Developing Effective Field Standard Operating Procedures (SOPs) for Staff Safety and Security in High risk Humanitarian Operations: A Contextual and Operational Framework

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Abstract:

Humanitarian operations in high risk environments, often characterized by armed conflict, post conflict political, economic and security instability and natural disasters, pose significant risks to the safety and security of humanitarian field staff. The imperative for humanitarian organizations to adopt robust security risk management strategies that prioritize staff safety and ensure operations continuity is central to humanitarian security risk management in high risk operations. A cornerstone of this process is the development of robust and effective field level Standard Operating Procedures (SOPs) that are adapted to the complexities of specific insecure operational environments where volatile conditions demand rapid, coordinated, and context-specific responses. This research aims to develop a contextual and operational framework for creating effective field level standard operating procedures that enhance staff safety in high risk humanitarian operations. Drawing on existing literature, organizational reports, case studies, and perspectives from humanitarian field staff, this research addresses the pivotal challenge in humanitarian security management, the formulation of robust, context specific SOPs designed for deployment in high risk operational environments. The research underscores the importance of context specific, adaptable, and regularly updated SOPs, that integrate local risk analysis and staff training. The outcome will be a set of adaptable SOP guidelines tailored to high risk humanitarian contexts, aiming to strengthen staff safety, organizational resilience, improve staff preparedness, and reduce operational vulnerabilities.

Key words: Contextual and Operational framework, Humanitarian security risk management and Standard operating procedures.

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1.   Introduction

Security risk management in humanitarian operations has significantly evolved since the turn of the millennium. This was on the background of increasingly volatile and insecure operating environments particularly high risk [1]. Humanitarian operations in high risk environments which are often characterized by armed conflict, political instability, and natural disasters present significant threats and risks to the safety and security of humanitarian field staff, resulting in injury, or even loss of life [1]. These volatile contexts demand rapid, coordinated, and context specific emergency responses, often under extreme pressure and resource constraints. The imperative for humanitarian organizations to adopt robust security risk management strategies is central to ensuring staff

safety and operational continuity in high risk environments. Central to this is the development of effective field level adapted standard operating procedures (SOPs) tailored to specific insecure operational environments to provide clear, consistent, and actionable instructions for responding and mitigating identified threats.

SOPs serve as the backbone of effective coordinated field level response, particularly in crises situations. However, significant challenges remain with implementation as in practice many SOPs remain generic, outdated, or misaligned with local field realities and therefore dysfunctional. Gaps persist in the operationalization of SOPs at the field level because many SOPs lack contextual specificity and fail to integrate local threats and risk dynamics. This research addresses the pivotal challenge in humanitarian security risk management, the development of robust and effective context specific SOPs designed for deployment in high risk operational environments. It emphasizes the need for actionable, field level SOPs that align with the realities of high risk environments where threats and risks are dynamic and diverse, access is constrained, and humanitarian staff face elevated exposure to safety and security risks.

This study aims to develop a contextual and operational framework for effective SOPs development and implementation that enhance staff safety and security in high risk humanitarian operations. By aligning SOP design with the realities of diverse high risk environments, the framework aims to improve staff safety, enhance staff preparedness, strengthen operational resilience, reduce operational vulnerabilities and support principled humanitarian action in complex crises situations.

2.   Contextual Background

The humanitarian operational landscape has progressively grown more volatile and multifaceted since the onset of the millennium particularly in high risk contexts. Statistics from the Aid Worker Security Database- *Major attacks on aid workers summary statistics 1997 to December 2024* and UN Secretary General *Annual reports on the Safety and Security of Humanitarian Workers*, among many other humanitarian reports, offer comprehensive analyses of major incidents affecting aid workers across diverse humanitarian operational contexts[2,3]. The statistics show that high risk humanitarian contexts have witnessed significant deterioration in security with humanitarian staff and humanitarian aid beneficiaries becoming direct or collateral targets[2,3]. High risk contexts are often defined by protracted armed conflict, systemic governance failures, terrorism and violent extremism, fundamentalism, pervasive criminality, civil unrest and compounded by climate-induced disasters[4,5].

The humanitarian operational environment is now shaped by an expanding array of security threats and risks emanating from a multiplicity of actors, state, non-state, ideological, criminal, and opportunistic, each driven by divergent motivations[1,5]. This complexity is particularly apparent in high risk environments where humanitarian crises increasingly unfold within conflict affected and fragile post conflict, or politically unstable states. In these environments, humanitarian personnel face a range of diverse direct and indirect security threats. These threats include targeted attacks, abductions, improvised explosive devices (IEDs), sexual and gender-based violence (SGBV), human trafficking, bureaucratic impediments, and restricted access to affected populations due to insecurity or political obstruction among many[1,5]. The high risk humanitarian operational terrain is further complicated by the presence of non-state armed groups (NSAGs), transnational criminal networks, and fluid frontlines that may disrupt humanitarian safe access, undermining humanitarian principles of humanity, impartiality, neutrality, and independence [1,5].

The conflict dynamics and instability drivers in high risk environments include international armed conflicts such as those in Ukraine, Syria, and Yemen and recently in Afghanistan where hostilities between sovereign states result in widespread displacement and disruption [1,4]. Internal armed conflicts, often involving armed groups or civil war scenarios as seen in Ethiopia, Myanmar, the Democratic Republic of Congo, Iraq, Colombia, Sudan, Somalia, Libya, Central Africa Republic (CRA) similarly generate severe humanitarian needs and insecurity [1,4]. Post conflict environments present their own challenges. Countries like South Sudan, Libya, Syria, Iraq, Afghanistan, and Ethiopia, though no longer in active combat, remain fragile and prone to renewed violence, institutional breakdown, and interference with humanitarian access [1,4]. Terrorism and religious fundamentalism, both domestic and transnational, further compound risks, targeting civilians and humanitarian

actors alike, as evidenced in contexts such as Sahel region (Burkina Faso, Mali, and Niger), Northern Nigeria, Somalia, and Northern Mozambique [1,4].

Localized armed groups who include tribal militias, vigilantes, and youth factions frequently disrupt humanitarian efforts when their interests are unmet, particularly in regions with weak governance and law enforcement [1,4]. The presence of armed combatants or ex-combatants in displaced persons camps adds another layer of complexity, often undermining civilian administration and creating parallel power structures that interfere with aid delivery, as seen in refugee and internally displaced persons camps in Kenya, Sudan, South Sudan, Syria, and the Central African Republic [1,4]. High crime rates, including kidnapping, gender-based violence, and organized criminal activity, pose persistent threats to both aid beneficiaries and humanitarian personnel. These risks are exacerbated by civil unrest protests, strikes, and demonstrations driven by unmet expectations among host communities and displaced populations, leading to intermittent service disruptions [1,4].

In these volatile and insecure contexts, humanitarian organizations must navigate complex risk landscapes while maintaining principled humanitarian action and operational integrity. These complex environments with multifaceted threats and risks underscore the urgent need for humanitarian organizations to develop field level contingency plans and SOPs that are context specific, adaptable, and operationally grounded. By systematically identifying threats, assessing vulnerabilities, and mapping mitigation measures, effective field level SOPs serve as tactical instruments that translate strategic security risk management frameworks into clear actionable procedures for frontline field teams [5,6]. SOPs are essential not only for safeguarding humanitarian personnel but also for ensuring the continuity and effectiveness of humanitarian assistance in the face of escalating threats[5]. Standard operating procedures in high risk humanitarian contexts are fundamentally anchored in security risk management, ensuring that operational decisions prioritize staff safety, beneficiary and community protection, and continuity of humanitarian assistance [5,7,8].

