

Appendix 5.2

**SLOPE-AI (Smart Landslide Observation and Prediction Enhanced with AI) for
Reliable and Economical IoT-Based Landslide Monitoring
Traveling to Project Sites in Ranau, Sabah, Malaysia
Report Form**

I. Proposer:

Name:	Norinah Abd Rahman
Position:	Project Leader
Institution:	Universiti Kebangsaan Malaysia

II. Objective:

1. To conduct on-site activities, including drone operation, geotechnical assessment, seismic (SASW) testing, hydrological assessment, and communication system verification at selected project sites.

III. Schedule:

Date	Location	Work	Person in charge
3 Dec 2025 (half-day) & 4 Dec 2025 (half-day) & 5 Dec 2025 (half-day)	Site 1 (KM84, Kundasang. 06° 00' 43.21" N, 116° 30' 48.02" E)	Geophysical survey (SASW)	Ir. Dr. Norinah Abd Rahman Ir. Dr. Reza P. Munirwan, Assoc. Prof. Ir. Dr. Yusria Darma
	Site 2 (KM96.7, Kundasang. 05° 58' 27.97"N, 116° 35' 42.71"E)	Geophysical survey (MASW)	PGeol. Dr. Nur Zulfa Abdul Kalid P.Geol. Mohd. Sallehuddin Mokhtar Muhamad Zaidi Zainudin Muhammad Nur Amirul Haziq Ridzuan (GVS)
		Geotechnical support and technical advice	Ir. Dr. Mohd Farid Ahmad @ Majid Ir. Azilah Ismail (FACE)
		Geotechnical Assessment & Soil Sampling	Ir. Dr. Anuar Kasa Dr. Phoummixay Siharath Dr. Phanthoudeth Pongpanya
		Drone Operation & Topographic Mapping	Dr. Ahmad Nazrul Hakimi Ibrahim Ir. Dr. Ros Nadiyah Rosli
		Hydrological Assessment	Assoc. Prof. Ir. Dr. Siti Fatin Mohd Razali Assoc. Prof. Ts. Dr. Mohd Hariri

		Arifin
	Communication System & IoT Testing	Dr. Asma' Abu Samah Dr. Farizah Ansarudin Prof. Ir. Dr. Norhana Arsad
	Site clearing	Freddly James (Local resident)

Note:

1. Field work on 3 December and 4 December was conducted for half a day only due to afternoon rainfall, different from scheduled.
2. A team from Geoventure Solution Sdn. Bhd. joined the field work and performed additional MASW testing, different from scheduled.
3. A team from Consultface Sdn. Bhd. also joined the field work by providing geotechnical support and technical advice, different from scheduled.
4. UKM team member Assoc. Prof. Dr. Nor Fadzilah Abdullah was unable to participate in the field due to a tight schedule. The scope of work originally assigned to her was carried out by Dr. Farizah Ansarudin and Prof. Ir. Dr. Norhana Arsad (UKM-supported), different from scheduled.
5. UKM team member Assoc. Prof. Ts. Dr. Mohd Hariri Arifin was able to join the field work until 3 Dec 2025,), different from scheduled.
6. A local resident was engaged to assist with site clearing due to dense vegetation at the project site, different from scheduled.

IV. Participants:

No.	Name	Organization
1	Ir. Dr. Norinah Abd Rahman	UKM
2	Ir. Dr. Ros Nadiah Rosli	UKM
3	Ir. Dr. Anuar Kasa	UKM
4	Dr. Ahmad Nazrul Hakimi Ibrahim	UKM
5	Assoc. Prof. Ir. Dr. Siti Fatin Mohd Razali	UKM
6	Assoc. Prof. Ts. Dr. Mohd Hariri Arifin	UKM
7	Dr. Asma' Abu Samah	UKM
8	Dr. Farizah Ansarudin	UKM
9	Prof. Ir. Dr. Norhana Arsad	UKM
10	Ir. Dr. Reza P. Munirwan	USK
11	Assoc. Prof. Ir. Dr. Yusria Darma	USK
12	Dr. Phoummixay Siharath	NUOL
13	Dr. Banthasith Vongphuthone	NUOL
14	Ir. Dr. Mohd Farid Ahmad @ Majid	FACE
15	Ir. Azilah Ismail	FACE
16	PGeol. Dr. Nur Zulfa Abdul Kalid	GVS
17	P.Geol. Mohd. Sallehuddin Mokhtar	GVS
18	Muhamad Zaidi Zainudin	GVS
19	Muhammad Nur Amirul Haziq Ridzuan	GVS
20	Freddly James	Local people

