

Scenarios and details of the demonstrations

① Use in times of disasters: Aerial shots to assess the damage and air transportation of relief supplies to isolated communities

Scenario:

A landslide occurs on a mountain road between Seso and Nishiamuro on Kakeroma Island due to typhoon damage, and Nishiamuro becomes an isolated village. The Setouchi-cho Disaster Response Headquarters collect disaster information from residents and use drone aerial images to assess the situation, and then airlift relief supplies to Nishiamuro.

Details of demonstration:

- Drones were flown to mountainous areas where damage was expected, and aerial images were taken of the surrounding area.

- A dedicated smartphone app collected disaster information and requests for relief supplies from the residents.

- High-resolution aerial images taken by drones and information received via smartphones are centralized in real time at the Setouchi-cho government's disaster response headquarters (training). Shared with the Self-Defense Forces, police, fire departments, etc., and used to access the situation and make judgments

- Water (2-liter×3 bottles) was lifted from the disaster headquarters to Nishiamuro as relief supplies. In the demonstration test, the supplies were loaded at Seso, Kakeroma Island, and delivered to the ground of the Nishiamuro Elementary School (as a shelter) by remote operation.

- Verification of drone operations in emergency and setting and operation of landing and take-off points

- Drone model: DJI Matrice 300 (aerial shot) Pro drone PD6B (air transportation)

② Use in ordinary times: Transportation of medical supplies and daily necessities to secondary remote islands

[Medical supplies]

Scenario:

With no pharmacies in Yoro Island and Uke Island, and all prescription drugs rely on door-to-door delivery by pharmacists from the pharmacy in Koniya. Deliveries to Yoro/Uke Island take a long trip, such as connecting ships and vehicles via Kakeroma Island. Also, scheduled deliveries are uncertain due to frequent ship cancellations. Drone air transportation as a new delivery method is introduced.

Details of demonstration:

- Prescription drugs (common drugs) were loaded onto a drone at Koniya in accordance with the "Guidelines for Delivery of Drugs by Drone." In this demonstration test, a direct route to Yoro Island was operated.
- The Nurse at a rural clinic on Yoro Island received prescription drugs unloaded from the drone and delivered them to the patient.
- Online medication instruction (mock) was conducted by a pharmacist from Koniya.
- Drone model: YAMAHA FAZER R G2

[Daily necessities]

Scenario:

With no big stores on Kakeroma/Yoro/Uke Island, when shopping for daily necessities, they use sea taxis and ferries for long trips to places such as Koniya. As with potential demand in the three islands for shopping daily necessities (food, etc.) easily, drone air transportation as a new shopping service is introduced.

Details of the demonstration:

- Residents order both hot food and drink (such as steamed meat buns) and cold food and drink (such as ice cream) from stores (convenience stores in Koniya). To place orders, they used the dedicated smartphone app on trial
- The products were picked up at the store and taken to the temporary port in Koniya. The drone is equipped with temperature control for hot and cold food and drink respectively.
- After receiving the order, it took about 20 minutes to pick up and load the products, and the flight time from Koniya to Yoro/Ikeji was about 30 minutes. The potential of the on-demand service that could deliver products in less than one hour under the thermal/cooling control was verified.

■ Drone model: YAMAHA FAZER R G2

