

Appendix I. Emergency Response Checklist

Date: _____

Instructions: To be filled by the designated Emergency Response Coordinator and respective leads, unless otherwise designated. During study activities the Emergency Response Coordinator should have the checklist on them at all times.

I. Emergency Team Information

Name of Emergency Response Coordinator:

Telephone #: _____

Name of UAV/RPA Operator Lead:

Telephone #: _____

Name of UAV/RPA Operator #2:

Telephone #: _____

Name of Medical Response Lead at Site 1:

Telephone #: _____

Name of Medical Response Lead at Site 2:

Telephone #: _____

Name of Medical Response Lead at Site 3 (if needed):

Telephone #: _____

Name of Site 1: _____

Name of Site 2: _____

Name of Site 3: _____

Other Emergency Response Members (designation) and Phone Numbers:

1. Name: _____

#: _____ Site: _____

2. Name: _____

#: _____ Site: _____

3. Name: _____

#: _____ Site: _____

4. Name: _____

#: _____ Site: _____

5. Name: _____

#: _____ Site: _____

6. Name: _____

#: _____ Site: _____

7. Name: _____

#: _____ Site: _____

8. Name: _____

#: _____ Site: _____

9. Name: _____

#: _____ Site: _____

10. Name: _____

#: _____ Site: _____

II. Emergency Response Coordinator:

Impact Mitigation

- Ensure Operator has received all of the permissions needed to conduct flights
- Ensure the Operator has not run into any issues during the Corridor flights or previous study flights before flights resume.
- Conduct pre-sensitization meetings with:
 - All site in-charges (Health Center or other)
 - Communities their leaders at each site
 - Schools
- Pass out IEC materials
- Air radio message to ensure the public is aware
- Publish Press Release to ensure the public is aware
- Give flight schedule to in-charges and community leaders
- Hire/ sign contract with the emergency team

- Give emergency contact list (above) to the In-Charge at each site and the leader of the HCAC
 - Name and Position of in-Charge that received the Emergency Contact list at Site 1:

 - Name and Position of in-Charge that received the Emergency Contact list at Site 2:

 - Name and Position of in-Charge that received the Emergency Contact list at Site 3:

 - Name and Position of Community Leader that received the Emergency Contact list at Site 1:

 - Name and Position of Community Leader that received the Emergency Contact list at Site 2:

 - Name and Position of Community Leader that received the Emergency Contact list at Site 3:

- Hire police on standby
- Sectioned off area around each landing site day of (see flight specific information)
 - Sight 1
 - Sight 2
 - Sight 3 (as needed)

MAIN EMERGENCY CHECKLIST

In the event of an emergency

- Coordinator and UAV Operator Lead decide which team to dispatch first
- UAV Operator to give GPS coordinates and/or general location
- Coordinator calls each site leader and WhatsApps study team:
 - o Site 1
 - o Site 2
 - o Site 3 (as needed)
- Emergency team and respective UAV operator leave for site of incident/accident in 2 vehicles (including ambulance)
- VillageReach personnel at the location the emergency team leaves from will secure any remaining equipment
- UAV Operator and emergency team in other location determine whether to turn other UAV around or land at its expected destination. The team that remains will ensure payload is put in refrigeration while other emergency protocol is in affect.
- Upon arrival at the site:
 - o Site Emergency Team splits up:
 - Medical personnel assess situation and go to any injured people first and assesses injury (taking injured to the ambulance and nearest health facility as needed)
 - In case of many people injured, the medical team shall priorities do the following:
 - o identify those in need for priority evacuation to main hospital
 - o the medical team to divide personnel and supplies; some to treat patients on site, others escort the injured to main hospital.
 - Police and other team members section off the crash site and ensure the community is told to stay clear
 - UAV operator secures the UAV
 - DCA to work with UAV operator to assess site
 - Fire department members address any related fire
 - Relevant personnel secure payload (Blood- MBTS, Oxytocin- PMPB/Study team)
 - Coordinator talks to community leaders to avoid panic and determine what they saw happening at the time of the crash/incident
 - Emergency team member takes pictures of crash site and any related damage
 - After getting the injured healed or in the ambulance and UAV in the vehicle, police and coordinator remain behind to talk to the community
 - o Communications and Advocacy Manager helps talk to the crowd
 - o Communications and Advocacy Manager coordinates media
- Flights put on hold while DCA assesses situation *this will happen with any unplanned landing***
- After the DCA assessment a decision will be made whether to resume flights that day with the other aircraft and/or that aircraft.**
- If flights are cleared to resume, the coordinator will discuss with the community and the Principal Investigator will discuss with the In-Charges prior to resuming flights to ensure there is no confusion.

