

The Potential of the United Nations As a Regulatory Regime Creator: The Case of Unmanned Aerial Systems in Ongoing Operations

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The geographic and capability proliferation of Unmanned Aerial Systems (UAS) occurs within a fragmented international regulatory context. The absence of global standards for use creates a vacuum of regulatory authorities that protect human rights when the United Nations (UN) employs state-provided or commercially supplied UAS. We argue that the UN can act as an agenda setter to generate international norms on UAS operational employment and social responsibility. First, the UN's utilization of commercially hired UAS can set international standards when hiring Private Military and Security Companies (PMSC) to provide UAS services based on transparent contracting procedures. Second, since UAS operations affect local populations through surveillance, standardization of population awareness campaigns, and internal surveillance protocols provide a template for UAS domestic applications. We examine the UN's use of UAS in the Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) and the Organization Stabilization Mission in the Democratic Republic of Congo (MONUSCO) to demonstrate the potential for UN leadership in international regulation.

Introduction

Unmanned aerial systems (UAS) are proliferating in use and capabilities challenging fragmented national and international regulation. New technologies affect social change as their implications extend into the field of human rights (Monshipouri, 2017). In the absence of consistent regulatory regimes, use of intelligence, surveillance, and reconnaissance (ISR) capabilities developed for war zones may infringe on aspects of the International Covenant on Civil and Political Rights (ICCPR), specifically article 17 that guarantees rights to privacy. The UN's deployment of non-lethal UAS encounter a patchwork of national, regulatory, ethical, and financial boundaries tied to nation-states. When the UN operates UAS in peacekeeping operations, its regulatory regime is frequently the only one active. This nationalistic regulatory vacuum enables the UN to use its agenda setting capabilities to foster consistent policies and procedures when UAS are used.

The UN has the capacity to develop consistent norms and regulatory practices for UAS use in two areas. First, the UN can establish policies and practices that protect the privacy of local populations during ISR peacekeeping, humanitarian, and other operations. The UN's efforts can standardize awareness campaigns and data protection protocols (e.g. tracking of individuals, cell-phone interception, mass video capture, and cyber protection against feed hacks). The standardization of procedures and processes are applicable beyond peacekeeping operations to all instances of UAS. Second, the UN can act as an agenda setter by establishing consistent and transparent command and control requirements when employing UAS from the

private sector and nation-state volunteers. The existing procurement process inconsistently provides public reporting and disclosures which contributes to hiring of private military and security companies (PMSC) to provide services (Tkach and Philips, 2020). The UN's leadership in consistent and transparent UAS utilization can serve as a template that protects human rights and deliver services.

International standards of use and practice have failed to emerge across UAS types including armed, unarmed, basic, advanced and environmental (disaster, humanitarian, or peacekeeping) (Fuhrmann & Horowitz, 2018). Even basic regulatory frameworks such as flight altitude vary by state. More advanced regulatory issues such as urban area operation, types of cargo, operators' legal liabilities, and autonomous flight have yet to be established in individual countries. International consensus and a consistent regulatory environment are even further from reality. Surveillance UAS that live stream video surveillance of urban areas ostensibly to provide police with intelligence and criminal tracking (Knezevich, 2019) are similarly unregulated at national and subnational levels. Developed states, specifically the US, United Kingdom (UK), and the European Union (EU), struggle to generate consistent laws and regulations to address privacy concerns (Finn and Wright, 2012). UAS may involve indiscriminate collection of video surveillance of the mass public. Indiscriminatory collection occurs when data of individual movements, dwellings, and activities fails to differentiate between belligerents (targets) and civilians at the point of collection.