3. Conceptual Framework- Humanitarian security risk management (HSRM) and Standard Operating Procedures (SOPs)

Humanitarian security risk management (HSRM) and Standard Operating Procedures (SOPs) are central to safeguarding staff in insecure environments by providing a structured approach to identifying, mitigating, and responding to threats. Humanitarian security risk management refers to the systematic process by which humanitarian organizations identify, assess, and mitigate security threats in order to enable safe and effective operations in volatile environments. It involves a combination of strategies tailored to specific contexts, aiming to reduce risks to acceptable levels so that humanitarian workers can "stay and deliver"[4]. Humanitarian security risk management provides the strategic framework for identifying and mitigating threats to personnel and operations. It determines how inherent risks in the humanitarian operating environment should be addressed *to* allow humanitarian organizations to fulfill their mandates and achieving their stated objectives while at the same time ensuring the protection of their staff from harm[7,8]. It focuses on identifying and mitigating threats in operational environments to safeguard humanitarian personnel, ensure unhindered access and delivery of humanitarian aid, and the protection of beneficiaries before and after assistance [7,8]. HSRM also encompasses the development of security policies, procedures, and practices that uphold the safety and continuity of humanitarian operations [4,5]. One of the key outcomes is the development of effective field level standard operating procedures that provide clear, actionable guidance for staff, particularly in high risk humanitarian contexts.

Standard operating procedures are formal, written instructions designed to ensure consistency, quality, and accountability in the execution of specific tasks or processes [9,10]. In humanitarian operations, SOPs serve as essential tools for guiding staff behaviour, clarifying roles and responsibilities, and supporting decision making under pressure, particularly in high risk or rapidly evolving environments [9,10]. SOPs are shaped by threat assessments and risk matrices, ensuring consistent implementation of minimum security standards across

diverse field environment. As such they serve as operational anchors during crises, enabling rapid, coordinated responses and reinforcing organizational and staff compliance[9,10].

SOPs provide clear, actionable steps for staff to follow during security incidents, ensuring consistency and reducing confusion under pressure. SOPs guide critical actions such as evacuations, hibernation, and medical emergencies, while aligning with broader humanitarian inter-agency procedures. SOPs also embed accountability through defined roles and reporting lines, and they evolve through lessons learned and incident reviews. Together with contingency plans, SOPs form the backbone of a security risk management framework, enabling organizations to operate safely in volatile environments. Without these tools, security risk management becomes reactive rather than proactive [9,10].

Effective SOPs are context specific, regularly reviewed, and integrated into staff training and simulation exercises to enhance preparedness and operational reliability [9,10]. Critical SOPS in high risk humanitarian environments are diverse and area or context specific. Examples of the critical security SOPs in high risk environments include Relocation and Evacuation; Staff Security Briefing; Staff Tracking; Vehicle Movements; Curfews; Checkpoints; Hostage Incident Management; Incident Reporting; Guidance for Handling Group Protests; Radio Communication, Emergency Communication and Access Control, among many others.

4.   Linking Humanitarian Security Risk Management and SOPs development in High risk Humanitarian Contexts

Humanitarian security risk management (HSRM) and the development of effective standard operating procedures form a symbiotic relationship in high risk environments where operational clarity and staff safety are paramount [5,11, 12]. HSRM provides the strategic framework for identifying, assessing, and mitigating threats to personnel, assets, and operations. That is, HSRM identifies context specific threats and risk thresholds while SOPs in turn, translate these strategic insights into actionable, context specific procedures that guide daily decision making and behaviour, crisis response and contingency planning, bringing clarity and reducing ambiguity during crises. [5,11, 12].

In high risk humanitarian settings such as areas with active armed conflict or fragile post conflict regions and regions prone to natural disasters, SOPs serve as the operational backbone of risk mitigation. They codify best practices for a variety of security processes such as relocation and evacuation, movement tracking, communication protocols, incident reporting, and emergency response, ensuring that all staff operate with a shared understanding of procedures[5,11, 12]. When SOPs are informed by robust HSRM analysis, they reflect real-world threats and field realities, rather than generic templates. This alignment enhances compliance, reduces ambiguity, and empowers humanitarian field teams to respond decisively during crises[5,11, 12].

HSRM identifies context specific threats, vulnerabilities, and risk thresholds and SOPs translates risk assessments into clear, actionable steps for staff reducing ambiguity during crises enhancing operational clarity and predictability [5,11, 12]. For example, in armed conflict areas or other highly insecure contexts, SOPs for movement tracking, checkpoints, kidnapping or curfew compliance come directly from HSRM processes such as security risk assessments. HSRM defines acceptable risk levels and mitigation strategies and SOPS Institutionalizes the protective and mitigation measures such as radio check protocols, safe haven procedures, checkpoints, civil unrest, relocation and evacuation and medical evacuation (MEDVAC) triggers). SOPs for checkpoints or civil unrest response are for example, crafted from HSRM threat and vulnerability assessments of specific operational contexts and field level scenario planning.

In crisis response, contingency planning and activation, HSRM maps out contingency scenarios and response capacities while SOPS provides step-by-step guidance for activating the contingency plans, ensuring rapid and coordinated action [13]. For example, SOPs for relocation, hibernation, or evacuation are directly derived from HSRM contingency frameworks. In Inter-Agency coordination, HSRM aligns risk thresholds and security risk management measures across humanitarian agencies while SOPs harmonizes procedures for joint operations, ensuring interoperability and mutual accountability [13]. Together, HSRM and SOPs ensure operational consistency, accountability, and rapid decision-making under pressure, while also supporting compliance with

inter-agency standards and evolving best practices. For example, shared SOPs for convoy movement, compounds sharing or compound lockdowns enhance coordination in multi-agency scenarios. In respect of training, compliance, and accountability, HSRM highlights critical risk areas requiring staff awareness and behavior change while SOPs serve as a training tool and compliance benchmark, reinforcing security culture [5, 9,13]. For example, SOPs for incident reporting, checkpoints or hostile environment briefings ensure staff are equipped to deal with these scenarios and accountable.

Significantly, SOPs grounded in HSRM principles foster organizational resilience. They enable continuity of operations by embedding contingency planning, evacuation triggers, and coordination mechanisms into routine workflows[5,9,11]. This is especially critical in humanitarian contexts where rapid shifts in security dynamics can jeopardize movements, access, logistics, and staff wellbeing. By integrating HSRM into SOP development, humanitarian organizations ensure that their security procedures and processes are not only technically sound but also adaptive, inclusive, and responsive to evolving risks [5,9,11]. HSRM offers the strategic framework, grounded in threat analysis, risk tolerance, and duty of care while SOPs translate this into clear, context-specific actions that guide daily operations, crisis response, and contingency planning [5,9,11]. Importantly, SOPs must remain dynamic, adapting to shifting threat landscapes, lessons learned, and the growing complexity of humanitarian access and staff wellbeing [5, 10].

5.   Security Policies and Frameworks Governing SOP Development in Humanitarian Organizations

Humanitarian organizations have policies and frameworks for SOPs development to ensure staff safety and continuity of operations. These SOPs are rooted in humanitarian security risk management, security measures, organizational mandates and risk appetite ensuring that humanitarian personnel can operate in volatile environments while minimizing threats [5,9,11]. For example, the UN Security Management System (UNSMS) has developed specific policies, frameworks and guidelines for the development of standard operating procedures in all operational contexts more so in high risk humanitarian contexts[14,15]. The policies aim to ensure staff safety, inter-agency coherence, and effective crisis response in complex environments. In the UN Security Management System (UNSMS), standard operating procedures are operational tools used to implement security risk management decisions to ensure consistent, context appropriate staff behaviour particularly in high risk environments. They translate security risk assessments into clear, actionable procedures that guide daily operations, incident response, and staff duty of care obligations[14, 15].

The United Nations Security Policy manual provides the overarching policy for security risk management across UN entities. The policy establishes institutional responsibilities, decision-making authority, rules, standards and coordination mechanisms[14]. Aligned with the UN Security Policy is the UN Security Risk Management (SRM) process, the framework for managing security risks [15]. The SRM process operationalizes UN security policies by guiding how to analyze risks and select appropriate preventive and mitigation strategies [15]. The SRM process, is a structured approach used to assess and manage security risks to UN personnel, assets, and operations. It serves as the foundational tool for UN agencies to design context-specific SOPs that align with their operational mandates, whether peacekeeping, humanitarian, development, or advocacy [15].

