) Draft less than 1m

- (4) Fixed mounted weapon stations
- (5) To transport up to 15 personnel including crew (or 1,800 kg)
- (6) Either water jet propelled or sufficiently powered outboard engines to achieve a Maximum Speed of 40 knots
- (7) Day and limited night capability to operate in the AOO
- (8) Radios with Marine bands as appropriate (HF as 200 Km and 30-35 Km for VHF); VHF Air-band communications is desirable.
- (9) SATCOM: capable of both voice and data
- (10) Radar and GPS capability
- (11) LPCs should be of a material and design capable of withstanding 7.62 mm non-armor piercing small arms fire.
- (12) ECHO Sounder
- (13) Counter-mine equipment as needed

**i. Boat Crew requirements.**

- (1) All crews must be qualified and certified to operate the vessels in accordance with International maritime Safety standards, for day and night operations. Weapons currency is a national responsibility. Crew members must be current with all the weapon systems on board for the duration of their tour of duty in the mission without the need of refreshing. Ideally all FMU personnel should be qualified swimmers. Sufficient buoyancy aids to permit three (3) independent operations must be provided.

**j. Maintenance Requirements.**

- (1) Maintenance activities: It is an essential requirement for the unit to include a fully independent boat maintenance component, capable of routinely carrying out all necessary scheduled maintenance and defect rectification. This component should include all required equipment, tools, maintenance manuals and specialist documentation for the following activities:
  - (a) Engine maintenance
  - (b) Hull maintenance.
  - (c) Gearbox/Transmission maintenance.
  - (d) Hydraulics maintenance.
  - (e) Electrical maintenance.
  - (f) Instrument maintenance.
  - (g) Weapons maintenance.
  - (h) Spare parts storage.
  - (i) Engineering records.
- (2) Maintenance Personnel: The number and qualifications of the maintenance personnel must be sufficient to ensure that all the requirements are fulfilled in capacities and capabilities for day and night operations in compliance with the applicable standards.

**k. Fire Fighting.** The unit must provide its own fire detection and alarm, and basic firefighting equipment and capabilities.

- l. Equipment Requirements.** Equipment requirements are at Annex A. Additional requirements are as follows:
  - (1) All equipment must be transportable either by MI-26 or C-130 aircraft. LPC are to be able to underslung by MUH (Mi-8/Mi-17) Total weight not to exceed 11,100 kg (24,470 lb).
  - (2) All containers, including for general storage, refrigeration, ammunition, medical, workshops, etc. are to be no larger than the standard ISO 20 ft container.
  - (3) All minor equipment, spare parts and consumables are supplied by the TCC under wet lease arrangements.
- m. Other Requirements.** The unit should be placed within the perimeter of a guarded location (base or compound) and will be capable to provide its own protection/defence. Protection requirements should be confirmed during the reconnaissance visit to XXX.

## 9. ADMINISTRATIVE REQUIREMENTS

- p.** Administration and discipline. Administration and discipline are a national responsibility.
- q.** Language The official language of XXX is English. The official operational communications of the Battalion with the Sector HQ will be in English. The operational radio communications will be in English.

## 10. LOGISTICS:

- a. General.** Logistic Support for these units is provided by the Mission. The support sites are identified as: XXX and XXX. Arrangements for logistic support are laid down in the TCC Guidelines. The provision of rations, raw water and fuel to the unit deployment locations will be a UN responsibility. The FMU, as a complete unit or sub-unit squadrons, will be equipped and sustained sufficient to undertake periodic and deliberate FOB operations of up to 30-days duration, assuming routine resupply within that period. The FMU would likely utilise both diesel (preference) and gasoline as primary fuel sources and requires self-lift for 5 x DOS of fuel and lubricants in wheeled/towed bowsers.
- b. Transport.** Transport of all commodities from the designated UN point of delivery, forward is the responsibility of the TCC. Hence all equipment, stores, ammunition and supplies should be planned to be handled and moved by COE. In cases where the UN provides resources which exceed the normal cargo handling capability of the Unit, the UN will assist, within reason, to distribute to a forward location. Where a detachment is deployed away from the unit's area of responsibility, the UN will provide rations, raw water and fuel to the new location.
- c. Catering.** Self-sustainable for kitchen, deep freeze and cold & dry food storage, hot dishwashing capabilities, cooks, mobile cold storage devices, etc. Cookers must be diesel-operated.



