UAVIATORS

HUMANITARIAN UAV NETWORK

Humanitarian UAV Code of Conduct & Guidelines

In March 2014, UAViators drafted the first version of the Humanitarian UAV Code of Conduct to inform the safe, coordinated and effective use of UAVs in a wide range of humanitarian and development settings. This document was shared widely and publicly disseminated as an open and editable Google Doc to solicit feedback. The Code of Conduct was subsequently revised a dozen times in 2014 and reviewed again at the UAViators Experts Meeting on Humanitarian UAVs held in November 2014 at the United Nations Secretariat. In June 2015, UAViators actively solicited additional feedback from dozens of humanitarian organizations. In July 2015, UAViators organized an International Policy Forum on Humanitarian UAVs to further revise the Code of Conduct and to produce additional guidelines identified as priorities during the 2014 UAViators Experts Meeting. The Policy Forum was attended by experts from UN/OCHA, UNHCR, DPKO, ICRC, ECHO, WFP, American Red Cross, MedAir, Humanitarian OpenStreetMap, Cadasta, Peace Research Institute, Oslo (PRIO), Trilateral Research, Harvard University, Texas A&M, Pepperdine University, École Polytechnique Fédérale de Lausanne (EPFL), University of Central Lancashire, ICT for Peace Foundation (ICT4Peace), BuildPeace, DJI and other independent experts. These additional guidelines, listed below, address four key areas: Data Ethics, Community Engagement, Effective Partnerships and Conflict Sensitivity. In August 2015, the revised Code of Conduct and the new Guidelines were again reviewed internally by humanitarian organizations whose representatives participated in the Policy Forum.

These thoroughly-revised documents are now being shared more broadly to solicit additional feedback. This open consultative process, which included dedicated Webinars, culminated with the 2015 UAV Experts Meeting on Humanitarian UAVs, which was co-organized with UN/OCHA, the World Humanitarian Summit (WHS) and MIT in October 2015. The documents were thus revised one more time at the 2015 Experts Meeting. Organizations that participated in the 2015 Experts meeting include the American Red Cross, Direct Relief / NetHope, DJI, Doctors Without Borders (MSF), FHI 360, Swiss Foundation for Mine Action (FSD), GlobalMedic, International Organization for Migration (IOM), UN Population Fund (UNFPA), National Research Council of Canada, Rockefeller Foundation, UN Development Program (UNDP), UN Office for Coordination of Humanitarian Affairs (OCHA), USAID and World Bank.

In December 2015, feedback and comments received during this open consultative process and at the Experts Meeting were reviewed. An executive committee of 5 individuals from different organizations subsequently reviewed and integrated this input into the Code of Conduct and Guidelines on February 24, 2016. The donor community has already expressed a strong

interest in this document and in being consulted once the process is concluded. It is our sincere hope that donors, UAV operators, humanitarian organizations and development organizations will stand by these guidelines and promote them publicly.

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HUMANITARIAN UAV NETWORK

Humanitarian UAV Network Code of Conduct

Unmanned Aerial Vehicles (UAVs) offer the potential to improve humanitarian assistance and disaster reduction. As such, they offer the possibility to better meet the needs of those affected by humanitarian crises. This can only be realized if UAVs are employed in a responsible and ethical manner. This Code of Conduct, aims to guide all actors involved in the use of UAVs to support the delivery of humanitarian assistance in disasters and situations of conflict. Acceptance and adherence to this Code will contribute to safety, professionalism and increased impact while building public confidence in the use of UAVs. The Code of Conduct will be revisited as experience grows and technology further develops. The UAViators Best Practice Report (available here) will also be updated as needed. Note that this Code of Conduct is a standalone document. The supporting, theme-based Guidelines are separate and distinct from this Code of Conduct.

The use of UAVs to support humanitarian action should be carried out for humanitarian purposes only and with the best interest of affected people and communities in mind, and should adhere to the humanitarian imperative of doing no harm. Naturally, how the guidelines below are applied may differ depending on whether UAVs are used to support humanitarian action in response to a natural disaster or armed conflict. That being said, UAV deployments in either context must observe the humanitarian principles of humanity, neutrality, impartiality and independence. UAV missions must also be legal, safe and have adequate insurance.

1. Prioritize safety above all other concerns: humanitarian benefits should clearly outweigh risks to persons or properties.

2. Only operate UAVs when more effective means are not available and when humanitarian purposes are clear, such as the assessment of needs and the response thereto. UAV missions should be informed by humanitarian professionals and experts in UAV operations with direct knowledge of the local context.