After the incident/emergency

- Communications and Advocacy Manager develops press release with input from DCA, MOH, VillageReach, and UAV operator
- UAV operator develops an initial report on incident within 24 hours, which is reviewed by DCA
- DCA determines whether the incident was due to external causes or an issue with the UAV itself
- DCA determines whether flights can resume
- If flights approved to resume, MOH makes decision whether they approve flights again.
- Coordinator and Communications and Advocacy Manager communicate with in-charges and community members at each site
 - Site 1
 - Site 2
 - Site 3 (as needed)
- UAV provider provides final report to DCA
- VillageReach delivers final report to MOH, in charges, and community leader

The Emergency Team Checklist

Preparations

- Ensure hire and coordination of an emergency team: *The emergency team shall be multi professional and should include Police, Fire Department, and medical team (trained Casualty/Trauma) Team, Study Team and the operator of the UAV/RPA.*
- Identify and train emergency response leader at each site and respective response teams- *the Emergency Response Coordinator would be in touch with the leader of each team and the leader would organize the team members in the event of an emergency*
 - Identified Site 1 Emergency response leader and team members (list on form)
 - Identified Site 2 Emergency response leader and team members (list on form)
 - Identified Site 3 Emergency response leader and team members (list on form)
- Give emergency team members some form of identifier to denote Emergency Team: sticker, clothing, hat, etc.
- Give fuel to each emergency team/vehicle/site in case there is not time to fuel
- Give each emergency team lead a copy of the Emergency SOP
- Give each emergency team member a copy of the emergency team checklist

Day of flights

- Hold daily meeting at ____ (time) at _____ (location) the morning of the flights (one hour ahead of flights) with emergency team
- Conduct roll call
- Identify location for each team member
- Site Leader ensures:
 - Vehicle present
 - Vehicle fueled
 - Back up fuel in vehicle
- Cordon off the landing or departure sites with highly visible materials prior to flight commencement.
- Clear Community members from landing sites
- Contact police on day of flight (in addition to prior)
- Send emergency to respective sites so they are present at least 20 minutes before flight
- Coordinator calls all site leaders to confirm communication
- Coordinator alerts all teams when flight has taken off

In the event of an incident:

- Coordinator receives call from coordinator
- Emergency team and respective UAV operator leave for site of incident/accident in 2 vehicles
- UAV Operator and emergency team in other locations ensure the equipment and space is secured and or put away at their locations.
- Upon arrival at the site:
 - Site Emergency Team splits up:
 - Medical personnel assess situation and go to any injured people first and assesses injury (taking injured to the ambulance and nearest health facility as needed)
 - In case of many people injured, the medical team shall priorities do the following:
 - identify those in need for priority evacuation to main hospital

- the medical team to divide personnel and supplies; some to treat patients on site, others escort the injured to main hospital.
- Police and other team members section off the crash site and ensure the community is told to stay clear
- UAV operator secures the UAV
- DCA to work with UAV operator to assess site
- Fire department members address any related fire
- Relevant personnel secure payload (Blood- MBTS, Oxytocin- PMPB/Study team)
- Coordinator talks to community leaders to avoid panic and determine what they saw happening at the time of the crash/incident
- Emergency team member takes pictures of crash site and any related damage
- After getting the injured healed or in the ambulance and UAV in the vehicle, police and coordinator remain behind to talk to the community
 - Communications and Advocacy Manager helps talk to the crowd
 - Communications and Advocacy Manager coordinates media
- **Flights put on hold while DCA assesses situation *this will happen with any unplanned landing***
- **After the DCA assessment a decision will be made whether to resume flights that day with the other aircraft and/or that aircraft.**
- If flights are cleared to resume, the coordinator will discuss with the community and the Principal Investigator will discuss with the In-Charges prior to resuming flights to ensure there is no confusion.

Operator: Must follow approved Department of Civil Aviation regulations at all times.

Impact Mitigation (Pre- flights)

- Gain approval for flights from the Department of Civil Aviation
- Read Aviation regulations in country of flights
- Ensure insurance coverage for people and property
- Gain approval for study flights by flying in corridor prior to study flights
- Coordinate flight paths with DCA and gain approval
- No indication of any issues at corridor and/or
 - Address any issues and cleared with DCA
 - Report any issues and cleared with DCA

NOTE: The operator shall not fly the UAV/RPA outside of the Kasungu Drone corridor if there is indication that there are issues with the operation of the aircraft.

- Design payload box with special/safe stowage for hazardous payload to minimize contamination
- Develop real time electronic in-flight drone tracking and visual line of site (VLOS) at designated waypoints.
- Conduct all flight checklists prior to each flight
- Contact air traffic control tower before using airspace.
- Label payload using standard conventions. If blood or other hazardous materials are being carried, the payload should be labeled accordingly.

In the event of an accident or incident

- Alert Civil Aviation and the Emergency Team at the first sign of any issue with the UAV/RPA.
- Immediately stop flights during official flights if there is any indication that there are issues with the operation of the aircraft and conduct a thorough assessment with DCA before being able to resume flights.**
- Coordinator and UAV Operator Lead decide which team to dispatch first
- Coordinator calls each site leader:
 - Site 1
 - Site 2
 - Site 3 (as needed)
- Emergency team and respective UAV operator leave for site of incident/accident in 2 vehicles
- UAV Operator and emergency team in other locations ensure the equipment and space is secured and or put away at their locations.
- Upon arrival at the site:
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