



SAVING
LIVES
CHANGING
LIVES

WFP Drones Unmanned Aircraft Systems

The World Food Programme (WFP) is scaling technology and innovation as part of its strategy to end hunger by 2030. Looking to improve its ability to prepare for and respond to humanitarian emergencies, WFP has been developing the use of unmanned aircraft systems (UAS), commonly known as drones, since 2017. With support from the Government of Belgium, WFP created a **UAS coordination model**, and in parallel, is building local capacity to use drones in countries at risk of natural hazards. Moreover, WFP acquired substantial knowledge during its work with drones in Mozambique following cyclones Idai and Kenneth in 2019. This has enabled WFP to better identify needs and opportunities for using drones in emergency response and to develop a new intensive training, “UAS Emergency Response Training” which was conducted for the first time in Mozambique in

December 2020.

With decades of experience in Aviation, Logistics and Telecommunications, which it uses for humanitarian response in over 80 countries each year, WFP is well positioned to **develop, coordinate** and **deliver** the standardized, **safe and ethical use of drones** for its own operations as well as those of partners and the wider humanitarian community.

WFP is focusing on three functional areas related to drone technology — **data collection, cargo delivery** and **connectivity** — which are being developed into **common humanitarian services** with support from partners and funding from United Kingdom’s Foreign, Commonwealth and Development Office Development (FCDO). Prepositioning drones and an investment in Information Management are at the heart of the WFP’s approach to this drone project.

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WFP EXPLORES USING DRONES FOR:



DATA COLLECTION



CARGO DELIVERY



INTERNET CONNECTIVITY

What has been done so far

WFP has been active with drones in **30 countries**— from prepositioning equipment and strengthening local emergency preparedness efforts through trainings, to supporting emergency responses when disaster hits.

Emergency response: When Hurricane Fiona made landfall in the Dominican Republic in September 2022, the WFP drone team was on the ground in less than 48 hours deploying 2 pilots and 2 drones to assess the damage and support the government. The team also used WFP-developed Machine Learning tool known as DEEP (Digital Engine for Emergency Photoanalysis), to automate the processing of analysing high resolution images of the impacted areas, cutting assessment time from weeks to hours.

Capacity building: after many years and both steady-state and emergency experiences, trainings offered can now be tailored according to the needs of the trainees. This has also enabled WFP to better identify opportunities for using drones in emergency response and to develop a new “UAS Emergency Response Training”. DEEP has also recently been incorporated into the trainings.

Preparedness: Following the deployment of drones after Tropical Cyclones Idai & Kenneth in Mozambique in 2019, WFP has worked together with partners to establish best practices to maximize the efficiency and effectiveness for Wide Area Search operations using drones. A two-phase mission has been carried out (the first in Mozambique November 2021 and the second in the UK June 2022) and a written study will be soon available.

Working with the humanitarian community

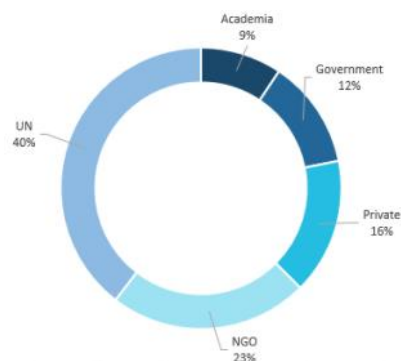
Technical Working Groups

While UAS technology holds tremendous potential in humanitarian operations, it also poses key challenges notably legal and operational issues, ethical procurement, partnerships, privacy and data protection, and community perception. To help steer the responsible use of drones and build a community of humanitarian stakeholders, WFP set up four technical working groups

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(TWG) around the following thematic areas: Regulation and Operation, Ethics, Connectivity, and Imagery.

TYPES OF ORGANISATIONS PARTICIPATING IN UAS TWGS



Connectivity (R2C2)

To help provide connectivity and reach communities affected by disasters, a new WFP Drones solution that emerged from the [Innovation Accelerator \(INKA\) Bootcamp](#) in 2021 is set to empower humanitarians responding to emergencies as well as communities in crisis.

The [Rapid Response Connectivity Carrier \(R2C2\)](#) is a tethered drone solution flying 24 hours a day, covering a 3 square kilometre area and providing potentially thousands of affected people and emergency responders with Internet access.

As of August 2022, it has been confirmed that R2C2 will be receiving its second round of funding from INKA.

Keynote event

ICAO Drone Enable, Montreal (November 2022)

The WFP Drone team along with WFP's Aviation and Aviation Safety teams, joined UNICEF and The International Civil Aviation Organization for Drone Enable, sharing new ways to advance humanitarian work, from local capacity building to accelerating emergency response.



Our Donors:



Since 2017, Emergency Response, Capacity Building and Preparedness has also been funded by ECHO

WFP Drones Team World Food Programme

For more information, contact wfp.drones@wfp.org
Or visit our website <https://drones.wfp.org/>