# NEPAL HUMANITARIAN DRONE TRAINING
# POLICY RECOMMENDATIONS 2019

Drones are becoming increasingly popular, and so is their application in humanitarian missions across the globe. Hazards and disasters result in the loss of lives and the destruction of infrastructure, often making conditions so difficult or dangerous that relief workers are unable to access affected areas to provide assistance. Nepal is one of the most disaster-prone countries in the world. As such, the use of drones for humanitarian purposes could significantly create better results in terms of emergency responses, better disaster preparedness, better situational awareness and better data for planning for hazard mitigation. Given the significant need for the use of drones in the context of Nepal, a "UAS training on coordination of drones in humanitarian action" was organised by the World Food Program (WFP) with WeRobotics and Nepal Flying Labs serve as trainers and technical partners thanks to the invaluable support of the Emergency Telecommunication Cluster and the Belgium Government.

The training comprised 45 participants representing a diverse sectors including the government authorities, INGOs, security agencies as well as private institutions. The training was aimed at sensitizing and transferring both the knowledge and the capacity to use drones in humanitarian missions safely, responsibly and effectively. In addition, the training included a full-day disaster simulation to reinforce all the learnings from the training, including best practices, standard operating procedures, codes of conduct, check-lists, imagery capture, imagery processing and imagery analysis. The training thus comprised theoretical sessions, plenary talks, presentations from leading organisations and stakeholders in the field, practical hands-on trainings and a live disaster response simulation. The training model and simulation was developed and implemented by WeRobotics in multiple countries around the globe has seen huge positive response from participants.

After acquiring hands-on knowledge on the use of drones in humanitarian action, a number of key recommendations were formulated by various participants and organising partners for consideration by the Nepal Government:

❏ Nepal Government is doing better in DRR related programs than in the past, but it is time that government go beyond traditional capacity building practices and trainings, and focus more on promoting practically-oriented DRR simulations with drones, GIS and other mapping technology, in all the provinces of Nepal along with special focus on disaster prone areas.

❏ Its has been clear to all the stakeholders that drones play a vital role in today's DRR scenarios. To this end, Nepal Government needs to promote research, development and manufacture of drone technology inside Nepal. They also need to provide dedicated air space (drone corridors) to researchers and makers to test, practice and refine their technology. We recommend that the government define such drone corridors possibly within or near Kathmandu Valley, providing ease of access to numerous drone professionals and academicians, while at the same time addressing the need to make the research dedicated airspace at a safe distance from settlements, existing airspace and sensitive areas. An increasing number of governments around the world are establishing drone corridors. Nepal Government thus has the benefit of learning from others in this space.

❏ Considering the huge benefits of drones and related robotics technologies in disaster response and humanitarian action, Nepal Government needs to formulate a simple set of regulations under the coordination with National Emergency Operations Center (NEOC) for emergency situations to help speed up recovery and response, while keeping the policies strict enough to prevent unauthorized drone users from operating.

❏ Nepal Government needs to develop a single digital platform that can track/record all drone activities in the country instead of traditional record keeping system where its highly impractical to track the use of drones within the country. An increasing number of governments around the world are setting us such digital platforms. Nepal Government thus has the benefit of learning from others in this space.

❏ Everyone with a drone is basically a drone pilot in Nepal. The ever increasing number of drone pilots is only going to create a worse situation for proper management with the lack of clear set of standards. Hence, Nepal Government needs to dedicate an authority and create standards defining "A professional drone pilot", and create provisions for certification examinations that would only allow strict professionals to operate legally. For this, Nepal Government could partner with existing drone based service providers in the country and

begin working on preparation of such a set of standards and certification examinations. An increasing number of governments around the world are setting us such certification standards. Nepal Government thus has the benefit of learning from others in this space.

❏ There is a strong need to organize more sensitization and awareness raising activities regarding the potential benefits and threats of this technology so that more people and organizations would be aware about the potential of this technology.

❏ Visit Nepal 2020 is actively promoting tourism in Nepal and planning to attract a significant number of tourists. Many of these tourists may bring their photography / videography equipment including drones. Instead of strictly discouraging the use of drones, the Nepal Government should design a more targeted policy to sensitize foreigners regarding the policies and the proper way of using drones in Nepal. For instance, installation of many information boards in airport arrivals and customs, banners with info on the policies, requirement to register the drone at customs, etc. An increasing number of governments around the world are already implementing these policies. Nepal Government thus has the benefit of learning from others in this space.

❏ Drones are associated with invasion of privacy and other security threats but also have the ability to save lives and reduce suffering in humanitarian disasters. Considering the very sensitive nature of this technology, Nepal Government must design strong monitoring plans in addition to the set of rules that controls the use of this technology so that humanitarian and other safe actions like R&D are encouraged while threat activities are prevented.

❏ Most of cargo drones used for medical deliveries and other health aid purpose are relatively heavier than mapping drones, i.e., they are large C category drones as dictated by the policies of Nepal. The Nepal Government needs to create a mechanism to enable trusted and professional organizations who meet relevant standards in terms of operations and project execution for such important life saving projects. The Government should also design flexible policies for such projects.