We examine the Department of Peacekeeping's (DPKO) use of UAS in peacekeeping operations to identify areas where the UN can assist in the development of internationally implementable regulations. The United Nations (UN) recognizes the criticality of ISR capability to address shortages in operational intelligence (United Nations 2009, pp. 27) in peacekeeping operations (PKO) in UN Security Council (UNSC) Resolution 2098 through increased UAS surveillance (United Nations 2013, pp. 7). Peacekeeping operations are conducive for this analysis for several reasons. First, DPKO leadership prioritizes the deployment of advanced UAS capabilities in conflict environments that lack national regulation, which generates a window of opportunity for the UN to be an agenda setter on human rights protections when using UAS. Advanced drones are larger, have more capabilities, and require increased ground base support compared to basic drones. Second, international regulations require standardizing how PMSCs supply UAS ISR services. DPKO operations include both national military and PMSCs supplied systems and thus offers opportunities to draw lessons in both contexts. Third, peacekeeping environments provide a consistent, if largely absent, regulatory environment to implement policies that affect key constituencies in the UAS debate including local populations, peacekeepers, PMSCs, and national militaries. Finally, we focus on peacekeeping environments because the lax regulatory environment allows UN policies and regulations to be a catalyst for international regulatory adoption. The DPKO creation and updating of peacekeeper training, equipment, and quality standards provides a template for dissemination of UAS regulations. Peacekeeping standardization integrates idiosyncratic national standards to a unified international peacekeeping requirement, which is a similar process required for UAS regulatory efforts. The existing peacekeeper evaluation system includes both UN and county-self certification, which mirrors national and international certification necessary for UAS regulation. Finally, the DPKO coordination with the International Civil Aviation Organization, a UN agency funded and directed by 193 national governments in support of air transport safety, ensures access to

air space related expertise. DPKO is best suited for the difficult task of transferring UAS standards to national and international bodies.

Development of consistent regulations and procedures in DPKO deployment of UAS has ethical, financial, and policy implications. First, the implications of UAS proliferation for local populations impacted by widespread, constant live-feed ISR has received little attention. Consistent with national debates on surveillance of criminal activity, the DPKO establishment of operational parameters to protect the privacy of the civilian population is necessary to be consistent with the ICCPR's right to privacy. Current ISR capabilities include near-constant, live-stream indiscriminate surveillance but may expand to include biometric tools and thermal scanners that are capable of tracking and viewing individuals inside buildings. DPKO regulatory tasks include designing standards and procedures to ensure civilian privacy. Efforts to inform the public of UN UAS operations, perhaps even formalizing what constitutes consent, is necessary to protect privacy and improve operational efficacy in an era when UAS are associated with air-strikes. Second, the UN can contribute to regulation standardization by developing and implementing transparent financial procedures. UAS contracting generates distinct ethical challenges because of the capabilities, expenses, and personnel requirements. Modification of the existing procurement system to clearly identify UAS needs, contracts, suppliers, and costs is required for the UN to internationalize regulations. Standardization of these procedures, more than just general improvements in transparency and tracking—two issues the UN struggles with across DPKO activities (Bures & Meyer, 2019), provide a template for effective UAS management. Finally, the UN is positioned to act as an agenda setter because international institutions contribute to norms (Jørgenson & Sørensen, 2012), it has the internal infrastructure and international recognition to implement policy standards. The combination of opportunity and existing capability establish the UN as an agenda setter in UAS utilization.

The article proceeds with a discussion of UAS development in peacekeeping operations. We then discuss each of the three regulatory issues (ethical, financial, and policy) as they relate to DPKO UAS use. Finally, we discuss the implications of the UN acting as an agenda setter on these issues.

UAS Background

UAS increasingly satisfy UN ISR requirements, though the demand for services outstrips the supply. UAS may provide surveillance that is critical in humanitarian crisis, as real-time data analysis improves decision making and resource allocation. In peacekeeping operations, UAS provide ISR that improves mission commander's situational awareness. Yet, nation-states continue to undersupply ISR capabilities that typically involves larger drones and ground control units (UN, 2013). This analysis focuses on UN use of UAS in PKOs, though the use of drones is accelerating in all UN operational areas, reflecting general UAS proliferation trends.

Horizontal UAS proliferation is the expansion of actors that utilize them. Horizontal proliferation is expanding despite nation-states recognize drone's potential disruptive capability. Early efforts at drone development were concentrated in advanced industrial countries. Israel used drones in the 1982 war in Lebanon to jam communication and conduct surveillance. Despite accelerated UAS research, widespread adoption of UAS did not occur until the early 2000s, when development and production costs dropped as barriers to entry diminished through technology advancement. States as diverse as Iran, Saudi Arabia, Turkey,

and the US maintain armed UAS capabilities while Mexico, Morocco, and Peru retain unarmed, advanced capabilities. In total, from early 2000 to 2014, more than 100 states maintained UAS programs. Capabilities are not concentrated in a few countries as at least 15 states have drone specific academies and at least 10 countries, including Nigeria and Azerbaijan, have conducted aerial strikes using UAS (Gettinger, 2019).