V. Summary of the activities corresponding to the objectives

On-site activities at the selected SLOPE-AI project sites involved coordinated geotechnical, geophysical, hydrological, topographic, and communication system operations field assesment. SASW and MASW surveys were conducted by deploying geophones along pre-determined survey lines, performing controlled impacts, calibrating sensors before measurements, and regularly checking equipment during data acquisition. Geotechnical assessments included slope inspections, soil characterization, and collection of representative soil samples (disturbed samples), with proper handling, labeling, and storage for laboratory testing, while on-site consultation ensured accurate interpretation of field conditions. UAV surveys were carried out with pre-flight planning, GPS-based waypoint navigation, and periodic battery and to produce high-resolution aerial imagery. Hydrological observations recorded surface runoff, drainage patterns, and potential water accumulation zones by visual mapping, water sample also collected. Communication system and IoT testing involved verification of data transmission, and preliminary troubleshooting to ensure signal reliability and system integration. All activities were executed with operational checks, data quality control, and hands-on involvement of team members.

VI. Others





SASW and MASW tests



Geotechnical Assessment and Communication Groups



Hydrological Assessment



Drone Operation Group



Group photo



Site clearing by hired local resident

Appendix 5.3

Expense Report of Traveling to Field Test Sites

Name (Proposer):	Norinah Abd Rahman
Position:	Project Leader
Institution:	Univeriti Kebangsaan Malaysia
Project Title:	SLOPE-AI (Smart Landslide Observation and Prediction Enhanced with AI) for Reliable and Economical IoT-Based Landslide Monitoring
Meeting/Event name:	
Date and Venue:	2 – 5 December 2025 Ranau, Sabah

1. Meeting package (if it is scheduled)

Date	Description (pax/venue, etc.)	Amount	Currency	Remarks
03/12/2025 – 05/12/2025	Lunch meals (11pax x 3 days)	2,310	MYR	Cash(/) Who paid: Norinah Abd Rahman Supporting documents NO. (RNJTT25001203)

2. Transportation Fee (flight/train/bus/taxi/rental car, etc.)

Date of Use	Means of transportation & Route	Amount	Currency	Remarks
02/12/2025 – 05/12/2025	Ground transportation	6,260	MYR	Cash (/) Who paid: Norinah Abd Rahman Supporting documents NO. (RNJTT25001203)

3. Accommodation Fee

Date of Use	Description (pax/ hotel name, etc.)	Amount	Currency	Remarks
02/12/2025	Hotel Room (6 Rooms x 3 nights)	6,120	MYR	Cash(/) Who paid: Norinah Abd Rahman Supporting documents NO. (RNJTT25001203)
02/12/2025	H Benjamin Residence - Additional room (1 rooms x 3 nights)	252	USD	Cash(/) Who paid: Phoummixay Siharath Supporting documents NO. (NUOL-Receipt 2/ RNJTT25001202)

4. Others (material costs/construction costs/Visa application/PCR test, etc.)

Date	Description (for what)	Amount	Currency	Remarks
02/12/2025	Water bottle for water sample collection.	89.70	MYR	Debit card (/) Who paid: Mohd Hariri Arifin Supporting documents NO. (R000436696)
03/12/2025	Service to clear working path to by local residence (native people).	300	MYR	Bank transfer(/) Who paid: Norinah Abd Rahman Supporting documents NO. (323175202Q)

Necessary documents: receipt/proof of payment, etc.

TOTAL ALL 16,100.30 (MYR)

**Total calculation is included in an excel file named 'Calculation'*