- d. **Office.** Self-sustainable for furniture and supplies, electronic data processing and reproduction capability including necessary software, etc.
- e. **Electrical.** Self-sustainable for electrical requirements. Main generators should have capacity of generating minimum of 3 KVA per person. The unit must deploy with 100% back-up power generation capability.
- f. **Minor Engineering.** Capacity to handle minor electrical repairs, to undertake non-field defensive minor construction, etc. The unit must deploy appropriate number of small generators with a capacity of up to 20 KVA.
- g. **Laundry & Cleaning.** The unit will provide laundry for all military and personal clothing, including dry-cleaning of operationally-required specialist clothing, camp cleaning unit, etc.
- h. **Tentage.** Tentage with metal pipe frames is recommended. Tentage includes flooring and the ability to heat and cool as appropriate, netting at doors and windows and outer fly for tents. It is required for the whole unit for its initial and subsequent deployments (To be confirmed during the recce visit).
- i. **Field Defense Stores.** UN will provide identification and field defense stores. There is no requirement for NBC protection.
- j. **Miscellaneous General Stores.** Self-sustainable in terms of bedding, furniture, welfare equipment & amenities, etc.
- k. **Days of Supply.** Mission direction on quantities and days of supply will vary with operational requirements. Reserve stocks are not considered within the normal replenishment model. Days of Supply relates to those consumables to be used by the unit and are separate from dedicated reserve stocks. Units will be capable of carrying one day of supply for all combat stores (water, food, fuel and ammunition) and will hold a total of three days of supply at each level as normal operating stock. Repair parts holdings are to be sufficient for one month's normal operations without resupply.
- l. **Self Sufficiency.** The unit is required to remain self-sufficient in all categories.
  - (4) **Water.** The unit must bring drinking water for the first 7 days after deployment. (The unit can also initially draw drinking water from available UNCOE using its own water carriage/storage equipment, in the interim period prior to establishment of its own water purification plant).
  - (5) **Rations.** Unit must bring rations for the first 14 days (composite / de-hydrated / tinned).
  - (6) **Supply.** The unit is to be fully self-sufficient for all supply categories, except fuel, for the first 6 months after deployment.
- m. **Medical.**
  - (1) All units deploying to XXX must be vaccinated for Cholera and Yellow Fever.
  - (2) The unit must deploy with one (1) Level I medical facilities. The Level I medical facility must have the ability to provide two (2)

FMTs in order to support operations at permanent and temporary deployment locations. Protection Detachments on board assigned barges must have designated Medical Personnel dispatched. All personnel must have knowledge of the basic immediate first aid (buddy aid) to casualty, and must be equipped accordingly.

- (3) Four (4) Level II medical facilities are located in XXX, XXX, X and X.
- (4) Two (2) Level IV medical capabilities have been contracted at X) and X for use by all the UN personnel.
- n. **Welfare Facilities.** Welfare facilities, such as internet access and recreational items, are to be provided by the unit.
- o. **Port Facilities.** The mission will facilitate availability of port services as required/ possible. The Force Marine Unit HQ is to maintain constant liaison with the Mission Administration on the issue of employing appropriate berth facilities along all rivers and will establish a reporting mechanism to ensure port information, points of contact and emergency facilities are kept for all locations along the rivers.

## 11. COMMAND AND CONTROL

- d. The Force Marine Unit will be under Operational Control (OPCON) of the Force Commander. OPCON allows the Force Commander to assign separate tasks to units and sub units within the military component, as required, within the mission area of responsibility. The Force Commander may delegate OPCON to subordinate levels.
- e. The Force Marine Unit HQ is to be established in XXX with a small liaison cell integrated in the FHQ in XXX.
- f. The Contributing Member State retains 'administrative control' over non-operational administrative issues over deployed military personnel and units. Administrative control is exercised by a senior national officer of a contributed military contingent within a mission area. This authority is limited to administrative matters such as personnel management, supply and services. Military personnel assigned to serve under UN operational control shall not act on national direction or instructions if those instructions may result in actions contrary to UN policies or adversely affect implementation of the mission's mandate.
- g. **Communications.** The Force Marine Unit HQ in coordination with the XXX FHQ G6 branch will promulgate a COMMPLAN as appropriate for Riverine Operations and in accordance with the following guidelines:
  - (1) Each Patrol is to be equipped with SATCOM capable of both voice and data, one HF radio set and at least three VHF handsets for onboard communications
  - (2) All deployed assets will pass the daily SITREP at X hrs and immediately following anchoring, or at last light, through the Force Marine HQ. Additional SITREP will be sent for routine special reporting or in case of emergency.

