

DEBRIEFING to the ICAO

DRONE ASSESSMENT

USE OF DRONE IMAGERY STRENGTHENING ASSESSMENT EFFORTS

Elie LENSKI, UNDAC Preparedness & Response Officer



Atlas Roster with United Nations Disaster Assessment & Coordination



UNDAC RESPONSE : EQ 7.3 in VANUATU

Mission from December 19th, 2024, to January 9th, 2025



AGENDA

1

DRONE CONTRIBUTION



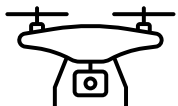
2

EXAMPLE



3

CHALLENGES & LIMITATIONS



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1 DRONE CONTRIBUTION TO AERIAL ASSESSMENTS

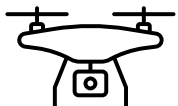
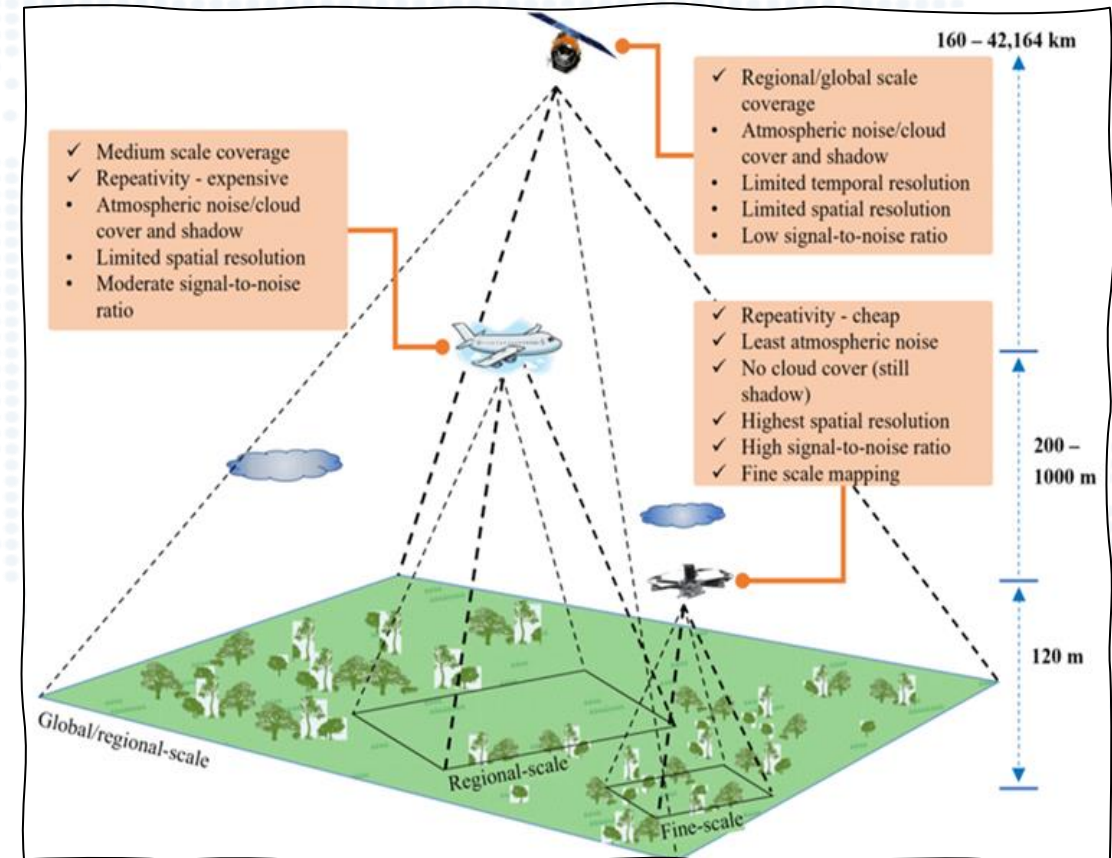