The UN SRM process requires that SOPs must reflect threat assessments, risk analysis, and mitigation measures[15]. SOPs must also ensure compliance with baseline minimum operating security standards for a security risk management area and minimum requirements for facilities and residences[15]. The development of area specific security standard operating procedures is key to this. In crisis response, security SOPs must include evacuation, relocation, and alternative work modalities e.g., hibernation protocols, tailored to area specific risks. Significantly, the SRM framework supports inter-agency coherence, ensuring that SOPs across agencies are interoperable during joint operations or clustered responses[15]. This promotes standardization of security measures while allowing for localized adaptation through field-level consultations, simulations, and inter-agency coordination.

UN agencies individually and collectively develop SOPs tailored for staff safety and security in high risk environments, and this is often aligned with the UN SRM framework and other security guidelines. The Inter-Agency Security Management Network (IASMN) plays a central role in harmonizing security practices across UN entities[16]. It was established to coordinate and standardize security risk management across UN agencies operating in diverse and high risk environments. Its work ensures coherence with the UN Security Management System [16]. IASMN has also led aligning UN agency-specific policies with UNSMS principles to reduce fragmentation and improve interoperability, promoting field level adaptability while maintaining core compliance standards[16]. IASMN has led efforts on developing and endorsing standardized SOPs for key operational areas such as:

- Relocation, hibernation, and evacuation procedures
- Security risk assessments (SRAs)
- Saving Lives Together framework
- Critical incident management
- Residential security measures
- Travel and movement
- Guidelines on Risk Avoidance
- Shared Cost Budget

The United Nations Designated Official(DO) and Security Management Team(SMT) Handbook provides foundational guidance for managing security risks at the country level, mandating the development of context specific SOPs and contingency plans for relocation, hibernation, evacuation and others[17]. The SOPs as operational tools are tailored to local threat environments, staff profiles, and mission critical functions. By detailing coordination mechanisms, threat analysis methodologies, and decision-making structures, the Handbook ensures that UN SOPs are both compliant with the UN Security Management System security policies and security risk management frameworks[17]. Significantly, the SOPs are adaptable to dynamic field realities enabling DOs and SMTs to translate strategic frameworks into actionable, field-ready security protocols suited for specific context areas.

UN agencies such as UNHCR, UNICEF, WFP, and UNDP among others use the UN SRM framework to develop SOPs that reflect their specific mandates, risk tolerance, field presence, and programmatic focus. The SOPs address staff safety and security, hazards (natural and weather) and operations. For example, UNHCR policy on security management addresses the management of security comprising steps to prevent and respond to deliberate and malicious human acts and defines roles and responsibilities for ensuring the security of UNHCR personnel, premises, assets and operations[18]. The policy emphasizes a risk management approach to operations in difficult environments and integration with UN Security Management System [18]. In addition to SOPs which focus on staff safety and security in high risk environments, UNHCR, also prioritize SOPs for protection and emergency response and safe access to displaced populations as per its mandate. UNHCR SOPs on staff safety and security include relocation or evacuation, staff security briefing, staff and vehicle tracking, incident reporting and guidance for handling group protests among many others[18]. SOPs for natural disasters or medical emergencies (e.g., pandemics) for both staff and persons under UNHCR mandates include community-based protection alerts, coordination with local authorities for safe relocation, early warning systems integration and contingency plans[18].

WFP's security policy is grounded in the UN Security Management System implemented through WFP's internal frameworks to ensure staff safety, operational continuity, and duty of care in high risk environments[19,20]. The policy emphasizes proactive risk management, staff safety, and operational continuity in high risk environments. It integrates enterprise risk principles with field-level protocols to protect personnel, assets, and beneficiaries[19,20]. Key elements of WFP's security policy include that WFP adheres to the UN Security Risk Management (SRM) framework, ensuring consistency with other UN agencies. Risks are assessed not only for staff safety but also for program delivery, beneficiary protection, and resource integrity. Country offices are mandated to develop context-specific SOPs such as staff movement, critical incident response(relocation,

hibernation, and evacuation protocols), access control and mandatory security briefings and compliance audits[19,20]. In addition to SOPs which focus on staff safety and security in high risk environments, WFP SOPs also focus on its mandates. For example, transportation, logistics and convoy SOPs in insecure regions[21].

UNICEF's security management policy is grounded in the UN Security Management System (UNSMS) and emphasizes context-specific risk management, duty of care, and operational continuity in humanitarian settings. It integrates security into programme delivery through the Core Commitments for Children (CCC) in Humanitarian Action policy. In UNICEF's security management framework, SOPs serve as the operational backbone for implementing the broader principles outlined in the UN Security Management System (UNSMS) and Programme Criticality framework. SOPs translate strategic risk assessments and duty-of-care commitments into clear, actionable protocols that guide staff behavior, movement, and response in high risk environments [22]. SOPs are developed at the country and field office level, tailored to specific threat contexts, and aligned with inter-agency coordination mechanisms such as Security Management Teams (SMTs), Security Cells and Saving Lives Together framework [22]. SOPs typically cover staff movement clearance, compound access control, critical incident response (e.g., relocation, hibernation, evacuation), and partner engagement protocols [22].

NGO humanitarian organizations and independent organizations such as International Committee of the Red Cross (ICRC) have specific security risk management frameworks that are tailored based on their mandate, risk tolerance, and operational footprint. The development of context specific SOPs is key. International NGOs like Save the Children, OXFAM, CARE, World Vision, Building Resources Across Communities (BRAC), Plan International, Mercy Corps, International Rescue Committee (IRC), among many others have security management policies and frameworks that emphasize staff safety and continuity of operations. These international NGOs are very active in high risk environments throughout the world. For example, CARE international Personal Safety and Security Handbook and CARE's Security and Safety Manual for Humanitarian Personnel provide guidelines for SOP development which includes knowing the environment, assessing threats, and adapting to complex contexts [23,24].

Independent humanitarian organizations such as, International Committee of Red Cross (ICRC) and Doctors Without Borders (MSF) also prioritize staff safety and strict observance of humanitarian principles of humanity, neutrality, impartiality and independence. For example, ICRC Security and Safety Manual for Humanitarian Personnel (SAFE) provides a structured framework for humanitarian organizations to design SOPs that prioritize staff safety in volatile environments [25]. It emphasizes risk assessment, situational awareness, and preparedness all of which are core inputs for SOP creation [25]. SOPs derived from the SAFE manual outline step-by-step procedures for staff in areas such as travel, communication, and incident response. For example, movement protocols (vehicle use, checkpoints, curfews) are standardized to reduce exposure to threats. The Manual encourages organizations to embed risk analysis into SOPs and the SOPs must prescribe actions tailored to specific contexts (conflict zones, disaster areas, epidemics)[25]. Significantly, SAFE highlights the importance of training personnel on security measures. SOPs operationalize this by mandating regular drills, briefings, and compliance checks[25].

SOPs in humanitarian high risk contexts are designed to protect staff and ensure continuity of operations. They must directly address both direct security threats (e.g., bombings, artillery fire, IEDs, ambushes, shootings, kidnapping/ abduction, gender-based violence, robbery, looting) and indirect threats (e.g., riots, protests, arbitrary detention, intimidation, restricted access, crossfire, collateral damage, floods or cyclones). These direct and indirect threats are well documented in humanitarian security management frameworks and reports such as the Good Practice Review 8: *Operational Security Management in Violent Environments*; Humanitarian Security Risk Management- Good Practice Review 8 3rd edition; Aid Worker Security reports, Aid Worker Security Database: *Major attacks on aid workers*: Summary statistics 1997 to December 2024 and UN Secretary General Annual Reports on the Safety and Security of humanitarian workers[2,3,5,12].The threats and risks must be navigated and SOPs play an important part providing clear steps that help field staff operate safely in fluid and unpredictable environments.

International and National Non-Governmental organizations(NGOs) also follow Global Interagency Security Forum (GISF) guidelines which provide practical tools for NGOs to develop SOPs that are context sensitive and field-adaptable[26, 27]. Resources include templates and toolkits for setting up safety, security, and risk management SOPs in humanitarian contexts[27,28]. The GISF Security to Go Toolkit offers modular SOP templates for rapid-onset emergencies and insecure environments[28, 29]. It particularly encourages participatory SOP design with field teams to enhance relevance and compliance. In addition, the Humanitarian library hosts several key documents that guide SOP development for humanitarian organizations. These resources provide frameworks, standards, and practical manuals to help humanitarian organizations design standard operating procedures that ensure staff safety and operational continuity. Key documents include standards, guidelines and Sphere standards. The Sphere standards are a collection of law, principles, standards, and humanitarian conduct codes used to support humanitarian capacity building [30].

