

4th Meeting of the Mine Action Innovation Technical Group (ITG)

Meeting Minutes

Date: 17 March 2026

Time: 10:00 – 12:00 CET

Format: Online

1. Introduction

The GICHD convened the meeting as part of the Mine Action Innovation Hub to bring together stakeholders across mine action, research, and technology sectors. The meeting had 29 participants (10 women and 19 men).

Objectives of the meeting:

- Recap ITG workplan and priorities for 2026
- Share updates on ongoing innovation activities
- Provide updates on ITG technical subgroups

The agenda is provided in Annex A and the list of participants in Annex B.

2. Opening and Workplan Overview

The GICHD opened the meeting with welcome remarks and housekeeping. Key points:

- The ITG will meet more frequently in 2026 (approximately every two months). Additional meetings may be held together with sector-wide events. Increased focus on shorter, more targeted thematic meetings.
- A side event on localization and innovation will be organized during the NDM (22–24 April, Geneva); due to the high volume of proposals, it may be merged with the MAG event, offering complementary perspectives from different angles.
- ITG mailing list is regularly updated; inactive contacts and bounced emails are removed—please stay engaged or inform us if your email changes if you wish to remain in the Hub
- Strong emphasis on technical subgroups to drive concrete outputs.
- We have witnessed strong engagement from members, with numerous subgroup sign-ups.
- The Land Release Research Agenda is in final stages of peer review and expected to be finalized soon. A technical sub-group is currently peer reviewing it.
- A new Innovation Hub website and strategic vision are under development by the Strategic Steering Board (expected mid-2026).

An in-person ITG meeting is planned for 1–2 July 2026 in Belgrade, focusing on:

- Sector's needs identification and analysis
- Case study development
- Operational challenges in land release

3. Sharing of Information

3.1 Technical training on UAV applications in Non-Technical Survey (Serbia)

Dr. Dejan Blagojević, Professor of Applied Studies at the Academy of Technical and Educational Applied Studies (Niš Department), delivered a presentation on the recent Technical training on UAV applications for NTS, conducted in partnership with SMAC (February 2026). The focus was the particular requirements to train staff to understand and use UAV based tools to support the NTS process.

Summary:

- UAVs are decision-support tools, not standalone solutions.
- Strong emphasis on:
 - Flight methodology
 - Data quality and validation
 - Photogrammetry and GIS integration
- Training included:
 - 70% practical / 30% theoretical
 - Multi-agency participation (Serbia, Bosnia and Herzegovina, Montenegro)
- Critical insight:
 - Data collection, processing, and decision-making require different skillsets and roles.
 - Use of UAV imagery and processing tools (e.g. Pix4D, QGIS) to support evidence-based decision-making.

Discussion highlights:

- Increasing adoption of UAVs across organizations (e.g., Ukraine, HALO)
- Use cases include:
 - Mapping and evidence verification in NTS
 - Supporting technical survey and area reduction
 - Guiding mechanical assets and access routes
- Effective deployment requires multi-disciplinary teams:
 - UAV operators
 - GIS/data analysts
 - Operations decision-makers
- Increasing experimentation with:
 - Thermal imagery
 - AI-assisted processing of sensor data (mostly RGB imaging)
 - Sensor fusion

- Challenges identified:
 - Often poor data quality collected due to lack of photogrammetry expertise and the right skills and training of operators
 - Lack of standardized training (training packages are currently being developed and delivered at least by HI and HALO).
 - Lack of testing and evaluation protocols to assist validation and accreditation processes
- Way ahead:
 - Standards evolving (notably IMAS 07.11 of January 2026 update included remote sensing)
 - ITG sub-group kicked off to develop common T&E protocols
 - Publications on past activities to be shared
 - Training packages could also be further shared

3.2 Ukraine Mine Action Innovation System

Kateryna Drozd, Demine Ukraine, Ministry of Economy, Environment and Agriculture, delivered a presentation focused on innovation developments in Ukraine.

Summary:

- Shift toward operationally driven innovation, rather than research-led.
- Introduction of the GRIT platform for data-driven prioritization.
- Increased collaboration between:
 - Operators
 - Engineers
 - Researchers
 - Government
- Main priorities:
 - Field testing and validation of technologies under real conditions
 - Building a national mine action innovation system
 - Strengthening, standardization, certification processes and local manufacturing capacity
- Challenges that remain despite the continuous efforts:
 - Many technologies are developed without understanding operational needs
 - Risk of duplication and non-applicable solutions
 - Need for continuous engagement with end users

At the end of the discussion the sharing of information section, the following reflections were shared with the ITG:

- ITG seen as a platform for connecting researchers with field actors.
- Academic contributors highlighted challenges in scaling innovation:
- Manufacturability of advanced sensors (e.g., quantum sensing)
- Limited access to field testing environments
- Need for iterative testing cycles with operational partners

4. Technical Subgroup Updates

As highlighted in the beginning of the meeting, to drive more concrete outputs of the ITG work, a strong emphasis will be put on operationalizing technical subgroups. Seven (7) technical subgroups have been initiated, covering priority thematic areas for 2026. Several subgroups are already active and progressing, with strong engagement from members and a high number of volunteers.