- (3) All deployed assets are to maintain a permanent link with the Force Marine HQ in XXX.

Annex:

## List of Equipment

### List of Equipment

All vessels should be equipped with integral enabling facilities such as inter-communication and intra-communication means (voice HF, voice VHF and tactical UHF), observation and navigation instruments, and night operation capability.

Additional safety equipment should be provided by the Riverine unit conforming to international legal standards sufficient for crew and maximum passenger complements for each craft.

A selection of significant samples of main riverine craft are as follows:

- a. **Patrol Craft.** Patrol Craft will be tasked to perform a myriad of riverine tasks, taking into account their organic capability. These tasks can be categorized into broad areas of: (1) surveillance and reconnaissance; (2) riverine security operations (e.g. patrolling, interdiction, Visit, Board, Search and Seizure (VBSS), escort and protection); (3) interaction and capacity building; and (4) contingency operations. Size and capability of Patrol Craft may be adapted to mission requirements; the range varies from small rigid-hulled inflatable boats (RHIB) to medium sized patrol craft.
- b. **Support Vessels.** Support vessels are mainly utilized for transport of logistics and personnel in support of land operations or own operations. Contemplating the confined space as well as the anticipated lack of port infrastructure inside most Riverine AO, landing crafts are a suitable option to provide this capability. These craft may also serve as afloat base ships with special tasks such as providing command and control elements, medical assistance, repair and salvage assistance as well as accommodation facilities.
- c. **EOD/Mine Counter Measure Vessel (MCMV).** Specific to its type, MCMVs are expected to perform mine clearance and may also serve to function as surveillance and information-sharing platforms. In the event where underwater operations are required (diving for salvage, rescue etc.), MCMVs may also be considered to support such operations.

### List of Equipment

Item	Number required	Remarks
<b>Personnel</b>		
Strength ceiling	X	Including X pers Level I Hospital
<b>Fast Patrol Boat (FPB)</b>		
Radar	X	
Counter-mine equipment		
VHF/HF Comms	X	
Satellite phones	X	X per Section + X at Shore-Based HQ
Machine gun (at least 23mm)	X	X per boat
Max Speed		40 knots
Range		250 nm at 10 knots
Propulsion		Either water jet propelled or sufficiently powered outboard engines to achieve a Maximum Speed of 40 knots. Preferable diesel fuel source.
<b>Miscellaneous Equipment</b>		
Assault Rifle	X	
Pistol	X	
Mooring buoy	(TBD)	
<b>Containers</b>		
Other containers	X	
<b>Support Vehicles (Commercial)</b>		
Truck, water (over 5,000 and up to 10,000 litres)	X	All with pumps
Truck, tanker (over 5,000 and up to 10,000 litres)	X	All with pumps and flow meters.(for diesel )
Truck utility/cargo (2.4 to 5 tons)	X	
Truck utility/cargo (6 to 10 tons)	X	
Ambulance (4x4)	X	
Truck maintenance heavy	X	
Truck maintenance medium	X	
Forklift heavy	X	
20 passenger bus	X	
<b>Support Vehicles (Military Pattern)</b>		
Jeep 4x4	X	With military radio
<b>Trailers</b>		
Light cargo single axle	X	
Heavy cargo multi axle	X	
<b>Other Equipment</b>		
Tentage	For X	As required equipment/in case of establishment of temporary detachments

Item	Number required	Remarks
<b>Engineering Equipment</b>		
Water treatment plant, up to 2,000 lph, storage up to 5,000 litres	X	Reverse osmosis unit capable of producing drinking water according to WHO guidelines
<b>Electrical – Generators – Stationary and Mobile</b>		
Generator 51-75 KVA	X	TCC need to select generator sizes to match specific loads. Generators are to be used in pairs and include synchronizing control equipment for parallel running.
<b>Logistic Equipment</b>		
Water Bladder (up to 10000 ltrs)	X	Collapsible, specially certified for water storage.

Note: Actual composition of equipment is subject to TCC negotiations with DPKO.