In high risk humanitarian contexts, humanitarian organizations particularly UN agencies and international NGOs, consistently embed core elements into their SOPs frameworks to ensure staff safety and operational continuity. A foundational component is the clear delineation of roles and responsibilities at different levels. Clear delineation of roles and responsibilities is vital in SOP development for high risk humanitarian contexts because it gives clear guidelines, prevents confusion during emergencies, ensures accountability, and enables rapid, coordinated action [27, 28, 29]. When staff at different levels know exactly what is expected of them, decision-making becomes faster, risks are managed more effectively, and duplication or gaps in response are avoided. This clarity also strengthens staff safety and confidence, allowing humanitarian organizations to maintain operational continuity even in fluid and volatile situations.

Developing SOPs in high risk environments presents significant challenges due to rapidly shifting threat landscapes, limited access to reliable information, and the need for operational flexibility [27, 28, 29]. SOPs must balance standardization with adaptability, ensuring clarity without becoming rigid or obsolete in volatile contexts. Coordination across multiple agencies, linguistic and cultural barriers, and varying staff capacities further complicate implementation. Additionally, integrating duty of care, mental health considerations, and accountability mechanisms into SOPs requires nuanced, context specific approaches that reflect both strategic priorities and field realities [27, 28, 29].

6.   SOPS Development in High risk Humanitarian Contexts

SOP development is anchored in humanitarian principles of neutrality, impartiality, independence and humanity. SOPs are the foundation of how humanitarian organizations work, turning security risk assessments and contingency plans into clear steps that help field teams operate safely in unpredictable situations [5,6,11,13]. The development of effective SOPs must be guided by comprehensive security risk assessments which highlight potential risks from the threats in the environment. The threats could emanate from, for example, armed conflict, crime, terrorism, civil unrest, cyberattacks, natural disasters, or internal organization threats. Security risk assessments not only prioritize the identification and evaluation of risks but also define prevention and mitigation strategies, along with security measures, to effectively address threats and lower risks [5,6,11,13]. SOPs must define how to respond effectively and prioritize the most critical threats that could compromise staff safety and operations since not all risks carry the same level of impact. In times of crisis, SOPs serve as a vital tool by providing clear, step-by-step actions that ensure staff know exactly what to do, thereby strengthening organizational preparedness. SOPS also promote consistency in response, standardizing actions so that procedures remain uniform, and confusion is minimized during high-pressure situations. Furthermore, SOPs support compliance and accountability, as many humanitarian organizations require documented procedures tied directly to risk assessments for audits, certifications, and legal obligations [5,6,11,13].

Typically, the SOPs developed and deployed in diverse high risk humanitarian environments must explicitly address the range of direct and indirect safety and security threats common in high risk humanitarian contexts and tailored to specific areas. For example, in armed conflict or fragile post conflict situations operational continuity SOPS include relocation, evacuation, hibernation and the triggers. Staff safety and security SOPs include security briefing, daily radio check-ins, travel and movement tracking, curfew restrictions, warden

system, checkpoints and incident reporting [5,13,26]. Communication protocols would include emergency communication systems, chain of command and emergency contact protocol. The SOPs also focus on gender sensitive security measures for example, person and victim centered approach (PCA), gender based violence (GBV) case management, safe shelters, reporting and referral procedures and safe distributions [5,13,27].

Crime SOPs focus on preventive and mitigation measures to armed robberies, human trafficking, extortion, cybercrime and thefts while incident management (reporting and response) provides clear escalation pathways, reporting formats, and post-incident debriefing. Training and compliance cover mandatory training, security briefings, simulations, and refresher training. Significantly, Inter-agency coordination mechanisms and harmonization tools e.g., International NGO Safety Organization (INSO) coordination, Saving Lives Together (SLT) forums and coordination with peacekeeping operations [5,13,27].

SOPs in high risk humanitarian operations have progressively evolved from basic, reactive templates into flexible, scenario-based guides that can adapt to diverse, complex and unpredictable humanitarian environments[5,9,31,32]. Humanitarian organizations now rely on real-time threat monitoring, digital tools, and adaptive decision making processes, with significant field level engagements, to strengthen these procedures, ensuring they remain relevant in rapidly changing contexts[5,9,31,32]. In addition to traditional security concerns, modern SOPs also integrate dimensions such as mental health support, gender sensitivity, and community engagement, recognizing that humanitarian security is multidimensional and must address both physical and psychosocial needs[5,9,31,32]. Regular drills, systematic reviews, and continuous feedback from field teams further enhance their effectiveness, keeping SOPs practical, responsive, and aligned with the realities of volatile humanitarian settings[5,9,31,32].

SOPs in high risk humanitarian operations must reflect the ground realities faced by humanitarian staff, which requires more than just theoretical frameworks. Field teams need to be prepared to respond effectively in crises, and this preparation depends on close collaboration with communities, security teams, field managers, and operational strategists. Such collaboration ensures that SOPs are not only consistent with broader organizational strategies but also tailored to the specific challenges encountered in the field. By bridging strategic planning with frontline realities, SOPs become living documents that guide humanitarian actors through complex emergencies, balancing organizational priorities with the immediate needs of affected communities[5,9,31,32].

7. Key Security SOPs in High Risk Humanitarian Operations

The development of SOPS must always be guided by the security risk assessments which determines threats and risks in the environment requiring development of certain specific measures and actions particularly in crises situations. The security context, organizational mandates and culture, and risk appetite play significant roles in SOP development and implementation at individual humanitarian organization level. The following are some of the key security SOPs developed in high risk humanitarian contexts[5,6,9,10,12,27,28].

1.   Security Briefing SOP
- Onboarding and briefing to all staff, visitors and others
- Security induction for new staff
- Area-specific briefings and cultural orientation

2.   Security Risk Assessment SOP
- Procedures for conducting regular threat and risk assessments.
- Identification of risk mitigation measures
- Security situation deterioration triggers

3.   **Incident Reporting & Response SOP**
- Clear steps for reporting security incidents (e.g., attacks, theft, harassment).
- Procedures for incident investigation, documentation, and follow-up.

4.   **Evacuation & Relocation SOP**
- Criteria for triggering relocation and or evacuation
- Alternative work modalities including hibernation
- Roles, responsibilities, and logistics for safe relocation and or evacuation.

- Warden System

5. **Travel Security SOP**
- Pre-departure briefings to high risk areas
- Movement tracking, and staff check-in protocols
- Communication protocol
- Use of armed escorts

6. **Curfew & Movement Restrictions SOP**
- Guidelines for staff movement during curfews or lockdowns
- Coordination with local authorities and security forces in emergencies

6. **Contingency Planning SOP**
- Business continuity planning(BCP) for critical functions.
- Activation triggers for BCP
- BCP critical staff

7. **Communication SOP**
- Emergency communication
- Radio and satellite communications
- Warden communication tree
- Daily check-ins via SMS, WhatsApp, Signal or GSM (where applicable)
- Use of secure communication channels

8. **Warden SOP**
- Warden system
- Warden Communication tree

9. **Coordination SOP**
- Mechanisms for coordination with UN agencies, NGOs, and local authorities.
- Participation in joint security risk assessments.

10. **Staff Safety & Wellbeing SOP**
- Arrest and detention of staff
- Mental health support,
- Rest and recuperation cycles
- Stress management.
- Procedures for Medical and Casualty evacuation and health emergencies.

11. **Code of Conduct & Protection from Sexual Exploitation and Abuse (PSEA) SOP**
- Mandatory reporting and investigation procedures.
- Training and awareness for all staff and partners.

12. **Fleet Management SOP**
- Vehicle tracking, maintenance, and Fuel management
- Driver protocols in emergency situations.