Vertical UAS proliferation occurs when actors improve their capabilities. Conceptually, UAS are divided into basic and advanced categories. Basic UAS can carry surveillance equipment but have limited payload, duration, and distance capability. Advanced UAS have extended range, loitering duration, and can carry substantial surveillance equipment or munitions. Early adoption of advanced UAS capabilities was determined by a state's technical capability. Although vertical proliferation is accelerating as economic and technical barriers are surpassed by innovation and price decreases, some states may not be able to obtain the most advanced systems. However, even basic UAS capabilities potentially enhance operations through ISR capability improvement.

The lack of international regulation means that actors, including the UN, are "making the rules as they go" (Tovrov, 2012). Regulation confusion persists for UAS, unlike other military specific technologies (e.g. missiles and weapons of mass destruction, radar, etc.) (Schulzke, 2018). In the absence of shared values, global management ethics are difficult to develop (Cooper and Yoder, 2002). Currently, the regulatory irregularities and potential liabilities are outweighed by the operational benefits of advanced UAS. The UN, states, multinational corporations, and non-state actors will continue to employ UAS because

DPKO Use of UAS

UAS IRS services are essential for the DPKO. Proactive protection requires dynamic protective posturing that enables rapid direct and decisive responses to threats in real time. Coordinated troop and resource movement within a conflict to counter emerging threats requires accurate and actionable intelligence. ISR capabilities in DPKOs are frequently insufficient. Improved ISR capabilities increase operational effectiveness, potentially reducing fatalities and improving mission outcomes. This section investigates UAS's contribution to peacekeeping operations in Mali (MINUSMA) and the Democratic Republic of Congo (MONUSCO). The case studies illuminate the benefits and liabilities of nation-state and PMSC supplied UAS.

MINUSMA is a peacekeeping mission, deployed in 2013, to stabilize Mali after the 2012 Tuareg rebellion. The operation highlights nation-states' capacity to supply UAS capabilities and demonstrates that, oftentimes, volunteers do not provide sufficient capabilities. In MINUSMA, Sweden's national military, supported by a PMSC, provided unmanned aerial surveillance and over two hundred personnel to maintain an operational pace that exceeded similar Swedish units' pace in Afghanistan (Spacemetric, 2016). Yet, when Sweden withdrew their UAS because the usage rate required frequent equipment replacement, other member states did not volunteer to fill the void. Consequently, the DPKO sought PMSCs to expand and continue surveillance services. Airbus, through the German Defense Procurement Agency, provided surveillance services using Heron 1 UAV drones rented from Israel Aerospace Industries. This contract is in addition to MINUSMA contracts for larger, medium-altitude UAS from Thales UK and Airbus Defense & Space. Nation states' lack of volunteering peacekeepers is a persistent problem. Yet, MINUSMA demonstrates that even when member

states provide ISR capabilities, operations can transition to corporate security, generating PMSC specific liabilities and problems.

MONUSCO's DCR mandate created the Force Intervention Brigade (FIB) in 2013. The FIB expanded operational requirements (Tull 2018, 185), as it allowed offensive operations without changing precedent (Genser and Garvie, 2015). The FIB represents the proactive posture desired by UN officials that utilizes specialized infantry, helicopter gunships, and UAS capabilities. UAS may improve operational awareness via real-time ISR capabilities that improve coordination and tactical decision making (Andrews, 2017, p. 5; Karlsrud & Rosen, 2013). Moreover, in the case of MONUSCO, unlike peacekeeping troops which may or may not contact civilian populations, the extensive UAS and merely the sound of low altitude drones notified local populations that the UN has a presence in the area (O'Grady, 2015). Andrews (2017) suggests that the presence of drones may have contributed to the increased surrender rate of M23 rebel group members. According to Hervé Ladsous, UN under-secretary-general for peacekeeping, UAS provision of real-time intelligence increases the effectiveness of UN operations and enhances civilian protection through timely, enhanced decision-making (Tafirenyika, 2016). Operational benefits of UAS also emerged from operations in Chad and Mali (Blyth, 2013), that will contribute to the incorporation of UAS capabilities by other PKOs and UN agencies.

The following section examines how the UN's reliance on PMSCs and nationally supplied UAS capabilities generates ethical, financial, and regulatory opportunities for global regulatory agenda setting. First, ethical concerns surrounding ISR activities for the broader population related to consent and privacy are discussed. Second, we explore the financial costs and opportunities of UAS use to evaluate the UN's contracting process. Third, we examine existing UN agencies, regulations, and policies that can be leveraged to improve UAS regulations as the UN acts as a global agenda setter.

