UNICEF Innovation
Drones

Drones

Addressing transport, connectivity and better emergency preparedness

Since UNICEF began working with drones, our investments have been focus on a range of applications, including:

1. Vaccine delivery/transport;

2. Improved connectivity in hard-to-reach communities; and

3. Aerial imaging for better preparedness and response in emergencies.

Drones

Addressing transport, connectivity and better emergency preparedness

We are currently investing in;

1. Creating capacity to use drones within UNICEF programmes,

2. Identifying, piloting and packaging drone solutions which have been screened as DPGs,

3. Developing and maintaining partnerships to bring in technical and financial resources to help UNICEF accelerate the use of drones globally, and

4. Exploring new applications and business models based on emerging trends

Drones

Addressing transport, connectivity and better emergency preparedness

2021 objectives;

1. Development and release of the Drone DPG Toolkit on GitHub

2. Leveraging UNICEF-ICAO partnership to support Governments and UNICEF country offices in the development and establishment of national drone regulations,

3. Development of central repository for all past and future UNICEF drone investments including event media, ops data, and GIS files.

Coordination

giz

BILL & MELINDA GATES foundation

UKaid from the British people

WFP World Food Programme

USAID FROM THE AMERICAN PEOPLE

unicef

WORLD BANK GROUP

IDB Inter-American Development Bank

The Global Fund

CDC

Gavi The Vaccine Alliance

European Investment Bank

UNFPA

World Health Organization

Technical leadership

Tools, materials and resources for UNICEF staff and external partners related to drone delivery integration into health supply chains (needs assessment, enabling environment, procurement of services, implementation, stakeholder engagement, etc.)

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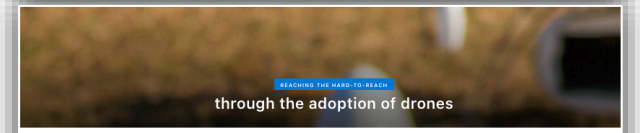
UNICEF GUIDANCE ON THE USE OF DRONES IN SUPPLY CHAINS
Document Number: GUIDANCE/SD/2021/001
Effective Date: 28 May 2021



What are drones?

A Drone, or an Uncrewed Aircraft System (UAS), is a remotely piloted aircraft system without a pilot or crew onboard, which can be pre-programmed to perform automated or autonomous flights. It presents with an efficient tool for last-mile health commodity delivery in access-constrained situations or during emergencies. This new revolutionary technology can also enable organizations and governments to quickly collect aerial data for emergency preparedness and response.

Drones can be useful tools in bridging some gaps within the national health and emergency supply chains, especially in serving the most disadvantaged remote communities and facilities. Drones have been used in the geographies and contexts that have limited road and transport infrastructure, and where in-country commuting, delivery and distribution is challenging, taking a disproportionately long time. The drones have been used to deliver medical commodities and diagnostic samples to/from islands, hard-to-access (seasonally or all-year-round) rural health facilities, mountainous regions, and natural disasters or emergency-affected places.

Why should governments use them?

Ministries of Health across all continents are strengthening the last-mile delivery by adding drones as a complementary transport modality in the public health supply chain. More and more governmental disaster response and civil protection departments are utilizing this new technology for their emergency preparedness and response work.

Drones can enable governments to better, faster, and more efficiently serve communities.

For instance:

1. Drones **can carry various health commodities** (vaccines, medicines, diagnostic samples, blood products) **and help extend the reach of the supply chain to communities and health centers** that are hard to reach;
2. In emergency settings, drones can be used for **critical supply delivery** (humanitarian aid or other supplies) to the places that are inaccessible during natural disasters;
3. Drone mapping and imagery coupled with appropriate geospatial analysis can **provide detailed visual or other information** for emergency preparedness and response; drones can also assist in the **search for missing people** and **provide situational awareness** of affected assets, facilities, infrastructure and households.

How can UNICEF support?

This transformative technology has the potential to improve the way UNICEF operates and supports governments in last-mile logistics, emergency preparedness, and disaster response as summarized below.

In order to fully utilize the potential of drone technology, it is essential to design, set up, and implement drone interventions that follow the best practices, are relevant to a specific local context, and can make an impact.

UNICEF guidance on the use of drones in supply chains, tailored for the use of Country Offices and Regional Offices, describes drone delivery applicability and use-cases in supply chains, provides drone technology and service model considerations for supply chain delivery, as well as introduces drone delivery service procurement tools, resources, and considerations (sample RFPS ToR, evaluation matrix, etc.)

Country support

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Needs Assessment to Identify Opportunities for Drone Deliveries for Supply Chain Operations

The survey is gathering insights into the UNICEF's in-country supply chain and last-mile logistics operations to identify countries, contexts, and areas where Unmanned Aircraft Systems (commonly known as drones) could be applicable.

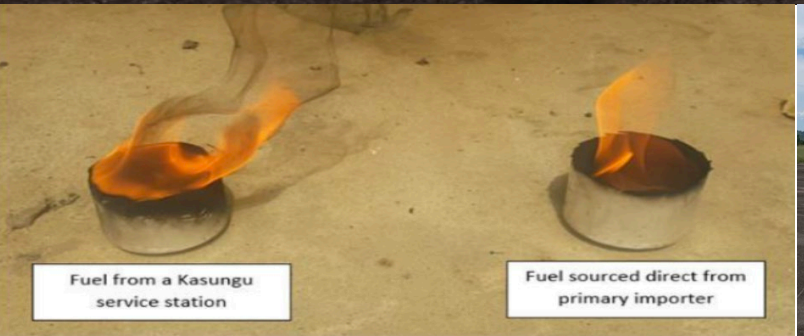
The results of the survey will help inform UNICEF's future strategy on drone delivery, as well as help inform the organizational needs for the procurement of drone delivery services and/or equipment.

This survey is intended for UNICEF's Country Offices' logisticians, supply, and/or procurement officers. Some of the questions require consultation with program colleagues and/or governmental counterparts. To avoid duplicates, it is expected to receive one consolidated answer per country office.

OK

Drone corridors

Kasungu, Malawi



Safe space for innovation to help governments learn

- Test **tech readiness** of UAVs for delivery, mapping and connectivity in the Malawi context
- Fly **BVLOS** and get certifications and approval from aviation authorities (CAAs)
- Community and government **engagement**, and sensitization

Drone corridors

Akmola and Almaty, Kazakhstan

UNICEF**INNOVATION**

- Support government's disaster reduction agencies to use UAVs for **emergency response** and **search and rescue**
- Test UAVs in the most **extreme weather** conditions
- Create **opportunities for local drone companies** to provide services to their governments

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Drone corridors

Njala, Sierra Leone

UNICEF**INNOVATION**

- Managed by UNICEF and the Directorate of Science Technology and Innovation

- Test UAVs in monsoon and **flood** conditions whilst supporting Government response efforts

- Act as enabling infrastructure for proof of concept of drone and other DPGs, as part of Sierra Leone's Digital Public Good pathfinder activities.

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