13. **Compound Access Control**
- Staff and visitors access management
- Vehicle control and access
- Emergency lockdown procedures
- Security guards' standing orders

The activation of these SOPs is not an arbitrary decision but must be guided by predefined thresholds that are carefully set during the planning phase and continuously updated through context specific security risk assessments. The thresholds act as "triggers" that signal when normal operations are no longer safe or feasible, and when staff must shift to contingency procedures [33,34,35]. The triggers could be escalating security incidents due to rising levels of armed conflict, targeted attacks on humanitarian workers, or civil unrest

disrupting normal life. SOPs may provide suspension of field movements, relocation of staff, or activation of evacuation processes to safe locations. Other triggers could be restricted access due to roadblocks, curfews, or denial of humanitarian entry by authorities. SOPs will guide staff on alternative routes, remote programming, or coordination with local partners.

Deterioration in civil infrastructure such as collapse of health systems, power outages, or destruction of transport networks may also be a trigger. SOPs may activate emergency logistics measures, backup communication systems, or shelter-in-place or in safe rooms. SOPs are not stand alone documents but must be integrated into broader contingency and business continuity plans, ensuring that security procedures and processes align with programmatic priorities and organizational mandates[33,34,35]. SOPs are most effective when they are embedded within the larger framework of contingency and business continuity planning. Validation of SOPs is an iterative process involving field simulations, after action reviews, and structured staff feedback, which helps refine procedures and build institutional memory[33,34,35].

Good Practice Review summarizes key elements of an SOP to include the following [5, p. 204].

1. **Title/header:** Clearly stating the name of the procedure and including document number and version.

2. **Purpose** : A brief explanation of the intent and objectives of the SOP.

3. **Scope:** defining what the SOP covers and to whom it applies. This may include geographic area, operations, and contexts covered (e.g., urban, rural, conflict zones, disaster-prone areas)

4. **Responsibilities:** Outlining the roles and responsibilities of individuals involved in carrying out the procedure and escalation paths

5. **Definitions**: Clarifying key terms or references that may be unfamiliar and sector-specific acronyms

6. **Procedure:** Step-by-step instructions for staff performing the task or process (the principal substance of the SOP).This may include activation criteria and the triggers

7. **Quality control** : Specifying any quality checks or inspections required.

8. **Approval/authorship signature(s)**.

9. **Revision history:** A record of changes made to the SOP over time.

10. **Appendices:** Any supplementary materials, forms or checklists

8. Relevance of SOPs in High Risk Contexts

The relevance of SOPs in high risk contexts is documented in several humanitarian security policies and guidelines, contingency planning manuals, and academic studies on risk management. Resources from Global Interagency Security Forum, provides practical SOP templates for humanitarian agencies, emphasizing risk management and compliance. Humanitarian Outcomes resources link SOPs directly to security plans and contingency arrangements, showing their role in mitigating threats. Humanitarian Practice Network, Good Practice Review 8. 3rd edition provides very useful information on importance and relevance of contexts specific SOPs. The UN Security Management System policies and procedures and UN agencies safety and security policies and procedures, and emergency procedures recognize the importance of field level SOPs which are area specific. In this regard, the UN security risk management process requires that SOPs reflect threat assessments, risk analysis, and mitigation measures.

SOPs are crucial in high risk contexts because they provide consistency, reduce human error, and ensure compliance with regulations, strengthening resilience and business continuity. In crises situations such as armed conflict, civil unrest, terrorism attacks, cyberattacks, or natural disasters, SOPs ensure that staff follow standardized steps rather than improvising, which reduces mistakes. The benefit is efficiency where clear instructions reduce downtime and confusion during emergencies. SOPs embed preventive measures into daily operations, helping organizations identify and address vulnerabilities before they escalate. SOPs document compliance and provide evidence during audits. SOPs also serve as training tools, ensuring new staff can quickly adapt to high risk environments without compromising safety. By linking SOPs to contingency plans, organizations can maintain critical functions even when disruptions occur. The strategic benefits include

organizational resilience where humanitarian organizations bounce back faster when SOPs are embedded in continuity frameworks. SOPs also safeguard institutional knowledge, preventing loss of expertise when key personnel leave or are unavailable [5,7,9,11,13,14,15].

In high risk humanitarian environments, SOPs such as Security Briefings, Incident Reporting, Evacuation & Relocation, Travel Security, Curfew & Movement Restrictions, and Contingency Planning form the backbone of organizational resilience. Their successful implementation depends on several factors like the timeliness and accuracy of information, staff compliance, and the adaptability of procedures to rapidly changing contexts. For example, a well-conducted Security Briefing SOP ensures staff are aware of threats before deployment. The security risk assessments SOP provide the analytical foundation for decision-making by evaluating the level of threats and the required necessary mitigation measures. If an incident occurs, for example staff are directly targeted or are caught in crossfire, the Incident Reporting & Response SOP kicks in, documenting the event and triggering protective and safety measures. The Evacuation & Relocation SOP guides the safe withdrawal of staff to pre-identified safe locations. Movement is monitored and controlled under the Travel Security SOP and Curfew & Movement Restrictions SOP, preventing unnecessary exposure. Meanwhile, Contingency planning SOPs provide fallback options if primary relocation or evacuation routes are blocked, ensuring operational continuity despite crises [5,7,9,11,13,14,15].

Organizational resilience also depends on effective coordination and staff wellbeing. Critical are SOPs that safeguard staff wellbeing and organizational integrity, such as Staff Safety & Wellbeing, Codes of Conduct, Prevention of Sexual Exploitation and Abuse(PSEA), Emergency Communication, Warden Systems, Coordination Mechanisms, Fleet Management, and Compound Access Control. These SOPs rely heavily on trust, accountability, and coordination sometimes among multiple actors' such as humanitarian agencies, local authorities, and affected communities. For instance, Communication SOP and Warden Systems SOP ensure rapid dissemination of alerts, while Coordination SOPs prevent duplication and confusion in multi-agency responses. Meanwhile, Staff Safety & Wellbeing SOPs and PSEA SOPs uphold ethical standards and protect vulnerable populations, which are vital for maintaining credibility and morale. Logistics are stabilized through Fleet Management SOPs, which keep vehicles ready for rapid deployment, and Compound Access Control SOPs, secure facilities against infiltration[5,7,9,11,13,14,15].

Together, these SOPs form a web of protection and accountability each reinforcing the other so that humanitarian operations can continue safely and ethically in the midst of crisis. However, SOPs only work effectively if staff are trained, leadership enforces compliance, and communication channels remain open and reliable. In volatile high risk settings, even the best-designed SOPs can fail if local dynamics, cultural sensitivities, or logistical constraints are ignored. The success of these SOPs in real crises hinges not only on technical design but also on leadership commitment, staff discipline, and the ability to adapt SOPs to unpredictable realities on the ground[5,7,9,11,13,14,15].

9. Key Components of Effective SOP development- A Contextual and Operational Framework in High risk humanitarian contexts

Developing effective Standard Operating Procedures (SOPs) in high risk humanitarian contexts requires a framework that is both contextually grounded and operationally precise and practical for the operating environment. There are several critical components to be considered for this to be achieved. The first critical component is contextual security risk assessment, which anchors SOPs in the realities of the threat environment. SOPs must be grounded in current security risk assessments and tailored to specific threats. SOPs must reflect local dynamics such as armed conflict, terrorism, crime, civil unrest, or natural hazards and be informed by inter-agency coordination mechanisms. This foundation ensures that SOPs are not too generic to be useful or too rigid to adapt to fluid conditions[36,37,38,39,40,41,42]. For the UN, this involves applying the UN Security Risk Management (SRM) framework and programme criticality assessments to determine acceptable risk thresholds and operational imperatives and developing SOPs suiting the environment[14,15]

Second, SOPs must reflect local realities terrain and logistics, cultural norms, access routes, community dynamics, local armed actors posture and not generic global standards. SOPs cover a wide range of activities, from daily routines to emergency response procedures, and must be tailored to address the specific risks and challenges present in the operating environment. In high risk environment SOPs must be developed around plausible operational scenarios, for example, ambush during convoy, unplanned relocation and or evacuation, emergency communications, armed attack, cyclone impact to ensure relevance. The SOPs would ordinarily cover movement tracking, communication and emergency communication protocols, incident reporting, evacuation and relocations triggers, and contingency planning. Role and responsibilities must also be clearly defined across field teams, security staff/focal points, and headquarters on who activates, who coordinates, who communicates. Step-by-step actions reduce hesitation and ensure uniformity under pressure and decisions are not delayed during emergencies [36,38,37,39,40,41,42].