3. Respect the humanitarian principles of humanity, neutrality, impartiality and independence: prioritize UAV missions based on needs and vulnerabilities, make sure actions are not, and not perceived as being, politically or economically influenced; do not discriminate or make distinctions on the basis of nationality, race, gender, religious belief, class or political opinions.

4. Do no harm: assess and mitigate potential unintended consequences that UAV operations may have on affected communities and humanitarian action.

5. Operate with relevant permissions: UAV operations must be in compliance with relevant international and domestic law, and applicable regulatory frameworks including customs, aviation, liability and insurance, telecoms, data protection and others. Where national laws do not exist, operators shall adhere to the ICAO RPAS Circular 328-AN/190[1] with the approval of national authorities.

6. Engage with communities: community engagement is important and obligatory. Developing trust and engaging local communities encourages active partnership, builds local capacities and leadership and enhances the impact of your mission. Information should continuously be provided to communities regarding the intent and use of UAVs. Refer to Humanitarian UAV Network Community Engagement Guidelines.

7. Be responsible: contingency plans should always be in place for unintended consequences. UAV teams must take responsibility for and resolve any issues involving harm to people and property, including liability.

8. Coordinate to increase effectiveness: seek out and liaise with relevant local and international actors and authorities. UAV teams must not interfere with and always seek to complement formal humanitarian coordination mechanisms or operations.

9. Consider environmental implications: operating UAVs should not pose undue risk to the natural environment and wildlife. UAV operators must take responsibility for any negative environmental impact their mission causes.

10. Be conflict sensitive: all interventions in conflict zones become part of conflict dynamics and can result in very serious unintended consequences, including the loss of life. Extraordinary caution must be used in deploying UAVs in conflict zones. Refer to Humanitarian UAV Network Conflict Zones Guidelines.

11. Collect, use, manage and store data responsibly: collect, store, share and discard data ethically using a needs-based approach, applying informed consent where possible and employing mitigation measures where it is not. The potential for information to put individuals or communities at risk if shared or lost must be assessed and measures taken to mitigate that risk (e.g. limit or cease collection or sharing). Refer to Humanitarian UAV Network Data Ethics Guidelines.

12. Develop effective partnerships in preparation and for and in response to crises: work with groups that offer complementary skill sets (humanitarian action, UAV operations, local context, data analysis, communications) during, and preferably in advance of crises. Refer to Humanitarian UAV Network Effective Partnerships Guidelines.

[1] See: http://www.icao.int/Meetings/UAS/Documents/Circular%20328_en.pdf

13. Be transparent: share flight activities as widely as possible, ideally publicly, as appropriate to the context. Convey lessons or issues to communities, relevant authorities and coordinating bodies as early as possible.

14. Contribute to learning: carry out and share any evaluations and after action reviews to inform the betterment of UAV use for humanitarian action.

15. Be open and collaborative: Coordination is a multi-stakeholder process. This means that lessons learned and best practices on the use and coordination of UAVs in humanitarian settings must remain open and transparent along with any related workshops, trainings and simulations.

Humanitarian UAV Network Guidelines on Data Protection

The deployment of UAVs in humanitarian context should be carried out in a conflict sensitive manner, in accordance with the best interests of affected communities, and with the humanitarian imperative of doing no harm. UAV deployments in humanitarian contexts must observe humanitarian principles of neutrality, independence, humanity and impartiality. In addition to observing humanitarian principles, UAV use should also comply with all laws and regulations, and taking into account considerations of public safety and insurance.
Naturally, how the guidelines below are applied may differ depending on whether UAVs are used to support humanitarian action in response to a natural disaster or armed conflict. Finally, these guidelines are linked to the Humanitarian UAV Network Code of Conduct and other supporting Guidelines[2], all of which should be adhered to.

1. Collect and analyse data in a manner that is impartial to avoid discrimination. Informed consent should be secured insofar as the situation allows. As far as possible, data collection and analysis should highlight the needs and aspirations of vulnerable and marginalized groups.

2. Carefully determine need(s) before identifying an appropriate data collection platform. Then ensure that the data you collect is necessary and proportionate given the need you are intending to meet. When possible, data from UAVs should be used in conjunction with other data sources and not relied on exclusively.

3. Where appropriate and feasible, take reasonable measures to establish informed consent for data collection by UAVs. When consent could not be obtained, take extra care vis-a-vis sharing this data with respect to data privacy and protection.

4. Before you deploy, establish a plan for managing the data you will collect, including who will own the data, the standards you will use and whether it is interoperable with other systems and existing platforms. The overarching priority should be to mitigate risk for the individual.