Regulation and Agenda Setting

Ethical

Ethical concerns emerge from UAS ISR efforts in conflict environments where combatants and populations intermingle (Johansson, 2011). This section examines the interaction between UAS use and the local population's right to privacy. The section evaluates ethical concerns when PMSCs act as service provider because these conditions exacerbate principal-agent dynamics, which heightens ethical concerns in other contexts (Carmola, 2010), and PMSCs are likely to provide UAS services in the future. We are not assuming that either national military or PMSCs conduct unethical operations; rather, the ethical concern arises from the nature of the provided service. This section specifically explores ethical concerns related to local populations and consent, data analysis and storage, future artificial intelligence driven data analysis, and perceptions of UN legitimacy from expanding UAS adoption.

PMSCs generate principal-agent dynamics through incentive incompatibility that effect ethical considerations of UAS ISR operations. Specifically, PMSCs seek to maximize profits and retain customers whereas the UN seeks to minimize costs and maximize services. Profit maximization does not mean PMSCs are unethical or reckless. In fact, in Iraq, PMSCs were less likely to commit friendly fire incidents than US military and Iraq national military units (Peteresohn, 2013). Instead, incentive incompatibility in this context means additional agency costs are generated because of the nature of ISR activities. These costs arise because UAS surveillance indiscriminately collects information on anyone within equipment range, raising

ethical questions related to consent for constant aerial surveillance and rights to privacy of self and movement enshrined in the ICCPR for local populations.

The primary ethical concern of UN ISR operations is intelligence collection on the local population (Humanitarian Aid, 2017). Contracted agents may employ forms of security that are opposed to the aims of the mission (Krahmann & Leander, 2019), which ISR extends to issues of consent. Since consent for constant video recording by the local population is typically not obtained, UAS use is increasingly alarming civil liberties groups in democracies. Technologies once used on battlefields are increasingly applied to civilians without any regulatory oversight or judicial review. Thus, the UN faces additional responsibilities to protect the local population's privacy, particularly vulnerable populations experiencing violence, displacement, or humanitarian disasters. Advancements in UAS technology such as infrared cameras, conversation recording microphones, and network integrated drones (i.e. swarming capacity) indicate that the ethical debates surrounding privacy will only become more complicated in the future.

Ethical concerns with UAS operation are exemplified by Nepal's restrictions. Nepal restricted UAS over concerns regarding sensitive information and photographs of cultural heritage sites during humanitarian operations after devastating earthquakes (Lichtman and Nair, 2015). Nepal's refusal to allow UAS operations was partially based on the nondiscriminatory nature of IRS-UAS. Nepal sought to avoid ubiquitous surveillance, even though some research suggests drones can improve disaster response coordination (Chowdhury et al., 2017). Nepal did not have a DPKO operation at the time, but the case is illustrative of privacy demands and regulatory UAS inconsistency: Nepal set limits while DRC and Mali did not. Thus, as individual nation-states chart their course on privacy rights and UAS employment, the UN has the opportunity to cross borders to develop policies that address concerns about local population consent.

UAS ISR capabilities involve data analysis and storage of mass, indiscriminate surveillance data. Analysis and storage of surveillance data increases opportunities for leaks, hacking, and data loss. Current UAS capabilities, data transfer, and storage liabilities are minimal as ISR is largely restricted to live audio-visual feeds. However, as the UN's operational environments expand to include countries like DRC that possess thick vegetation that obscures ground movement, more advanced optics such as infrared capabilities coupled with 24/7 surveillance coverage may be utilized (Smith, 2013).

Ethical concerns derived from ISR operations are heightened by potential artificial intelligence enabled analysis. The initial era of UAS ISR, live stream broad surveillance, and its impact at the tactical operational level will change as duration on station (e.g. time over the target) increases and data processing methods improve. Image processing software, particularly facial recognition, is already applied to live feed UAS ISR by national militaries, and there are rising concerns about law enforcement applying the capability to entire populations. Commercially available software eliminates the necessity for the UN to develop its own AI-enhanced image processing capacity, lowering the technical threshold to adopt the service. However, AI-enhanced analysis does not address the underlying ethical concern that broad ISR collects information on local populations without their consent while monitoring belligerents.