The third key component is the modular and adaptive design, which ensures SOPs can be scaled and tailored to diverse operational footprints. A modular and adaptive design means that SOPs are developed as flexible units or components that can be adjusted depending on the situation. By being modular, SOPs avoid a "one size fit all" approach, and by being adaptive, they remain relevant even as the situation evolves, ensuring that security and humanitarian operations can function effectively across diverse operational areas. For example, relocation and or evacuation SOPs have to be applied differently between urban and rural settings, meaning their development should be context specific. Humanitarian agencies often operate across compounds, mobile teams, and remote sites, each requiring distinct procedures. Modular templates such as those found in GISF's *Security to Go* toolkit allow for rapid NGO customization while maintaining core compliance standards. The SOPs must include trigger based procedures enabling swift decision making during critical incidents. Equally important is operational clarity, with clearly defined roles, responsibilities, and escalation chains. Significantly , field-test SOPs through drills, simulations, and feedback loops and adjust based on lessons learned and evolving threats [36,37,38,39,40,41,42].

A fourth essential component is staff safety and wellbeing and duty of care obligations. Staff wellbeing and duty of care SOPs are designed to protect humanitarian personnel from foreseeable risks, uphold ethical standards, and ensure resilience in volatile environments. They integrate safety, psychosocial support, gender sensitive measures, and accountability mechanisms into daily operations. SOPs must integrate gender-sensitive measures by ensuring safety, equity, and psychosocial support for all staff. For example, SOPs must address risks specific to female staff, for example, safe accommodation, ensuring that housing arrangements are secure and gender-sensitive, with separate facilities if needed and strict access control procedures to avoid intrusion and potential harm.

Other SOPs specific to female staff in high risk environments are safe travel, person and survivor centred reporting pathways for sexual exploitation and abuse (PSEA), and gender-sensitive security briefings. Duty of care SOPs may include flexible work arrangements, maternity/paternity leave, and childcare support to reduce stress and promote wellbeing. Significantly, mental health and staff wellbeing should be embedded through psycho-social support, peer support procedures, referral mechanisms, and stress management guidance. These elements should not be taken as ancillary but are central to maintaining operational resilience and staff motivation in high risk environments. Significantly, SOPs require regular training on code of conducts, gender sensitivity, prevention of sexual exploitation and abuse and cultural awareness to foster inclusive and respectful work environments[36,37,38,39,40,41,42].

Fifth is accountability and compliance. To ensure accountability and compliance, SOPs must be embedded into the organizational culture through structured training and induction processes including onboarding, refresher modules, and regular briefings that utilize visual aids and scenario-based walkthroughs. SOPs capture institutional expertise, vital when turnover or crisis disrupts staffing. SOPs form the backbone of drills, ensuring staff are prepared for real scenarios. SOPs also document adherence to regulations, protecting organizations from liability. Monitoring mechanisms such as incident data analysis, radio check audits, and movement tracking systems provide real-time oversight and reinforce adherence. A robust review cycle, ideally conducted quarterly

or triggered by contextual shifts, ensures SOPs remain responsive to evolving threats and operational realities. These mechanisms promote staff safety and foster a culture of proactive organization security risk management[36,37,38,39,40,41,42].

Sixth, strategic alignment with contingency plans is equally critical. SOPs should be directly linked to contingency and continuity plans, translating strategic frameworks into actionable field level procedures. SOPs link directly to contingency measures, such as Business Continuity Plans ensuring critical functions continue. Contingency plans and SOPs are interdependent components of crisis preparedness and management. They serve complementary roles within security risk management, operational readiness and continuity frameworks. Therefore, effective crisis preparedness and management necessitates the parallel development of contingency plans and standard operating procedures (SOPs), tailored to the specific operational context. This ensures that responses are both structured and adaptable to the unique challenges of each operational environment. This coherence ensures that emergency responses are not ad hoc but grounded in pre-established planning logic [13,36,37,38,39,40,41,42].

Finally, Inter-agency harmonization particularly through alignment with cluster coordination mechanisms and UN and NGOs security procedures help avoid fragmentation and promotes collective security standards across operational areas. Harmonization ensures SOPs are interoperable across organizations. This includes aligning with frameworks like *Saving Lives Together (SLT)* and INSO coordination platforms and supporting local partners in developing their own SOPs through participatory design. Localization enhances relevance, ownership, and compliance, making SOPs not just documents but living tools for safety and continuity. Importantly, SOPs must be positioned as tools for resilience, not as reactive instruments. By embedding SOPs into long term operational strategies, organizations enhance continuity, safeguard critical functions, and maintain principled humanitarian action even amid volatility [36,37,38,39,40,41,42,43].

10. The challenge

Humanitarian organizations operating in high risk environments such as armed conflict zones, post-conflict fragile states facing political, economic, and social instability, and disaster-prone regions encounter significant challenges in designing and executing effective SOPs. The gap between well developed SOPs and the realities encountered during crises situations in high risk humanitarian settings is often driven by a combination of many factors such as contextual misalignment, volatile environments, resource limitations, communication barriers, organizational and human factors. Despite the existence of well-designed SOPs, humanitarian organizations often encounter challenges in their practical application. The following gaps are frequently observed in SOP development in high risk humanitarian contexts.

• **Contextual Misalignment:** Contextual factors are particularly critical in high risk environments, where the security situation most of the time is volatile, fluid and unpredictable. SOPs are often designed at macro/headquarters(H/Q) level or in stable environments, which may not reflect the fluid realities of for example, armed conflict areas, post conflict fragile states, evolving terrorism threats, criminality and civil unrest in field locations. The SOPs designed at macro levels may not account for specific local and unique challenges, such as diverse armed actors, terrain, infrastructure, cultural factors/dynamics or other local contextual factors. The over reliance on HQ developed templates with little or without field customization, has been observed as a significant cause of failure in some humanitarian organizations. For example, a relocation or evacuation SOP may assume functioning infrastructure, but in practice, roads may be blocked by state and non- state armed groups or destroyed by floods. Even comprehensive SOPs may overlook specific scenarios, operational nuances, or local contextual factors, leading to gaps during actual crises. This mismatch between written procedures and ground realities leads to gaps in execution [5,6,30,44,45].

• **Rapidly Changing Risk Environment:** High risk humanitarian settings are volatile with active armed conflict, diverse armed actors, terrorism, social and political instability, sudden outbreaks of violence, or natural disasters that can alter field conditions overnight making static SOPs obsolete. Security threats can escalate suddenly (e.g., armed conflict, terrorism, improvised explosive devices (IED) attacks, kidnapping, roadblocks, civil unrest e.g., looting, demonstrations). As crises in high risk environments can unfold unpredictably, this

requires flexibility and real time decision making that pre-established SOPs may not accommodate. If SOPs are too rigid, they may fail to accommodate these shifts. Staff may be forced to improvise undermining consistency and safety. The challenge lies in balancing standardization with flexibility to adapt quickly to evolving threats. Crises situations often unfold unpredictably, requiring flexibility and real-time field level decision-making. Information gaps or misinformation can lead to poor decisions. In these contexts, adaptive planning and real-time decision-making are more valuable than rigid adherence to static SOPs [5,6,30,44,45]. The Afghanistan crises -August 2021, Ukraine - February 2022, Sudan- April 2023, South Sudan- 2013 and 2016, Gaza -October 2023 and Syria, 2011 and Dec- 2024, are examples of security situations which changed rapidly, and some SOPs could not accommodate this [13].

- **Limited Resources and Capacity:** Humanitarian funding has been declining over the past years due to a variety of reasons including reduced donor funding and many humanitarian crises to be funded[36,46,47]. Particularly affected are humanitarian operations in conflict and post conflict fragile states that regularly face shortages of funding, personnel, equipment, and logistical support. This is compounded by the fact that some crises have become protracted. For example, Syria, Yemen, Somalia, South Sudan, Sudan, Myanmar, northern Mozambique, Northern Nigeria, and eastern DRC have been in crises for several years now[13, 36,46,47]. Many SOPs and contingency plans may assume availability of resources such as vehicles, fuel, communication equipment or secure locations to relocate personnel. Yet these well written SOPs cannot be executed if vehicles, communication tools, or trained staff are unavailable. Resource constraints make it difficult to maintain preparedness, stockpiling, training simulations and ensuring compliance with procedures during crises situations[5,13,36,46,47].