5. Establish a plan for responsibly storing, sharing and discarding the data you will collect, including ensuring the security of storage and transmission of data.

6. Consider solutions for privacy and ethical sensitivities (blurring, virtual machines to query the data, down sampling).

[2] See: http://www.cashlearning.org/resources/library/389-protecting-beneficiary-privacy-principles-and-operational-standards-for-the-secure-use-of-personal-data-in-cash-and-e-transfer-programmes

7. Before deploying, conduct a risk assessment taking into account the context within which you will be operating, covering the data that will be collected and the tools that will be used.

8. Before collecting, sharing or storing data that is particularly sensitive, an assessment should be conducted to mitigate the risk and benefit. This can include religious and military sites and other information that may be considered military intelligence, and may also include other information according to the local context and the type of response, such as religious and critical infrastructure, pictures of the deceased, communication records or personal data.

Humanitarian UAV Network Guidelines on Community Engagement

The deployment of UAVs in humanitarian context should be carried out in a conflict sensitive manner, in accordance with the best interests of affected communities, and with the humanitarian imperative of doing no harm. UAV deployments in humanitarian contexts must observe humanitarian principles of neutrality, independence, humanity and impartiality. In addition to observing humanitarian principles, UAV use should also comply with all laws and regulations, and taking into account considerations of public safety and insurance. Naturally, how the guidelines below are applied may differ depending on whether UAVs are used to support humanitarian action in response to a natural disaster or armed conflict. Finally, these guidelines are linked to the Humanitarian UAV Network Code of Conduct and other supporting Guidelines, all of which should be adhered to.

Communities should be consulted and information on how UAVs will be used should be provided. Community engagement (or social engagement) is thus important and obligatory. Building trust with local communities allows them to be active partners, decision makers and enablers, thus enhancing the mission and humanitarian/development impact.

1. Familiarize yourself with the local language(s), cultural norms and customs. Be sensitive to the fact that disaster affected communities may be marginalised, discriminated against, suffering or traumatized and that the use of UAVs could cause more harm than good in conflict settings. Local livelihoods and access to basic necessities may also be disrupted.

2. Identify community representatives who are responsible for the geographical area you are interested to survey. If the area is relatively small, seek local community representatives. Be aware that local representative may not be so representative, as some communities may be marginalized and not represented. It's therefore important to seek to understand the local dynamics and to ensure that your approach doesn't discriminate those who may be the most vulnerable or who may have the greatest needs. If the survey area is larger, seek provincial or regional representatives. Meet with relevant community representatives and provide them with your credentials such as business cards, letter stating that you have legal permission from a government entity to operate UAVs, an official partnership letter from a humanitarian organization, etc.

3. Manage expectations; be clear that UAV flights may not immediately and tangibly result in aid or other forms of support. Explain the purpose of your UAV mission, why it is important, with whom the data will be shared, how it will be used, and how long this data will be retained. Show the technology and examples of aerial maps/imagery to ask permission to carry out the UAV flights. Jointly identify specific flight paths: what altitudes to fly, where and when. Ensure that marginalized areas are not ignored and that suggested flight plans do not represent conflicts of interest.

4. Be sure to ask whether any field based disaster damage assessments have been carried out and whether any UAV teams/pilots (international, national or local) recently carried out any aerial surveys. If one or more teams have flown in the area, contact those teams to request the imagery or propose a sharing arrangement. Also ask which areas have been most affected and which areas should be prioritized and avoided (such as military and holy sites).

5. If community representatives grant you permission, then collaborate with them to publicize the mission, purpose and the proposed flight plans. Seek advice and make recommendations on how to leverage the tools to engage the community and support their needs and aspirations. Ask representatives to contact/inform the police so they are aware of the project and can assist with safety and information dissemination. Ask for guidance on how to reach out to local media (e.g., radio and newspaper) and influencers who represent diverse groups in the community including the most vulnerable groups. Produce flyers that provide an overview of your UAV mission and include contact information should community members have questions, suggestions, concerns and/or complaints. Schedule a public meeting with various civil society groups to present your mission, demo your technology and display examples of aerial imagery. This could also serve to dispel rumors, especially in conflict zones. Communicate risks and the process for documenting any incidents/accidents. Explain the proposed role of community members in potentially building UAVs, flying the UAVs and analyzing the data. Allow time for questions and answers during your public meeting. Finally, place signs up in areas where UAVs will be flying with the date and time of flight including your contact information.

6. For the safety of the community, please follow safety guidelines and best practices for UAV flights—see Humanitarian UAV Missions: Towards Best Practices.[3] Share incident/accident reports with local representatives and police.