Finally, the DPKO's use of UAS may undermine perceptions of legitimacy. Local populations, from Nepal to DRC, have attached perceptions of US armed drone strikes to all drone operations. The perception that drones are armed contributed to Nepal's ban during

earthquake recovery and to negative public approval of drones in DRC. Perceptions of armed drones extend beyond populations to the UN state members. MONUSCO requested UAS capabilities 5 years before the UN finally authorized their use because of the persistent perception within member states that armed drones may be used (Calfas, 2014).

The UN faces additional legitimacy perception liabilities as other actors deploy drones. First, perceptions of UN legitimacy when using UAS may be undermined as autocratic regimes utilize ISR capacities to improve social control and oppression. While autocratic adoption remains limited, domestic UAS that track individuals, monitor urban areas, and potentially use force are increasingly likely as the costs and technical barriers decline. Second, non-state actors are increasingly able to use UAS, further complicating how local populations perceive UAS activities. Unlike other actors, the UN must balance perceptions of its legitimacy affected by other actors. When the operating environment becomes crowded by other actors UAS, it will be critical for PKO success to correctly establish UAS attribution to differentiate UN operations from others.

Financial Regulation

The financial regulation for UAS is a developing global issue. As the financial costs of UAS drop and the range of services expands, idiosyncratic national regulations will continue to emerge. For the UN, operating in disparate national regulatory environments impairs adoption of consistent policies. Financial regulation is paramount because drone use is increasing, even in instances where it is comparatively less cost effective than existing alternatives. In areas of IRS, there are few existing alternatives to UAS services. The UN's financial regulation of UAS, either provided by nations or PMSCs, includes including contract award processes, contract regulation, and compensation.

Financial regulation requires an open and transparent process to identify service requirements and develop solicitations. The process to produce the solicitations, however, lacks transparency and fails to effectively identify acceptable price ranges for specific services. MINUSMA 2016/17 budget process demonstrates that UN budgeting is frequently focused on overall price reduction. MINUSMA 2016/17 argued that UAS expenditures on UAS could be reduced without hurting operational effectiveness. The budget request suggests that oversight is functional but does not clarify why initial costs were so high or if the cost reduction request would have an undue effect on operational effectiveness. Oversight in South Sudan's budgetary requests for UNMISS similarly raises questions about the UN's process. UNMISS's (PKO in South Sudan) 2016/17 budget request included \$20 million for UAS capabilities while the initial budget only called for \$10 million. Instead of awarding the requested \$20 million or even the budgeted \$10 million, the Advisory Committee reduced funding to \$8 million because "the estimated cost was not calculated on the basis of the specific needs of UNMISS." While the memo indicates committee oversight and efforts to reduce spending, it raises questions about how the initial dollar figures were identified. The massive service price range, over 100 percent of final budgeted totals, was due to internal discussion ranges—not competitive bidding. The inability to identify service price range internally—what the service actually costs by contacting vendors and how much to purchase—captures the inconsistency of UAS contracting processes (UN, 2016).

PMSC supplied UAS highlight the difficulty in transparent contracting. Variability in contract award processes and the UN's flexibility in payment system means that PMSCs may be used more frequently than expected from member states' failure to volunteer (Tkach and

Philips, 2020). The lack of tracking system, not just for UAS services but PMSC services in general, undermines the anti-mercenary norm promoted by the UN (Bures and Meyer, 2019). The contracting process itself may institutionalize distinct chains of command and separation between the intelligence and surveillance generated from UAS and DPKO command. For example, the solicitation for UAS surveillance and intelligence services, eventually won by the Italian company a subsidiary of Finmeccanica, Selex EX, an Italian company, explicitly states that PMSCs must be self-sufficient in technical and subsistence requirements. The separation of peacekeepers and PMSCs may generate conditions that lead to enmity that hurts operational capacity because PMSCs employees are housed and maintained separately from peacekeepers and receive higher compensation (Dunigan, 2011). PMSC reporting and collaboration process is also separated from UN peacekeepers. The contract only requires that the PMSCs will work closely with the UN aviation and military personnel, though it does not stipulate how that is to occur.