- **Communication Barriers:** Communication challenges often undermine the effectiveness of SOPs, particularly in high risk humanitarian contexts. SOPs may be overly complex, poorly translated, or inaccessible to frontline staff, making them difficult to understand or apply. In multilingual or low-literacy environments, staff may struggle to interpret procedures correctly, which increases the risk of errors. Weak communication infrastructure such as unreliable internet, mobile networks, or radio systems further complicates the timely dissemination of updates and instructions in crises situations[5, 36, 48,49].

Inadequate communication during implementation can also hinder coordination among staff, leading to fragmented responses and reduced effectiveness in crisis situations. Communication breakdowns are especially problematic in remote and insecure areas, where they can delay decision making and obstruct the activation of contingency plans. For example, internet or mobile network outages may disrupt emergency communication systems, preventing SOPs from being triggered when needed most. Further, information sharing between humanitarian organizations and other interlocutors at the various levels, national, regional, and local levels is often ad hoc, leaving gaps in situational awareness. These barriers highlight the critical need for clear, accessible, and reliable communication channels to ensure SOPs function as intended in volatile environments [5, 36, 48,49]**.**

- **Poor Coordination and Communication Channels:** SOPs do not address weak coordinating mechanisms of security approaches between the diverse stakeholders (UN, NGOs, state authorities, peacekeeping forces, international forces) at different levels, national, regional, or local. Multiple humanitarian organizations such as UN, local and international NGOs with fragmented mandates, in most cases have overlapping or conflicting SOP procedures and or priorities making harmonization and coordination of SOPs very difficult in crises situations[5,41,44,48]. UN agencies, NGOs, state authorities, and international forces, such as peacekeeping forces, operate under different legal and political frameworks, sometimes leading to conflicting priorities. Multiple SOPs may exist for similar tasks (e.g., relocation, evacuation, protection, logistics), creating duplication or contradictions. Lack of interoperability between different humanitarian organizations may lead to use of incompatible systems for reporting, monitoring, and response, making coordination harmonization difficult [5,41,44,48].

- **Human Factors, Accountability and Enforcement:** Stress, fatigue, and fear in high risk environments affect decision making and adherence to SOPs. Staff may prioritize immediate survival or local practices over

organizational procedures. Furthermore, without clear accountability structures, adherence to SOPs may be inconsistent. Enforcement mechanisms are essential to ensure compliance across all levels of the organization. If organizational culture does not emphasize accountability and continuous learning, SOPs risk becoming "paper exercises" rather than living tools. Enforcement mechanisms are essential to ensure compliance across all levels of the organization[5,30,41,44].

- **Lack of Realistic Testing and Drills:** SOPs remain theoretical unless validated through regular drills. Without realistic, regular drills and testing, weaknesses go undetected, leaving staff unprepared for actual crises. While SOPs may appear comprehensive on paper, they often are not tested under realistic, high-pressure scenarios. As a result, staff may lack sufficient training or awareness of the SOPs and may not be familiar with their roles, responsibilities or procedures during an actual crisis leading to confusion and delays in response [5,30,41,44]**.**

- **Failure to Update and Review:** SOPs may appear comprehensive on paper but fail to translate into actionable practices. Without reinforcement through training and practice, procedures risk becoming static checklists rather than dynamic response tools. SOPs that are not regularly reviewed and updated may become outdated, failing to address evolving threats, new technologies, or organizational changes [5,30,41,44].

11.   Best Practices in SOP Development

SOPs are essential tools for ensuring consistency, safety, and accountability in humanitarian operations, especially in high risk environments. Well designed and properly implemented, SOPs help organizations respond effectively to emergencies, protect staff, and maintain operational continuity. The following best practices have emerged from field experience, organizational learning, case studies and humanitarian reports.

- **Contextualization and Local Relevance:** SOPs must be tailored to the realities of the environment where they will be used. This includes accounting for local security dynamics, cultural norms, infrastructure limitations, and legal frameworks. Engaging local field staff and partners in the development process ensures that SOPs are both practical and culturally appropriate. For example, in armed conflict areas, security procedures should reflect local threats such as IED attacks, checkpoints or militia activity, while in a flood-prone area, evacuation SOPs should consider limited road access. Engaging local staff ensures cultural sensitivity like respecting community norms during curfew enforcement and makes SOPs more realistic[5, 6,9,30,36].

- **Clarity, Simplicity, and Accessibility:** SOPs should be written in plain language that anyone can understand, even under stressful conditions. They should use straightforward language, avoiding jargon, and include visual aids such as flowcharts or checklists when appropriate. Accessibility is also key, SOPs should be available in both printed handbooks and digital formats and translated into relevant local languages. For example, a curfew SOP in South Sudan should be available in English and Arabic so all staff can follow it. A staff briefing SOP in Mozambique Cabo Delgado province will be in both Portuguese and English (UN working language). Effective SOPs are clear, concise, and easy to follow, especially under stressful conditions [5,27,28,29,30]

- **Integration with Training and Simulations:** SOPs are only useful if staff know how to apply them, are familiar with their content and confident in their application. Training sessions, tabletop exercises, and simulations allow staff to practice responses before a real crisis. For instance, a fire evacuation SOP should be tested through drills where staff physically exit the compound. Embedding SOPs into onboarding ensures new staff immediately understand expectations, while refresher training keeps procedures fresh in memory and institutional preparedness[5, 6,9,30,36].

- **Flexibility and Adaptability:** Given the fluid nature of high risk humanitarian operations, SOPs must be adaptable to changing conditions. They should include guidance for decision making in uncertain or rapidly evolving situations and allow for field-level discretion when necessary. Flexibility should never compromise safety staff or ethical standards. For example, a relocation and or evacuation SOP might specify primary and secondary routes but also empower field managers to choose alternatives if roads are blocked[5, 6,9,30,36].

Regular Review and Updating: SOPs should evolve with changing realities. After action reviews following incidents can highlight gaps and should inform updates to ensure that SOPs remain relevant and effective. For

example, if a communication SOP fails during a security relocation or evacuation because radios ran out of batteries, the SOP should be updated to include backup power sources. SOPs should be treated as living documents, subject to regular review and revision. A formal review cycle for example, every 6 months helps to institutionalize this process [5, 6,9,30,36].

- **Alignment with Organizational and Sector Standards**: SOPs should not exist in isolation. Aligning them with organizational policies, sector/cluster wide guidelines and international humanitarian standards like Sphere Standards or Inter Agency Standing Committee (IASC) guidelines ensures consistency and credibility. This ensures coherence across operations and facilitates coordination with other actors in joint responses. For example, a Prevention of Sexual Exploitation and Abuse (PSEA) SOP should align with global safeguarding standards, so that staff behaviour is consistent across agencies, making coordination smoother[28,29, 38, 44,45].

- **Inclusion of Safety, Ethics, and Accountability Measures:** SOPs must explicitly protect staff and affected populations. SOPs should explicitly address staff safety, ethical conduct, and accountability mechanisms. This includes clear reporting channels for security incidents, safeguarding vulnerable groups, and ensuring compliance with humanitarian principles. For example, a fleet management SOP should include rules against using vehicles for unauthorized purposes, while a PSEA SOP should outline confidential reporting mechanisms for misconduct[5, 28,29,30,38].