# Riverine Environmental Factors

## 1. Introduction

A thorough knowledge and appreciation of the general and physical environment is of vital importance in planning and conducting riverine operations. Environmental factors that may affect the composition and employment of UN Military Riverine Units include:

- a. Water depths
- b. Tidal ranges
- c. Tidal currents
- d. Width and complexity of waterways
- e. Natural or artificial obstacles (rocks, rapids, bridges and dams)
- f. Lack of suitable harbours or staging areas
- g. Concentrations of population along waterways
- h. Lack of adequate nautical cartography

## 2. General Characteristics of Waterways

In certain areas of the world, extensive river and canal systems provide the principal means of transportation. People tend to settle along these waterways which frequently provide their only lines of communications. To hostile forces, these waterways represent a means for clandestine movement under the cover of civilian traffic and congested settlements, and provide favourable conditions for mining and ambush tactics. The countering of such tactics is particularly difficult because of the danger to the civilian population. Thus, general characteristics of the environment, which include economic, social and civil considerations, are closely tied to physical characteristics. To establish and maintain control under such conditions requires extensive use of the waterways.

## 3. Physical Characteristics of Major Drainage Systems

Major drainage areas can be divided generally into three elevational zones, each of which has certain general characteristics. These three zones are: the upper zone or headwaters, the middle zone or central valley zone and the lower zone or delta.

- a. **Upper Zone or Headwaters.** This zone is generally a mountainous region drained by numerous large and small tributaries, many of which merge to form a river system. Characteristically, the headwaters are variable and unpredictable.

- Navigation is difficult or impossible. Headwaters are characterized by waterfalls, rapids, high banks, steep gradients, and local variations in water depth that complicate the design of watercraft for use in this zone.
- b. **Middle Zone or Central Valley.** This zone is generally a broad river valley into which numerous smaller tributaries feed. The middle zone is wider and slower than the upper zone and is often interspersed with obstacles.
- 1) In the upper part of the middle zone, the erosional process is dominant; whereas, downstream the depositional process becomes progressively more active. Consequently, in the upper part, navigation is more heavily influenced by river-bedrock formations and often approaches conditions similar to those of the headwaters.
  - 2) In some parts of the middle zone, braiding (multiple channelling) sometimes occurs and successful navigation depends heavily on determining the principal channel. Deep channels are usually scarce in braided middle zones; consequently, navigation is often a severe problem. In addition, braided channels constantly change their course and characteristics.
  - 3) In the middle zone where meandering occurs, navigation problems are greatly simplified by relatively regular and predictable characteristics. At low to average river stages, the location of maximum water depth is usually close to the location of the maximum channels in braided streams and, thus, is more predictable.
- c. **Lower Zone or Delta.** The lower zone is generally the widest of the sectors, and the speed of the current may change or even reverse with the tide. The lower sector is usually navigable by ships in natural or manmade channels. When a delta is formed, it is usually characterized by a flat depositional plain formed by a number of river tributaries discharging sediment and water into a gulf, bay, or ocean.
- 1) Tidal activity can influence waterway velocity radically but in a roughly predictable manner.
  - 2) Delta areas located in favourable climates are extremely productive agricultural areas. Natural levees, river flood plains, flat terrace land, and tributary levees are converted to productive crop land in many of the world's major river deltas. In addition, large areas of land are reclaimed from natural swamp or marsh conditions and converted into productive wet and dry crop fields.

#### 4. Canals

Canals have highly predictable characteristics and retain dimensions closely related to initial construction through upkeep dredging activity and the depositional and scouring characteristics of waters in the canal.

## 5. Environmental effects on riverine forces.

### a. General

The environment of riverine areas varies depending on the geography and the seasonal climatic conditions. This significantly affects the operations of the riverine force. *In its most severe form, the environment becomes a dominant military consideration.* The generally accepted military concepts and techniques of mobility, combat support, and combat service support must be modified to overcome handicaps imposed by the environment.

### b. Environmental considerations

- 1) **Waterways.** There may be several major waterways in the area in addition to an extensive network of lesser waterways, canals, and irrigation ditches. In tropical and subtropical areas, the banks may be covered with a dense growth that precludes visibility inland from the water. Waterways are the predominant lines of communications; usable roads are scarce; cross-country mobility is drastically curtailed; and suitable land area for command, control, fire support, logistics, and air installations frequently is not available.
- 2) **General Effect.** Waterways must be exploited to exercise control over the area of responsibility. When necessary, facilities for command and control support and other tasks must be waterborne.



### Generic UN Military Riverine Unit Equipment Requirements

#### Introduction

1. As has been articulated throughout this manual, riverine operations integrate and employ several types of ships, watercraft, aircraft, weapons and naval forces for specialized and light infantry operations. Furthermore, their operational environment is characterized by limited land lines of communication, with extensive water surface and/or inland waterways providing natural routes for surface transportation and communications. Therefore, they are required to be adaptable in their force composition and equipment profile. Furthermore, equipment requirements will be dictated by the Mission mandate and objectives, current and future threat analyses, operational environment, terrain imperatives and the geographical spread/separation of the deployment. Issues of mobility, firepower and force protection will all place additional demands on the force structure.