AREAS OF INTEREST

- ❑ PHYSICAL ACCESS CONSTRAINTS
- ❑ INFRASTRUCTURE DAMAGE
- ❑ ENVIRONMENTAL RISKS

MODALITIES

- ✓ SUPPORT COORDINATION
- ✓ STRENGTHEN SHARING
- ✓ UNIFIED METHODOLOGY
- ✓ CONDUCT ASSESSMENT



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REQUESTER



- JOINT ENVIRONMENTAL UNIT
- INFRASTRUCTURE EXPERT
- GOVERNMENT BODIES
- COMMUNITY OF PARTNERS

NEED

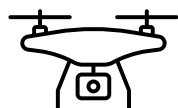


- ☐ FLAG RISKS
- ☐ DAMAGES
- ☐ OVERVIEW
- ☐ MAPPING

ADDED VALUE



- ✓ SPEED UP
- ✓ ACCESSIBILITY
- ✓ COST EFFICIENT
- ✓ GRANULARITY /
RESOLUTION



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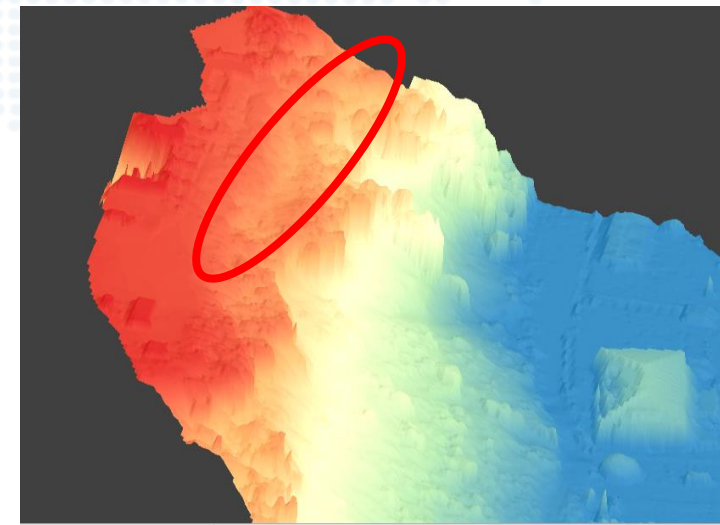
Mission from December 19th, 2024, to January 9th, 2025



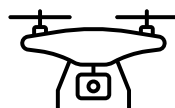
Aerial image



3D Model



Digital Elevation Model (DEM)



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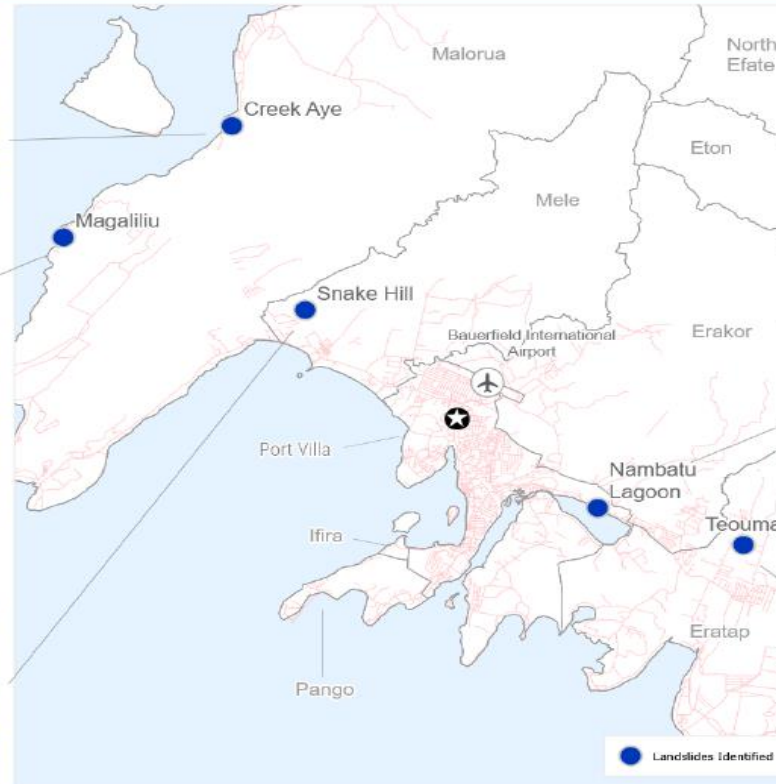
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2 ASSESSMENT OF LANDSLIDES RISK