Potential financial and legal liabilities arise when UAS malfunction and crash. ISR equipment is expensive, and the drones are sufficiently large to cause damage when malfunctions occur. For example, one Selex EX drone crashed during initial operations. The malfunction that caused the crash was not publicly released by the UN or Selex EX reports were issued in a timely manner. Subsequent company communication stated that equipment was operating within normal parameters and maintenance was current. The eight months period the crash site was left uncleaned deepened the local populations mistrust of MONUSCO—the incident epitomized the belief, articulated by Faustin Zabayo, a local youth counselor, that the UN “don’t actually have the goodwill to help the families that they haven’t come back to get the drone” (O’Grady, 2015). The initial efforts to clean the site focused on the debris pieces most essential for the UN—the black box, avionics, and sensors. Eventually, the landowner was compensated, but only after the appointment of Lt. Col. White, former Chief of MONUSCO’s unmanned aerial systems program (O’Grady, 2015). The lengthy delay in cleanup prior to the command transition raises the question whether a different commander, one without UAS experience in DRC, would have continued to leave the site uncleaned. This example highlights that financial and legal liabilities extend to new arenas when operating UAS.

The UN’s Global Agenda Setting Role

The UN has the institutional capacity and global reach to shape international procedures and norms of UAS ISR utilization. Our focus on peacekeeping operations encompasses multiple stake holders including local populations, peacekeepers, PMSCs, and national militaries where ethical implications and financial interactions can establish international precedents. The following section outlines how the UN can address ethical concerns of mass surveillance in peacekeeping operations. Next, an analysis of UN procurement process reveals how modifications to the existing infrastructure can produce transparent UAS usage.

Population Awareness and Consent

Local population notification protocols are necessary to establish public awareness of UAS activities. Tracking rebel movements and tactical intelligence necessitates intelligence collection of civilian populations. Notification protocols thus are focused on the individual who are also most effected by the conflict, heighten the importance of awareness campaigns and operations. The UN has experience in establishing benchmarks for awareness campaigns

such as message penetration rates, medium variety, and direct outreach programs. Unlike larger outreach programs, UAS ISR awareness campaigns are restricted to rebel movements, not urban areas, which reduces the total number of effected individuals. PKOs to rebel movement, not urban areas, the total number of individual effected is reduced. Systematic notification may reduce misperceptions that the DPKO operates armed drones. Public awareness campaigns accomplish two goals. First, public awareness campaigns clarify that the DPKO does not use armed drones. Second, public awareness establishes a method to protect the most vulnerable portions of the civilian population without hurting operational effectiveness by restricting ISR operations.

The idea of local concept in media research must be reconceptualized from its medical and research bases to be applicable in PKOs. Establishing consent does not mean individual, signed, Institutional Review Board approved documentation in developing world contexts (Krogstad et al., 2010). Instead, drawing on medical literature, we argue that consent can be communal based agreements. Existing arguments for gathering and retaining individual medical information without the consent of the participants is frequently justified as a public health necessity and the health of society takes precedence over individual consent (Diallo et al., 2005). Public health-based arguments, which incidentally frequently state medical language for consent is not applicable to security or intelligence gathering, is premised on the belief that infectious diseases posse significant social threats and tracking the spread of diseases is paramount for effective response.

A similar imperative to protect the broad population applies to UAS operations. First, administration of public health activities in peacekeeping environments is complicated by the lack of security. Similar to medical responses during a public health crisis, such as Ebola outbreaks that require tracking individual movements and networks, UAS ISR improves peacekeepers operational capacity, potentially reducing insecurity in contexts where violence is most severe or where vulnerable populations are most effected by instability. Second, tracking is concentrated on rebel or insurgent operatives in areas with civilian populations. This scenario is parallel to patient tracking during infectious disease outbreaks when most concern is on tracking infected individuals in general populations. When broad collection of the population occurs, the DPKO should tailor data processing to limit retention of non-target individual movements. Thus, the DPKO customization of mechanisms employed by the medical community for establishing individual and community consent in areas under UAS ISR establish global standards for individual rights in conflict affected areas.

Financial Transparency and Operational Regulation

The UN’s Department of Procurement and DPKO can set standards for transparency and ethical contracting by improving existing processes. In the case of nation-state provided UAS capabilities, existing mechanisms that track public compensation rates, total personnel, and other financial factors are sufficient, once the records are consistently updated and are publicly available. In the case of PMSCs supplied UAS capabilities, alternations to the existing procurement process are necessary to ensure transparent and cost-effective contracting services.