7. Assess the potential for imagery or associated information to cause harm to the community (in whole or in part) and to humanitarians on the ground. Sharing information could exacerbate tensions within the community, for example, so measures must be taken to mitigate that risk including the option of not sharing information.

8. In line with the above, share your imagery both in printed and digital form with local representatives as soon as possible. At the very least, show the imagery collected by displaying it on your computer. (Naturally, this guideline may not be appropriate at all when operating in conflict zones). Ask these representatives for guidance on data privacy/protection preferences and use your best judgment. Encourage representatives to display hard copy images in public areas for all to see. Schedule another public meeting before you leave, sharing the results of your mission, any incidents/accidents

[3] See http://www.UAViators.org/docs

and imagery collected. Explain the process for data removal. Allow time for question and answers. Refer to Humanitarian UAV Network Data Ethics Guidelines.

9. If the application of UAVs is for paylaod delivery, the same protocols listed above should be taken into account. For possible payload delivery in conflict zones, remote engagement may be an option but this may also pose dangers to at-risk communities. Please see guidelines below on Conflict Sensitivity.

Humanitarian UAV Network Guidelines on Effective Partnerships

The deployment of UAVs in humanitarian context should be carried out in a conflict sensitive manner, in accordance with the best interests of affected communities, and with the humanitarian imperative of doing no harm. UAV deployments in humanitarian contexts must observe humanitarian principles of neutrality, independence, humanity and impartiality. In addition to observing humanitarian principles, UAV use should also comply with all laws and regulations, and taking into account considerations of public safety and insurance. Naturally, how the guidelines below are applied may differ depending on whether UAVs are used to support humanitarian action in response to a natural disaster or armed conflict. Finally, these guidelines are linked to the Humanitarian UAV Network Code of Conduct and other supporting Guidelines[4], all of which should be adhered to.

Relevant partnerships can be established between actors who need and provide humanitarian or development data and/or humanitarian or development cargo services (including national and local governments; the UN and NGOs)

For UAV operators/providers/volunteers looking for humanitarian partners:

In general, experience has shown that the most useful UAV uses in disasters are those uses that are carried out in partnership with a sponsoring organization or agency, where the UAV operator acts based on the needs of the sponsor organization who knows the overall context of the disaster. In the context of conflict, UAV operators must *only* operate in partnership and under the strict guidance of sponsoring organizations or agencies.

In disaster response and preparedness settings, UAV operators seeking a partnership should:

1. Find a sponsoring humanitarian/development organization, ideally prior to a crisis.

2. Develop your mission(s) in tandem with sponsoring organization efforts to assist the affected community and work through the sponsoring organization to engage with the community.

3. Understand the context of the overall humanitarian emergency or development context and position yourself and your equipment as to not become a liability.

4. Some organizations will not have the capacity or ability to engage you in a conversation about the utility of your technology, particularly during crisis response. Be prepared to take no for an answer.

For organizations looking to partner with UAV groups:

[4] See: http://www.elrha.org/wp-content/uploads/2015/01/effective-partnerships-report.pdf

1. Assess utility of UAVs in addressing needs of affected communities and consider making partnerships prior to crises (standby partnerships, letters of mutual intent, MOUs, implementing partner agreements, etc.). In a crisis, be aware of local operators who are acting independently and in good faith and consider efforts to reach out to them to bring them into coordinated humanitarian efforts.

2. Select a company or organization with compatible principles, taking note of the overall framework for operation of UAVs in humanitarian contexts outlined above. Prioritize partnerships with local operators. Transparency with respect to objectives and funding is important to gauge the suitability of partners. When exploring partnership possibilities, be sure to identify who will cover travel/shipping costs, import/export devices, secure insurance, obtain waivers/permissions, analyze the resulting data, etc.

3. Define the terms and duration of your partnership, including community engagement principles, responsible data management and interoperability, data protection, data ownership and publicity rights during and after the partnership has ended and other similar considerations. Remain cognizant of the fact that the prioritization of the affected communities necessitates both the identification and avoidance of any conflicts of interest as well as the invalidity of any considerations of third parties that would compromise the primary obligation to affected populations in any way.

4. Define and discuss the risks for the organization and for the UAV operator. This includes the safety of local communities and staff as well as potential threats to overall mission accomplishment as well as financial and reputational risk.

5. Clearly specify termination of contract clauses. Termination of contract is considered to be lawful when a legitimate reason exists to end the contract before the UAV mission has been completed.

6. Establish adequate Standard Operating Procedures (SOPs), including day-to-day procedures for information sharing and reporting of flight plans, logs etc.