VANUATU EARTHQUAKE OCHA/UNDAC Landslides Assessments

As of 06 Jan 2025



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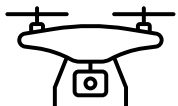
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2 DRONE ASSESSMENT: DAM BURST RISK



- Hard to reach area
- Risk of secondary / tertiary hazard



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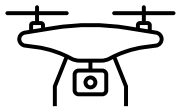
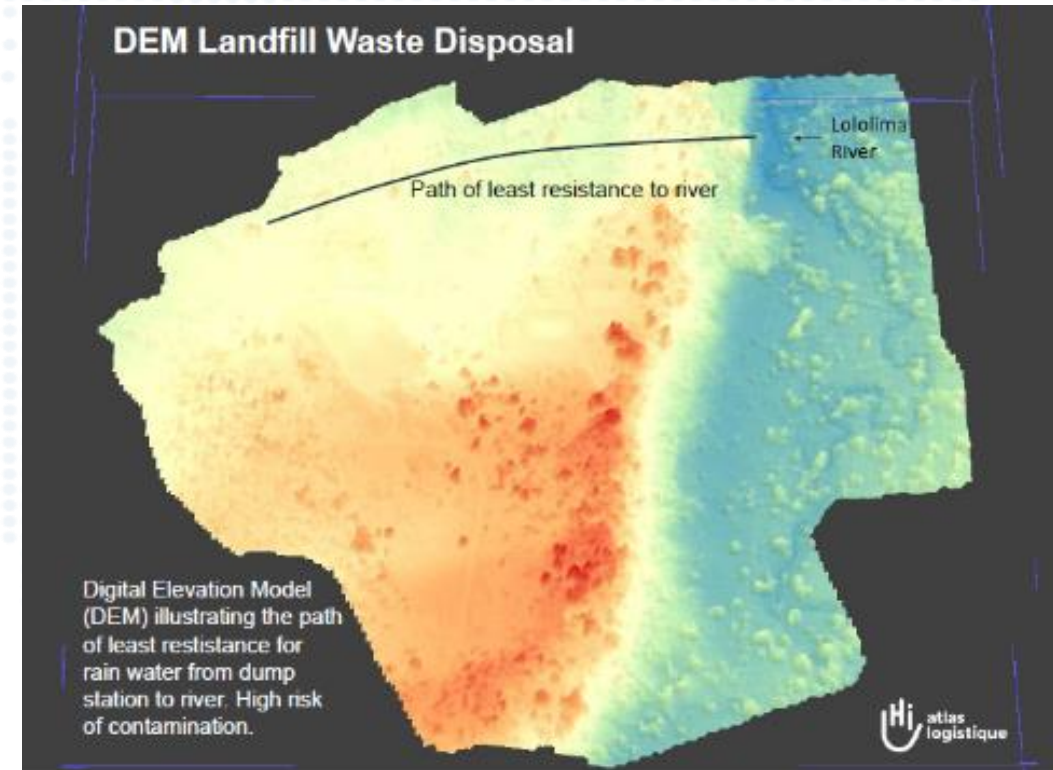


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2 Drone Assessment : DUMPING STATION