#### Purpose

2. This annex is not intended to be a definitive list of equipment holdings for a UN Military Riverine Unit. However, it will provide a basic equipment profile, which can be adapted to Mission-specific requirements and established TCC tables of equipment. Recommendations on specific quantities of equipment are deliberately avoided, with the focus instead is on identifying the most likely requirements and highlighting the desired scales of issue for key equipment.

#### Equipment Profile

3. The suggested equipment in the following table is produced with reference to the UNIBAM Volumes I and II, 2012 and the Contingent-Owned Equipment Manual of 2011. Recommended scales of issue have been developed after due consideration of best practices and Mission operational and logistical requirements. Nonetheless, the equipment and scales of issue suggested in the following table **are for reference only** and do not replace the authorizations described in the Contingent-Owned Equipment (COE) Manual. Furthermore, **TCCs have the flexibility to adapt or modify the requirements during MOU negotiations.** It is understood that the UN Military Riverine Unit may well require specialized equipment or stores that are not part of the current COE Manual. These may be provided by the TCCs, with reimbursement discussed separately while negotiating the MOU. The following equipment is meant primarily to be Contingent-Owned Equipment.

## Annex C

<b>UN Military Riverine Unit</b> <b>GENERIC TABLE OF EQUIPMENT</b> <b style="color: red;">This table is for illustrative purposes only.</b> <b style="color: red;">Actual equipment will be based on Mission-specific requirements.</b>							
	NOMENCLATURE	LIKELY REQUIREMENT AT LEVEL OF:					COMMENTS
		HQ	Company	Platoon	Element	Indiv	
<b>VESSELS</b>							
1	Fast Patrol Boat (FPB)		X	X			Speed: 40 knots; Range: 250 nm at 10 knots; Capacity to Accommodate: 29 pers; Propulsion: Driven by two fwd/reverse engines - either waterjet propelled or outboard; Hull: Reinforced; Fuel Source: Diesel
2	Rigid-Hull Inflatable Boat (RHIB)		X	X	X		Main Power: 80HP Outboard motor; Crew: 2 pers; Capacity: 8 pers; Fuel Source: Diesel
3	Self-Propelled Afloat Base of Operations		X				COE or UNCOE. Only required if FPB is unable to accommodate 29 pers.
<b>ARMAMENTS</b>							
4	Personal Weapons					X	Up to Light Machine Gun and/or Under Barrel Grenade Launcher

5	Side-Arms (Pistol)	X		X	X		
6	Crew-Served Machine Gun	X	X	X			1 per vessel, 1 at Shore-based HQ and 1 at FOB
7	Flare Gun / Signal Device		X	X	X		White and coloured flares
<b>ELECTRONIC EQUIPMENT / INSTRUMENTS</b>							
8	Radar		X	X			1 per vessel
	Counter-mine equipt						
9	Night Vision Devices		X	X	X		Monocular / goggles at individual level with helmet/harness mount at Platoon / Element level
10	GPS Vessel Mounted		X	X			
11	GPS Individual Portable	X	X	X	X		
12	Digital Camera	X	X	X	X		
13	Search Light		X	X	X		
14	Flood Lights				X		
15	Data Acquisition and processing system		X	X			
16	Hydrographic Echo Sounder		X	X			
<b>COMMUNICATIONS EQUIPMENT</b>							
17	Satellite Phone	X	X	X	X		
18	Telephone Exchange	X	X		X		
19	Mobile / Cell Phones	X	X	X	X		If communications infrastructure is available in the Mission area
20	VHF/UHF Radios	X	X	X	X		Secure. Including base, vessel and vehicle-

							mounted sets. Include Ground-to-Air capability
21	HF Radios	X	X	X	X		Secure. Including base, vessel and vehicle mounted sets. With ability to transmit and receive data
<b>SUPPORT VEHICLES (MILITARY PATTERN)</b>							
22	Jeep 4 x 4	X			X		With military communications
<b>SUPPORT VEHICLES (COMMERCIAL PATTERN)</b>							
23	Truck, water (over 5,000 and up to 10,000 litres)				X		All with pumps
24	Truck, tanker (over 5,000 and up to 10,000 litres)				X		All with pumps and flow meters (for diesel)
25	Truck, utility / cargo (2.4 to 5 tonnes)				X		
26	Truck, utility / cargo (6 to 10 tonnes)				X		
27	Ambulance 4 x 4				X		
28	Truck maintenance heavy				X		
29	Truck maintenance medium				X		
30	Trailer, light cargo single axle				X		
31	Trailer, heavy cargo multi axle				X		
32	Forklift heavy				X		