7. To avoid disruptive and/or overlapping UAV flights and congestion of airspace, support humanitarian coordination efforts and clusters where they exist, including daily reporting of where and when operations are occurring.

Humanitarian UAV Network Guidelines on Conflict Sensitivity

The deployment of UAVs in humanitarian context should be carried out in a conflict sensitive manner, in accordance with the best interests of affected communities, and with the humanitarian imperative of doing no harm. UAV deployments in humanitarian contexts must observe humanitarian principles of neutrality, independence, humanity and impartiality. In addition to observing humanitarian principles, UAV use should also comply with all laws and regulations, and taking into account considerations of public safety and insurance. Naturally, how the guidelines below are applied may differ depending on whether UAVs are used to support humanitarian action in response to a natural disaster or armed conflict. Finally, these guidelines are linked to the Humanitarian UAV Network Code of Conduct and other supporting Guidelines, all of which should be adhered to.

All interventions in conflict zones become part of the conflict dynamics and can result in very serious unintended consequences, including the loss of life. Extraordinary caution should be used in deploying UAVs in conflict zones.[5] These guidelines refer to the possible use of UAVs for humanitarian purposes in conflict zones. In other words, they do not refer to the use of UAVs for conflict prevention or peacekeeping (unless these intersect with humanitarian activities). [In general, as with other humanitarian UAV deployments, UAV missions in conflict zones should follow the ICRC Data Protection standards[6], the UN Guidelines on Confidentiality and Handling of Sensitive Information and the UNHCR Data Protection Policy.

In conflict zones, different bodies of law apply, such as International Humanitarian Law or International Human Rights Law. However, not all armed actors party to the conflict can be counted on to abide by these bodies of law. What follows are the specific principles by which UAV missions should also abide in conflict zones:

1. Ensure that the sole purpose of all UAV missions is to strengthen humanitarian action, including protect the population and relieve suffering.

2. Determine whether UAVs (armed and unarmed) are already being used by some of the parties to the conflict. If they are, this may make it difficult to distinguish between your UAVs and those used by the parties to the conflict. Your use of UAVs may thus create fear and also raise suspicions.

3. Never accept tasks from armed actors party to the tensions or conflict, including the collection or sharing of information with them. Never carry payloads for them. Due

[5] The present section addresses situations of armed conflict, both international or non-international as defined by IHL. The same principles and rules should be applied, mutatis mutandis, to other situations of violence which don't reach the threshold of armed conflict (riots, coup d'état, widespread violence, etc). The existence of localized or low level conflict, including at the intra-or inter community level should also be considered.

[6] See: https://www.icrc.org/eng/resources/documents/publication/p0999.htm

diligence must be taken when interacting with *any* group in a conflict setting, including government authorities.

4. Engaging local communities in person in conflict zones may place them at greater risk. Remote engagement should be considered when appropriate and safe.

5. Ensure that UAV mission staff have adequate insurance and require staff to take necessary training in basic security in the field. Ideally, the UAV operator should also hav experience working with or along side security forces.

6. Ensure that a humanitarian actor has negotiated access with armed actors party to the conflict for your UAV mission.

7. Ensure that all data transmissions and storage in or to conflict zones are secure and encrypted.

8. Put in place protocols to manage UAVs captured by armed actors party to the conflict, including adequate markings and coloring, a disable function, destruction of the memory card and simultaneous remote recording of data.

9. Ensure adequate action and communications to address local perceptions around the use of UAVs. Perceptions may include: Perceived as hostile by one or more of the parties to a conflict (regardless of your actual neutrality or impartiality); Fear or hostility from local populations traumatised by conflict; and Negative association with military operations (including counter-terrorism or peacekeeping operations). All of these perceptions could jeopardize or contaminate the humanitarian purpose.

10. Conduct a risk assessment on whether local conflict affected populations can be targeted as a result of UAV flights (data collection or cargo), and put in place appropriate mitigating actions (including deciding not to fly UAVs).

11. Consider the (positive and negative) effect on conflict dynamics of using local UAV operators (e.g. negative: leaked or manipulated data, alternative uses, coercion of operators; positive: greater trust, local buy-in, sustainability).

12. Consider the safety of the UAV team especially if located within the conflict area and dynamics. Be aware that they could be targeted or coerced. Seek the security advice of relevant international actors (e.g. DPKO units and / or UNDSS).

13. Consider that domestic and international militaries operating in the conflict zone may be willing to share UAV data and capabilities, and consider on a case by case basis whether utilizing these military assets is in or can be perceived to be in contradiction with the humanitarian aim of your mission.