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TECHNICAL CONSIDERATIONS : DUMPING STATION



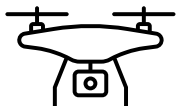
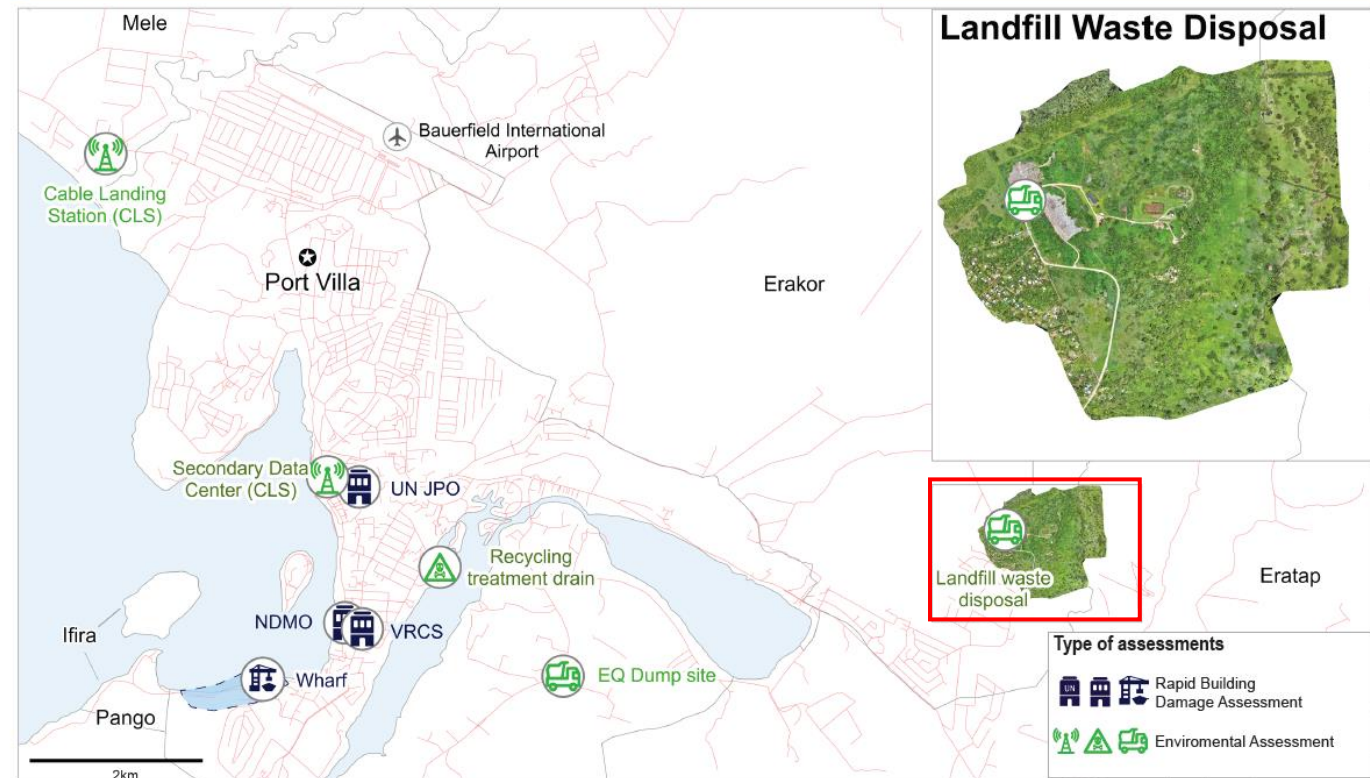
- 1/1 scale of orthomosaic
- 100% processed offline
- Produced in 24h