12. Strategies for Improving SOP Execution

There are several strategies to improve SOP execution in high risk humanitarian operations**.** One of the key strategies is integration of SOPs into humanitarian security risk management. SOPs should be embedded within the broader security risk management framework, ensuring they are not isolated documents but part of a dynamic system of risk mitigation. This integration allows SOPs to directly reflect risk assessments, threat analyses, and mitigation strategies, making them responsive to evolving security environments. Linking SOPs to risk management also ensures consistency across organizational policies, reducing gaps between planning and execution[5,27,28,29,30]**.**

Improving SOPs execution in high risk humanitarian contexts requires a framework that balances contextual sensitivity with operational discipline and exigencies. Contextual adaption means SOPs should never be "one-size-fits-all." They must be tailored to the identified security threats and risks, local environment (e.g., cultural norms, community structures), political dynamics and operational realities of the specific operational environment based on contextual risk assessments. For example, in armed conflict zones, relocation or evacuation SOPs should account for checkpoints, curfews, and local armed actors (e.g., militia). This contextualization ensures that SOPs are not only technically sound but also practically feasible for frontline field staff who face unpredictable challenges daily. SOPs designed at headquarters may be far removed from the realities of the complex field environments hence the greater need for contextual adaption based on security risk assessments [9,35,37,38,45]**.**

A strong SOP framework begins with inclusive design and participatory input from frontline field staff. Local staff, community representatives, and security experts should be actively involved in drafting and revising SOPs. Their participation ensures relevance and fosters genuine buy in. Frontline field staff bring lived experiences that provide critical insights into risks often overlooked by outsiders such as informal checkpoints, armed groups presence, or cultural sensitivities around gender and authority. Embedding this local knowledge into SOPs not only strengthens ownership but also increases compliance, as staff are more likely to follow procedures, they helped shape[9,35,37,38,45]**.** Equally important is involving field staff and local stakeholders in the adaptation process. SOPs designed far from the crisis can miss practical realities like limited infrastructure, shifting security conditions, or language barriers. By consulting frontline staff, community leaders, and local partners, organizations can refine SOPs to reflect lived realities. This participatory approach ensures SOPs are practical, culturally sensitive, and responsive to dynamic conditions ultimately strengthening ownership and increasing the likelihood that they will be followed during crises[9,35,37,38,45]**.**

Effective execution of SOPs also depends on training and simulation exercises. SOPs remain theoretical unless tested under realistic, high-pressure conditions. Scenario based drills, tabletop exercises, and field simulations help staff internalize staff roles and responsibilities, while also exposing weaknesses in the procedures. These exercises should be repeated regularly, with lessons learned feeding back into SOP revisions. In high risk contexts, staff must be able to act instinctively under demanding or stressful conditions, which requires practice in realistic conditions. Training should emphasize adaptability and how to make responsible decisions when strict adherence to SOPs is impossible due to rapidly changing circumstances[9,35,37,38,45]. Another consideration of effective SOP execution is communication and accessibility. SOPs should be concise, translated into local languages, and presented in formats that are easy to use in emergencies such as checklists, flowcharts, or pocket guides. Clear communication channels must also be established so that updates or changes to SOPs reach all staff quickly. In volatile environments, where misinformation spreads easily, clarity and consistency in communication can prevent confusion and save lives[9,35,37,38,45].

Refining SOPs for better coordination requires moving beyond technical checklists to embed mechanisms that foster real-time collaboration and accountability. This involves establishing unified command structures and joint operations centers where UN agencies, NGOs, and state authorities coordinate seamlessly, supported by dedicated staff who bridge communication across national, regional, and local levels. SOPs should anticipate overlapping mandates through scenario-based harmonization, clearly designating lead agencies under different crisis conditions. To strengthen interoperability, shared digital platforms for incident reporting, resource tracking, and security alerts must be integrated, while periodic joint simulations and after action reviews help identify gaps and drive collective updates. Crucially, community integration ensures that local authorities and civil society are engaged not only in implementation but also in the design of SOPs, reinforcing inclusivity and resilience [9,35,37,38,45].

Finally, SOPs must be treated as living documents. SOP execution must be supported by monitoring, feedback, and continuous improvement mechanisms. After action reviews, incident debriefs, and real-time feedback loops allow organizations to refine SOPs based on actual field experiences. This iterative process ensures that SOPs remain relevant and responsive to evolving risks. Translating SOPs into local languages, simplifying technical jargon, and providing visual aids make them accessible to all staff, regardless of literacy or technical background. By balancing operational discipline with contextual sensitivity, humanitarian organizations can ensure that SOPs are not just compliance tools but practical guides that enhance safety, accountability, and effectiveness in volatile environments. Importantly, staff should be empowered to adapt SOPs responsibly when conditions demand flexibility, reinforcing a culture of accountability and resilience [9,35,37,38,45].

13.   Summary

Standard Operating Procedures play a pivotal role in organizational resilience by providing a structured framework for identifying, assessing, mitigating, and monitoring potential threats. When effectively designed and implemented, SOPs enable humanitarian organizations to respond proactively rather than reactively, ensuring that risks are managed before they escalate into crises. SOPs establish clear procedures that reduce uncertainty, enhance coordination among staff, and promote accountability across all levels of the organization. By embedding SOPs into daily practice, humanitarian organizations can minimize the negative impact of unforeseen events, safeguard field staff and assets, and maintain continuity of critical functions even in insecure environments such as in armed conflict zones.

Developing effective SOPs in high risk humanitarian contexts requires a framework that is both contextually grounded and operationally precise. Anchored in thorough security risk assessments, SOPs must reflect local realities such as terrain, cultural norms, community dynamics, and the posture of armed actors, while remaining adaptable to fluid conditions. SOPs should cover core operational areas including movement tracking, communication protocols, incident reporting, relocation and evacuation triggers, and contingency planning, with clearly defined roles and responsibilities to ensure timely, coordinated action under pressure. Modular and adaptive design further strengthens relevance across diverse operational footprints, while field-testing through drills and simulations ensures SOPs remain practical, responsive, and continuously improved.

Equally critical are measures that embed duty of care, accountability, and strategic alignment into SOP development. Gender-sensitive provisions, mental health support, and survivor centred reporting pathways safeguard staff wellbeing, while structured training, monitoring mechanisms, and review cycles reinforce compliance and institutional resilience. SOPs must be integrated with contingency and continuity plans, ensuring responses are coherent rather than ad hoc, and harmonized across agencies to promote collective security standards. Positioned as living tools, SOPs enhance resilience, protect staff and sustain humanitarian access, enabling organizations to operate safely and effectively in volatile environments while upholding their mandates to serve the most vulnerable communities.

SOPs are not static documents but living tools that must reflect the evolving nature of humanitarian security risk and organizational resilience. The ability of humanitarian organizations to operate safely and effectively in high risk environments depends not only on technical instruments but also on a sustained commitment to preparedness, collaboration, and learning. By investing in these areas, humanitarian actors can better protect their personnel, maintain operational continuity, and uphold their mandates to serve the most vulnerable in times of crisis and crises are never far away.

14.   Conclusion

As humanitarian crises grow in scale and complexity, the environments in which humanitarian organizations operate have become increasingly insecure. This study has shown that strengthening preparedness and response requires the systematic development, implementation and integration of effective standard operating procedures. Drawing on literature, organizational reports, and best practices, the research identified essential components of effective SOP development and highlighted recurring operational challenges. It outlined best practices for SOP design and implementation and strategies for improving SOP execution in high risk humanitarian environments.

The study concludes that SOPs are indispensable instruments for strengthening organizational resilience in high risk humanitarian contexts. By providing structured frameworks for risk identification, mitigation, and response, SOPs reduce uncertainty, enhance coordination, and safeguard both humanitarian personnel and assets. Their integration into daily operations ensures continuity of critical functions even in high risk environments such as armed conflict areas, while embedding accountability and compliance across all organizational levels. When anchored in thorough risk assessments and adapted to local realities, SOPs become more than procedural checklists but evolve into dynamic tools that enable proactive, coordinated, and effective crisis management.

Significantly, SOPs must be treated as living documents that evolve alongside the shifting nature of humanitarian security risks. Their success depends not only on technical specifications and precision but also on leadership commitment, staff training, and collaborative learning across multiple organizations. By embedding duty of care, gender sensitivity, and wellbeing provisions, humanitarian organizations reinforce both ethical standards and operational integrity. When harmonized with contingency and continuity plans, SOPs ensure coherent responses, collective security, and sustained humanitarian operations. In this way, SOPs empower humanitarian organizations to protect their personnel, maintain operational continuity, and uphold their mission to serve vulnerable populations even amidst the most unpredictable crises.

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