



UNITED NATIONS DEPARTMENT OF FIELD SUPPORT (DFS)

UNITED NATIONS RPAS EXPERIENCE FROM THE FIELD



Remote Technologies

DRONE



Negative repute !





Remote Technologies

UAS – Is it Unmanned ?

UAV – Is it a Vehicle?

RPAS – Remotely Piloted Aircraft Systems (by ICAO)



Classification of RPAS

Class	Category	Normal Employment	Normal Operating Altitude	Normal Mission Radius	Primary Supported Commander	Example Platform
CLASS I < 150 kg	MICRO <2 kg	Tactical Platoon, Section, Individual (single operator)	Up to 200 ft AGL	5 km (LOS)	Platoon, Section	Black Widow Mikado SpyArrow
	MINI 2-20 kg	Tactical Sub-unit (manual launch)	Up to 3K ft AGL	25 km (LOS)	Company, Squadron	Scan Eagle Skylark Raven
	SMALL >20 kg	Tactical Unit (employs launch system)	Up to 5K ft AGL	50 km (LOS)	Battalion, Regiment, Brigade	Luna Hermes 90 Skylark II
CLASS II 150 kg - 600 kg	TACTICAL	Tactical Formation	Up to 10,000 ft AGL	200 km (LOS)	Brigade	Hermes 450 Seeker 400 Shadow 600
CLASS III > 600 kg	Strike/ Combat	Strategic/National	Up to 65,000 ft MSL	Unlimited (BLOS)	Theatre COM	Predator B Predator C
	HALE	Strategic/National	Up to 65,000 ft MSL	Unlimited (BLOS)	Theatre COM	Global Hawk
	MALE	Operational/Theatre	Up to 45,000 ft MSL	Unlimited (BLOS)	JTF COM	Predator A Heron Hermes 900