VANUATU

Earthquake OCHA/UNDAC Team Assessments

As of 06 Jan 2025



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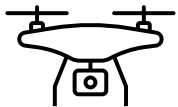
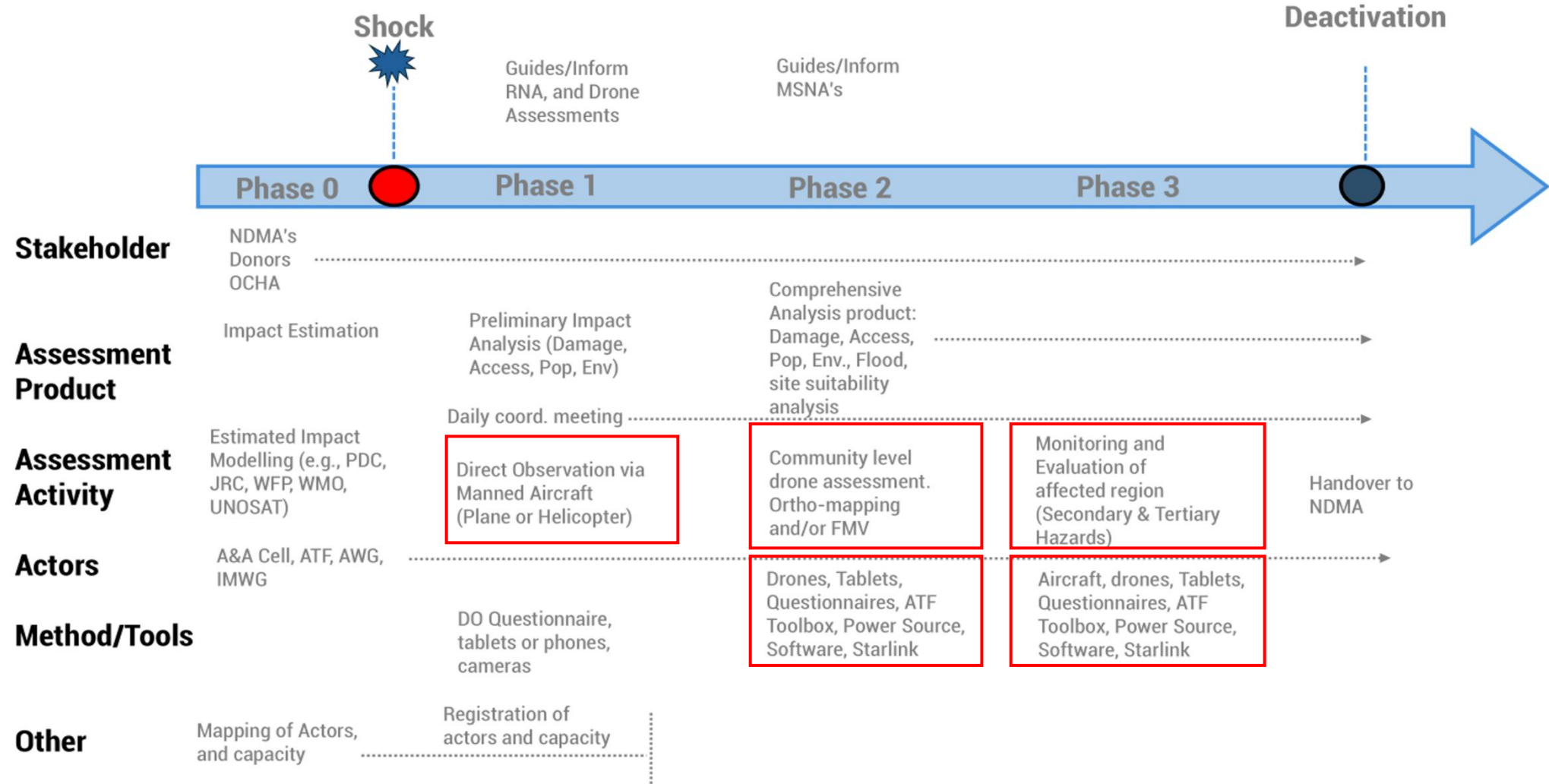


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Aerial Assessment Coordination & Delivery



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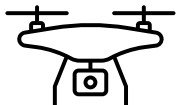
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DRONE ASSESSMENT : CHALLENGE & LIMITATIONS



- **Weather condition**
- **Technology limitation : battery autonomy / range / etc.**
- **National authority approval to fly**
- **Local authority and community approval to fly**
- **Coordination : gaps and overlap**



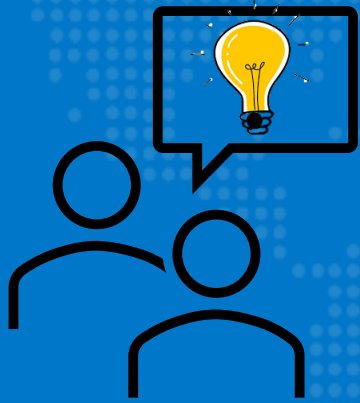
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ANY SUGGESTION ?



Joint Environment Unit Assessment mission, December 30th, 2024
Port Vila, VANUATU

MANY THANKS FOR YOUR ATTENTION !

For any follow-up discussions : e.lenski@atlas-roster.hi.org