33	Bus, passenger				X		
<b>ENGINEERING EQUIPMENT</b>							
34	Water Treatment Plant, up to 2,000 lph, storage up to 5,000 litres				X		Reverse osmosis unit capable of producing drinking water according to WHO guidelines
35	Generator 51-75 KVA				X		TCC need to select generator sizes to match specific loads. Generators are to be used in pairs and include synchronising control equipment for parallel running.
<b>MISCELLANEOUS EQUIPMENT</b>							
36	Water Bladder (up to 10,000 litres)				X		Collapsible, specifically certified for water storage
37	Portable Temporary Accommodation / Tents	X	X	X	X		For entire Task Unit for at least six months - for living, storage, operations centres, administration and miscellaneous purposes
38	Mooring Buoys		X	X			
39	Container, 20 ft ISO				X		To include refrigerator and freezer units for rations storage; controlled temperature and secure storage for medical supplies; controlled temperature and secure storage for ammunition; maintenance facilities; general stores.

40	Team Field Trauma Kits		X	X	X		
41	Safety Equipment / Personal Protection					X	Including, but not limited to water safety equipment, ballistic armour, eye and ear protection, personal harnesses, etc.
Note: Actual composition of equipment is subject to TCC negotiations with DPKO							

## Sample Evaluation Checklists

## Pre-Deployment Evaluation

Serial	Evaluation Criteria	Evaluation	Remarks
a	<b>Generic Peacekeeping Skills.</b> Are all personnel of the UN Military Riverine Unit trained on and sensitized to the generic UN policy guidelines and directives for conducting peacekeeping operations? Do they demonstrate a clear understanding of these guidelines and directives?		
b	<b>Mission-Specific Peacekeeping Skills.</b> Are all personnel of the UN Military Riverine Unit trained, equipped and organized to perform mission essential tasks as per peacekeeping norms? Is the unit capable of performing in line with Mission mandate(s)?		
c	<b>Basic/Conventional Skills.</b> Is the unit trained in basic infantry skills like firing personal weapons and minor tactics in accordance with national standards?		
d	<b>Physical and Mental Robustness.</b> Is the UN Military Riverine Unit physically and mentally robust enough to be deployed to the harsh conditions of the field Mission?		
e	<b>Core-Specific Capabilities.</b> Is the UN Military Riverine Unit able to perform core tasks based on unit organization, tasks assigned and type of Mission?		
e	<b>Mine- EO- and IED-Awareness.</b> Is the UN Military Riverine Unit aware of minefield, Explosive Ordnance and Improvised Explosive Device hazards? Are the basic protective measures known and trained?		
g	<b>Leadership.</b> Is the unit chain of command capable, responsive and accountable for delivering in a		

	peacekeeping environment?		
h	<b>Command and Staff.</b> Is the unit command and staff integrated, trained and capable of planning, organizing, coordinating and directing the multifaceted operational and administrative tasks in the peacekeeping environment?		
i	<b>Training.</b> Has the UN Military Riverine Unit undertaken peacekeeping-oriented and Mission-specific training? Has it achieved the requisite standards?		
j	<b>Resources.</b> Is the unit carrying or in possession of the required number of personnel, arms, ammunition, equipment, accessories, spares, unit stores and expendables as per MOU and Mission requirements?		
k	<b>Equipment Maintenance/Management.</b> Does the unit maintain a minimum serviceability state of 90 percent and does it have the capability to organize preventive maintenance and repair/recovery in situ?		
l	<b>Weapons, Instruments and Vehicles.</b> Are all weapons zeroed, instruments calibrated, vehicles maintained and inspected and certified for correctness and functionality as per required standards.		
m	<b>Logistics.</b> In case of deployment at more than one location, are the forward deployed elements configured for independent and self-sustained logistics capability (food, water, accommodation, hygiene and sanitation, transport, and medical), or do they receive this support from the hosting headquarters?		
n	<b>Medical.</b> Do all personnel meet the requisite medical standards? Have they been inoculated as per Mission requirements and have they cleared the periodic medical examination? Does the unit have access to a fully operational medical facility (Medical Level 1) in accordance with the MOU?		