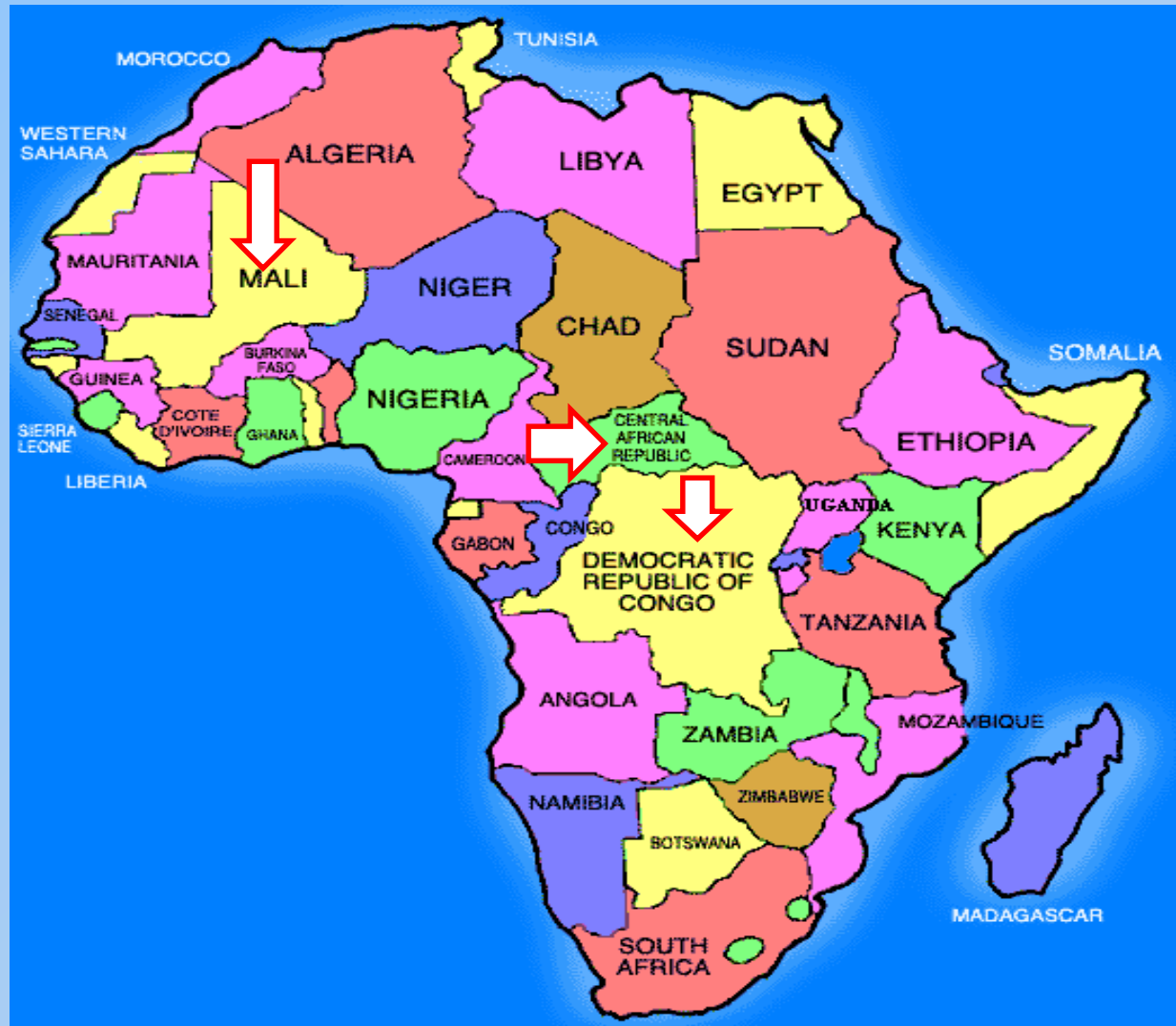


Countries of Operations

Republic of Mali

Central African Republic *

Democratic Republic of Congo



RPAS in the United Nations (unarmed)

LIGHT RPA's

RAVEN



ALADIN



TACTICAL RPA's

FALCO



MIKADO



PUMA



SHADOW-200



HEAVY/MALE RPA's

HERMES 900



HERON 1



RPA's Operators Type and Country

Operators	Civilian	Military	Type/Country	
<p>RPA's (Remotely piloted Aircraft)</p>	<p>6</p>	<p>42</p>	<p><u>Civilian</u> Falco (IT) Hermes-900 (UK)</p>	<p><u>Military</u> Shadow-200 (SE) Raven (NL) Puma (SE) Wasp (SE) Luna (DE) Aladin (DE) Mikado (DE)</p>

- Heron-1 Military RPAS from Germany to Mali
- The handheld mini's/ light utilized by military teams and GIS are not included

RPAS Possible Tasks



Peace Keeping (Day and Night)

- Mission Mandated support tasks

Humanitarian (Day and Night)

- Monitor Disaster Areas: flood, earthquake, lava eruptions
- Monitor population movements
- Identify/ Monitor illegal Activities
- Monitor movements of AG's
- SAR Operations
- IDP/ Refugee movements
- Geo Surveys
- Logistical surveys/ recce
- Facilities security support
- Any other

Note : Mechanisms are in place in each mission to support Humanitarian tasks. Imagery is usually different for humanitarian and PK tasks



Some Benefits

- Long hours of operations - day and night
- Personnel not in harm's way
- Higher flexibility of tasking
- Real time data and more response time for actions
- Positive impact on security situations *
- Morale for local population *

* Survey by France 24

<http://www.france24.com/en/20150409-un-drones-future-peacekeeping-democratic-republic-congo-fdlr-humanitarian-drc>

- ❖ Think of it only as a CCTV in a supermarket or at a security gate of a field location