The following subgroups provided brief updates to the ITG:

- Test & Evaluation (T&E) for UAV-based Remote Sensing
 - Ongoing efforts to develop standardized protocols for testing and evaluating UAV-mounted sensors.
 - Recognized as critical to support IMAS alignment and comparability of results.
 - A proposal for the IMAS RB will be made based on this sub-group.
- Innovation Session 2026 – Mine Action in Urban Areas
 - First meeting planned for 18Mar to discuss initial agenda for the session (29 Sep–1 Oct 2026, Geneva).
 - Focus on urban contamination challenges and actionable solutions.
- Non-explosive Disposal & Protective Technologies
 - First meeting planned for 20Mar.
 - Research into alternatives to high-order detonation and blast and fragmentation mitigation technologies, particularly in urban contexts.
 - Trials will be conducted with selected technologies/methodologies
- Technical Survey
 - Ongoing review and update of the GICHD Technical Survey Guide.
 - Subgroup contributing to ensure integration of new technologies and operational practices.
- Innovation Award 2026
 - Subgroup to act as evaluation committee. Around 15 full papers to be reviewed by the panel 1-29 June 2026.
 - Award will adopt an open innovation format with 3 categories: breakthrough innovation, fringe innovation and scalable innovation.

6. AOB

6.1 Publication of research and innovation related articles through the Hub

With JMU's JCWD not currently functioning, there is a gap for sector publications. The Innovation Hub could close that gap research and innovation related articles. It would entail:

- Publishing in the Innovation Hub website (which will be created by Jun26).
- Peer review by qualified voluntary ITG members.

This would be done on a free flow basis, as requested, without adding resources to go after articles and publications or producing issues.

Discussion:

- Issue of conflict of interest would need to be addressed: participants in the ITG might also be authors, so peer review assignments need careful selection to avoid conflicts.
- Resource Intensity: it was raised that peer reviewing is time-consuming. Dedicated teams or external experts may be required. Coordination by Innovation Hub secretary would be required.

Action items :

- A short concept paper will be drafted by GICHD to describe the initiative more concretely, incorporating the feedback received from ITG.
- This concept paper will be disseminated to ITG with an MS Form questionnaire to collect further inputs and validate support for the initiative.

7. Way Ahead:

The ITG will continue to convene according to the agreed Workplan in a large plenary focusing on sharing of information and brainstorming on specific themes, with more regular short meetings. Technical sub-groups will advance on more concrete deliverables and report back to the ITG.

Next meeting:

- Next ITG meeting planned for **28 May** focusing on Explosive substances detection. ITG members interested in presenting during the upcoming meeting shall contact Boris Ohanyan Boris : b.ohanyan@gichd.org
- Agenda and calendar invitation to be sent in the coming weeks.

Annex A. Agenda

Time	Activity and Topic	Who
OPENING (30 mins)		
10:00-10:10	Welcome and Housekeeping	Radwa Rabie
10:10-10:30	Updates on the Innovation Hub Recap of 2026 workplan & priorities	Miodrag Milenkovic, Pedro Basto
SHARING OF INFORMATION (60 mins)		
10:30-11:30	UAV Team Serbia – UAS application in NTS Training	Dejan Blagojevic
	FAIR risk assessment model – way ahead (Innovation Awardee 2025) - cancelled	Charlie Valentine
	Ukraine Mine Action Innovation update	Kateryna Drozd
TECHNICAL SUBGROUP UPDATES (20 mins)		
11:30-11:50	T&E for UAV based remote sensing	Matthew Abercrombie
	Innovation Session 26	Alain Nellen
	Non explosive disposal / protective technologies	Georgina Darlow
	Technical Survey	Radwa Rabie
	Innovation Award 26	Boris Ohanyan
WRAP UP (10 mins)		
11:50-12:00	AOB	All
	Wrap up and way ahead	Co-Chairs

Annex B. PARTICIPANTS LIST

National Mine Action Authorities/Centers (NMAA/NMAC) & Government institutions

Name	Organizations / Affiliation
Miodrag Milenkovic	Republic of Serbia Mine Action Centre
Jelena Krstić	Republic of Serbia
Arshak Kocharyan	Center for Humanitarian Demining and Expertise (CHDE)
Rothna Buth	ASEAN Regional Mine Action Center (ARMAC)
Kateryna Drozd	Demine Ukraine / Ministry of Education (MoE)

Mine Action Organizations

Name	Organizations / Affiliation
Angela De Santis	FSD
Katherine James	The HALO Trust
Christopher Cooper	The HALO Trust
David Lloyd	The HALO Trust
Joshua Redmond	The HALO Trust
Matthew Abercrombie	The HALO Trust
David Wiley	MAG
Stephen Ingram	MAG
Muhannad Alnajjar	Mine Action Canada Fellow and ICBL campaigner
Erik Tollefsen	ICRC
Kaitlin Hodge	HI

Academia and Research and Technology Organizations

Name	Organization / Affiliation
Dejan Blagojević	Academy of Applied Technical Studies
Stirling Scholes	University of Strathclyde
Shahab Moeini	SubSphere Corporation
Michael Zimmer	Minesight Tech
John Frucci	Oklahoma State University / Global Consortium for Explosive Hazard Mitigation / CERAD
Mariazel Maqueda López	EPFL
Emanuela Elisa Cepolina	Snail Aid – Technology for Development
Emilio Canales	FAE Group SpA
Diane Turner	Anthias Consulting Limited
Jonathon Guthrie	MRead
Rob Haelterman	Royal Military Academy, Belgium

United Nations, other international organizations and NGOs

Mathieu Waeber	UNMAS
Sean Hatfield Moorhouse	UNDP

GICHD

- Radwa Rabie
- Boris Ohanyan
- Pedro Basto
- Igor Karpachev
- Alain Nellen
- Kinda Samra