o	<b>Integrity.</b> Are all unit personnel aware of applicable UN rules, regulations and code of conduct, and have they demonstrated high standards of professionalism and integrity?		
p	<b>Morale and Motivation.</b> Are all unit personnel well motivated to operate in a complex, restrictive, multinational and multidimensional environment while maintaining high morale?		
q	<b>Welfare.</b> Does the unit maintain high standards of personnel welfare as per national standards and Mission requirements?		
r	<b>Legal.</b> Do unit personnel and commanders clearly understand the responsibility to adhere to, promote and protect the legal framework for UN peacekeeping operations with specific reference to SOFA/SOMA, ROE, Human Rights and Humanitarian Law, other relevant international legal statutes and the host nation law?		
s	<b>Evaluation.</b> Has the unit carried out a formal evaluation? Have shortcomings been rectified? Have TCC authorities certified the unit to be fit for deployment to the Mission on time?		

## In-Mission Evaluation

Serial	Evaluation Criteria	Evaluation	Remarks
a	<b>Performance.</b> Does the unit plan and perform all mission essential tasks effectively and safely as per Mission mandate(s), peacekeeping norms and Mission SOPs?		
b	<b>Shortcomings.</b> Has the unit taken corrective action on shortcomings in performance or resources observed by the unit, COE team, Force or Mission leadership?		
c	<b>On-The-Job Training.</b> Does the chain of command institute measures for on-the-job training of all personnel (based on their basic job categories) to maintain qualification standards?		
d	<b>In-Mission Training.</b> Is the unit carrying out periodic in-Mission refresher, task-oriented and Mission-specific training as per IMTC guidelines?		
e	<b>Counter-Improvised Explosive Devices.</b> Is the unit trained in the current hazards of minefields, Explosive Ordnance and Improvised Explosive Devices?		
e	<b>Serviceability.</b> Is the unit carrying out periodic inspection, preventive maintenance and repairs on time and replacing items that are unserviceable?		
f	<b>Conduct and Discipline.</b> Does the unit continue to maintain high standards of conduct and discipline in all ranks?		
g	<b>Outreach and Engagement.</b> Has the unit been able to (where relevant) establish good rapport and effective interface with the local population through CIMIC, Quick Impact Projects and welfare activities?		

## **References**

### **General References**

United Nations Peacekeeping Operations, Principles and Guidelines (UN Capstone Doctrine) (2008)

[http://pbpu.unlb.org/pbps/Library/Capstone\\_Doctrine\\_ENG.pdf](http://pbpu.unlb.org/pbps/Library/Capstone_Doctrine_ENG.pdf)

United Nations Infantry Battalion Manual (August 2012)

<http://www.un.org/en/peacekeeping/documents/UNIBAM.Vol.I.pdf>

<http://www.un.org/en/peacekeeping/documents/UNIBAM.Vol.II.pdf>

United Nations Security Management System, Security Policy Manual (8 April 2011)

[http://ppdb.un.org/Policy%20%20Guidance%20Database/Security\\_management\\_system\\_policies.pdf](http://ppdb.un.org/Policy%20%20Guidance%20Database/Security_management_system_policies.pdf)

UN Force Link

The Online Strategic Movements and Force Generation Knowledge Centre

<https://cc.unlb.org/default.aspx>

Generic Guidelines for Troop Contributing Countries Deploying Military Units to the United Nations Peacekeeping Missions

[https://cc.unlb.org/COE%20Documents/Generic%20Guidelines%20-%20Military%20\(TCC\)/Generic%20Guidelines%20for%20TCCs%20Deploying%20Military%20Units%20to%20the%20UN%20Peacekeeping%20Missions\(Mar%2008\).pdf](https://cc.unlb.org/COE%20Documents/Generic%20Guidelines%20-%20Military%20(TCC)/Generic%20Guidelines%20for%20TCCs%20Deploying%20Military%20Units%20to%20the%20UN%20Peacekeeping%20Missions(Mar%2008).pdf)

Manual on Policies and Procedures Concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors Participating in Peacekeeping Missions (COE Manual)

[http://www.un.org/en/peacekeeping/sites/coe/referencedocuments/COE\\_manual\\_2011.pdf?bcsi\\_scan\\_00259711a12fb51a=sOZRyx95Yi5OihONCU1qZkoP3AqaAAAAvo2FNA=&bcsi\\_scan\\_filename=COE\\_manual\\_2011.pdf](http://www.un.org/en/peacekeeping/sites/coe/referencedocuments/COE_manual_2011.pdf?bcsi_scan_00259711a12fb51a=sOZRyx95Yi5OihONCU1qZkoP3AqaAAAAvo2FNA=&bcsi_scan_filename=COE_manual_2011.pdf)