First, the UN’s existing rules and regulatory agencies can be leveraged to improve UAS supplier transparency. The UN’s extensive reliance on the private sector for air lift capacity necessitated the establishment of separate procurement procedures that provide an adoptable framework. Air Operator Registration (AOR) reviews companies and ensures compliance

with safety standard to be eligible for UN contracts. Extension of the AOR's vetting process to PMSCs that supply UAS, instead of only requiring standard registered vendor paperwork, improves the vetting process. Moreover, open publication of company profiles that include history of activities in DPKO operations, operational capability (e.g., size of drones, surveillance capabilities, etc.), and overall company history standardizes private sector engagement. UAS operations are not secret so releasing this information will not impact operational effectiveness. Moreover, PMSC increasingly utilize social media (Joachim & Schneiker, 2012) and online media to detail operational information to legitimize their businesses (Spearin, 2008).

Second, the UN must develop coherent, consistent, and transparent contracting practices. The existing procurement system, which, for decades, has performed admirably in difficult circumstances across dozens of global locations in conflict affected areas, requires standardization (Bures and Meyer, 2019). Development of internal cost assessments and consistent requests for proposals are the first area for improvement. Initial announcements for operational support in DRC emphasized the separation between PKO operations and PMSC. The UN should establish standard practices to incorporate PMSCs into operations reduces command and control issues. Moreover, inclusion of PMSCs in PKO operations, may assist in reducing the nebulous legal status by incorporating them into the PKO's chain of command.

Third, the establishment of a publicly accessible contract protest process mechanism, similar to the US government process, is necessary to ensure the UN implements policies consistently and provides information to the public about the process. The Department of Procurement has a protest process, but it is not transparent as limited information about number of cases, procedures and rulings is available. A protest system modeled on the US GAO, where companies file complaints when they believe the contracting process was not followed, and public decisions are released is critical in ISR services where public trust is an issue of concern. Public publication of protests provide insight into levels of PMSCs competition. Competition amongst PMSCs improves service performance (Akcinaroglu & Radziszewski, 2012; Petersohn, 2017). The protest process prevents substantively altering the initial contracting process because protest only occur in a small percentage of contract awards.

Conclusions and Implications

This analysis establishes specific steps to improve international regulatory cohesion of UAS ISR. The DPKO has the potential to be the agenda setter in this regulatory environment because it is uniquely positioned to engage relevant stakeholders while utilizing the capability. Two primary areas for regulation are civilian population consent and financial transparency. First, the UN must implement coherent population awareness campaigns in areas of UAS ISR operations. Misperceptions that the UN operates armed drones remain pervasive (Dorn and Webb 2017); initially delaying UN adoption of the capability and disrupting community trust building in war effected countries. Second, existing procurement infrastructure tailored to UAS employment can be achieved to improve contracting processes. The UN can augment existing processes encompassing each phase of contracting (proposals, competition, protests, and service delivery), which will institutional consistent procedures that can be adopted worldwide.

The global increase in demand for UAS ISR is occurring in the absence of standardized regulation and application to civilian populations. If the DPKO can establish UAS standards and practices, the International Civil Aviation Organization (ICAO) can assist in transmitting

those standards to nation states and consolidating recommendations in airspace related policy areas. The ICAO does not advocate or push specific policies, instead it acts as a repository for rules and relations that are searchable by country. Thus, the ICAO needs the DPKO to advocate for policy standardization with member states—something the DPKO already does on peacekeeper standards. The DPKO can leverage its experience in conflict environments and use of ISR operations as a blueprint for UAS regulation.

UAS ISR operational regulations could take a similar form of PMSC regulation as that established in the Montreux Document. The Montreux Document is an international regulatory document that outlines how PMSCs are to be employed, operate, and held accountable. The development of the doctrine was undertaken by the Swiss government because dominant powers, particularly the US, were hesitant to engage the process. The Swiss and other partners developed a regulating approach that integrated stakeholders across the issue space through relational-programmatic accountability. Consequently, the accountability developed for the industry was predicated on 'actor buy' into the process, not state based laws or regulations (Avant, 2016).

Actor buy-in is essential in UAS ISR regulations as coordinating national government and international organizations faces obstacles. For a Montreux Document type agreement to form, the DPKO, civilian populations, nation states, and other relevant stakeholders must coordinate a response. In the case of PMSCs, it was decades into the industries operation before such coordination was achieved. DPKO direction, however, can speed the process as regulations are developed and applied to operations. The DPKO has opportunities to shape the construction of UAS ISR rules by implementing transparent, consistent rules.

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