Challenges

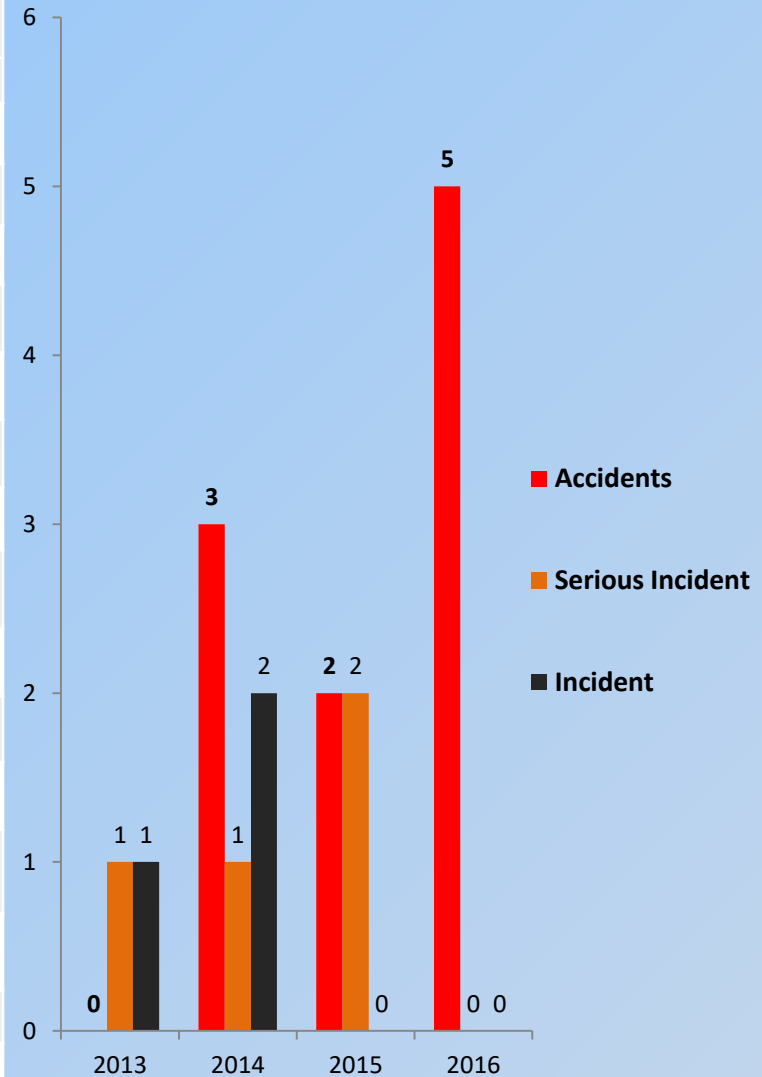
- Legal framework – Mandate and Approvals
- Regulatory - ICAO, EASA, FAA – Host Nations / Operators
- Information / Data Collection
 - Security
 - Storage
 - Infrastructure
- Technical
 - Integration with other resources - ASIFU
 - Environment and platform (payloads)- \$
 - Integration and Airspace Management – Host Country, Humanitarian, Commercial own PK air traffic
 - Infrastructure requirements
- Liability, Insurance
- Resistance from Partners / Sensitivities
- High accident rate vs Reputation



Accidents/ Incidents

RPA's OCCURRENCES FROM 2013 - 2016

DATE	LOCATION	OCCURRENCE
16-Dec-13	Goma	Serious Incident
20-Dec-13	Goma	Incident
15-Jan-14	Goma	Accident
31-Jan-14	Goma	Incident
7-Apr-14	Goma	Incident
28-Jul-14	Goma	Accident
8-Sep-14	Goma	Serious Incident
20-Oct-14	Goma	Accident
10-Jan-15	Bunia	Serious Incident
10-Mar-15	Bunia	Serious Incident
24-Aug-15	Bunia	Accident
16-Dec-15	Bunia	Accident
4-Feb-16	Bunia	Accident
29-Apr-16	Tombouctou	Accident
1-Jul-16	Gao	Accident
13-Jul-16	Bukiringi	Accident
12-Sep-16	Gao	Accident



Mitigating Actions from Lessons Learnt



- Development of UN Regulatory framework – ICAO Doc 10019 (DPKO,DFS and DM)
- Detailed coordination with partners (UNCT) and host country in AOR
- More transparency
- Integrated operations for optimum benefits to support mandated activities
- Robust process of RFP and technical evaluations
- Enhanced safety features and monitoring
- Change of attitude and approach efforts



Conclusion

- ✓ UN RPAS Standards once developed could be studied for inclusion in UN AVSTADS after UN ATAG approval
- ✓ Great opportunity to work together

Our paths may be different and so our tools but they all converge on the same objective – saving lives !



Thank you for your attention