Mission Start-up Field Guide for Mission Managers of United Nations Peace Operations 2.0, United Nations Department of Peacekeeping Operations and Department of Field Support, September 2010

<http://ppdb.un.org/Policy%20Guidance%20Database/2010.1MissionStartUpFieldGuide1Aug2010.pdf>

Medical Support Manual for UN PKO

[http://physiciansforhaiti.org/wp-content/uploads/2013/04/DPKO-MSM.pdf?bcsi\\_scan\\_00259711a12fb51a=hmWzNdn8DV+iawiew2GfNRDw0H+aAAAvo+FNA=&bcsi\\_scan\\_filename=DPKO-MSM.pdf](http://physiciansforhaiti.org/wp-content/uploads/2013/04/DPKO-MSM.pdf?bcsi_scan_00259711a12fb51a=hmWzNdn8DV+iawiew2GfNRDw0H+aAAAvo+FNA=&bcsi_scan_filename=DPKO-MSM.pdf)

UN Integrated Assessment and Planning Handbook

<http://www.un.org/en/peacekeeping/publications/2014-IAP-HandBook.pdf>

UN PKO: Principles and Guidelines

[http://pbpu.unlb.org/pbps/library/capstone\\_doctrine\\_eng.pdf](http://pbpu.unlb.org/pbps/library/capstone_doctrine_eng.pdf)

UN PKO Planning Toolkit – 2012

[http://www.un.org/en/peacekeeping/publications/Planning%20Toolkit\\_Web%20Version.pdf](http://www.un.org/en/peacekeeping/publications/Planning%20Toolkit_Web%20Version.pdf)

## Training References

The following list of training references will be of great value to UN military unit commanders and their staff. These documents provide better understanding of the peacekeeping training system, its participants' roles and responsibilities, and available resources. These and other important peacekeeping documents are available at:

<http://ppdb.un.org/SearchCenter/Results.aspx?s=PPDB%20Scope&k=2.%09SOP%20on%20Implementation%20of%20Amendments%20on%20Conduct%20and%20Discipline%20in%20the%20Model%20Memorandum%20of%20Understanding%20Between%20UN%20and%20TCCs>.

Policy on Training for all UN Peacekeeping Personnel (2010)

Policy on Support to Military and Police Pre-Deployment Training for UN Peacekeeping Operations (2009)

Guidelines on Roles and Training Standards for UN Military Staff Officers (2009)

SOP on Mobile Training Support Team (2009)

SOP on Training Recognition (2009)

SOP on Training-of-Trainers Courses (2009)

Pre-Deployment Information Packages (PIP)

UN Training Support to Member States

[http://www.peacekeepingbestpractices.unlb.org/PBPS/Pages/Public/PeaceKeepingTraining.aspx?page=support&menukey=\\_12\\_4](http://www.peacekeepingbestpractices.unlb.org/PBPS/Pages/Public/PeaceKeepingTraining.aspx?page=support&menukey=_12_4)

## Evaluation References

In addition to this manual, the following UN peacekeeping documents provide guidelines and standards by which UN military units can evaluate their operational readiness. The following documents are available on-line at:

<http://ppdb.un.org/SearchCenter/Results.aspx?s=PPDB%20Scope&k=2.%09SOP%20on%20Implementation%20of%20Amendments%20on%20Conduct%20and%20Discipline%20in%20the%20Model%20Memorandum%20of%20Understanding%20Between%20UN%20and%20TCCs>

or, through the Office of the Military Advisor, DPKO at UN Headquarters:

- TCC-specific UN peacekeeping operations manuals, guidelines and standard operating procedures.
- Mission mandate, memoranda of understanding, status of forces agreement and Rules of Engagement and TCC Guidelines.
- Statement of Unit Requirement issued by the UN Office of Military Affairs, DPKO.
- Mission Concept of Operations, operational directives and orders, Operational Plans, Standard Operating Procedures and Mission-specific case studies.
- Generic Guidelines for Troop-Contributing Countries Deploying Military Units (2012), the COE Manual 2011 and Guidelines on Peacekeeping Training (2011).
- Lessons learned and best practices of current and past peacekeeping Missions.
- Information obtained during the military unit's command group reconnaissance visit and feedback from the unit being relieved.
- After action reports and end of assignment reports of units and previous commanders.