

Day 2 — How Would We Actually Investigate It?

Friday, 16 October 2026

Prague, Czech Republic

Day 2 moves from understanding the problem to designing the investigation.

The central question is simple:

If we had to begin work on this territory, what would we actually do?

The day is organised around real cases, operational constraints, technologies, field methods and investigation design.

Participants are not divided into academic and practical groups.

A Case Lab may bring together:

- a local organisation;
- a soil or water specialist;
- a GIS or Earth Observation company;
- a humanitarian demining operator;
- a laboratory;
- a geophysicist;
- an engineer;
- a remediation company;
- an infrastructure operator;
- and a potential project or financing partner.

Each sees a different part of the same problem.

Day 2 is where those parts have to become an investigation.

09:00–09:20

Day 1 → Day 2

What do we need to investigate?

The morning begins with a short synthesis of Day 1.

The purpose is not to repeat the previous discussions.

The moderators will identify a limited number of unresolved questions that require an operational response.

These may include:

- missing spatial evidence;
- uncertain contamination sources;
- inaccessible territory;
- inadequate historical baselines;
- unknown groundwater pathways;
- missing laboratory data;
- uncertainties after mine clearance;
- inadequate monitoring systems;
- or questions that cannot be answered with the methods currently proposed.

These problems become inputs for the Case Labs.

09:20–10:50

Case Lab I

Returning Land to Civilian Use

One possible Case Lab will examine a territory affected by war, explosive hazards and possible environmental contamination.

Humanitarian demining answers an essential question:

Can people enter the territory safely with respect to explosive hazards?

But this does not automatically answer:

Is the territory environmentally safe to use?

The working group may examine:

- mine-action information;
- historical land use;
- satellite imagery;
- soil conditions;
- possible energetic residues;
- metals and other contaminants;
- groundwater;
- surface water;
- mechanical disturbance caused by clearance;
- agricultural use;
- food-chain considerations;
- and long-term monitoring.

The purpose is to design the investigation that should follow land release.

Questions for the Case Lab

What information should pass from the mine-action organisation to the environmental team?

Which areas should be sampled first?

What can be mapped remotely?

What must be measured directly?

Which contaminants should be considered?

Is groundwater investigation necessary?

How should mechanical clearance affect sampling design?

What evidence is required before agriculture resumes?

Who should remain responsible for monitoring afterwards?

The session should move toward a practical investigation structure rather than a general discussion.

10:50–11:20

Coffee Break

Participants working on the Case Lab are encouraged to continue discussion informally.

11:20–12:50

Case Lab II

A War-Affected Freshwater or Aquatic System

War-related environmental impacts rarely stop at the edge of a contaminated site.

Rivers, reservoirs, groundwater and sediments may transport contamination across large distances and over long periods.

A water-system Case Lab may include:

- damaged industrial infrastructure;
- wastewater releases;
- fuel or chemical contamination;
- altered hydrology;
- destroyed monitoring stations;
- sediment contamination;
- damaged water-supply systems;
- remote sensing;
- field sensors;
- laboratory data;
- downstream populations;
- and ecological impacts.

The objective is again practical:

How should this system actually be investigated?

Possible Working Questions

What historical baseline exists?

If it does not exist, how can it be reconstructed?

What can Earth Observation reveal?

Water extent?

Changes in vegetation?

Turbidity?

Surface anomalies?

Infrastructure damage?

What requires field measurement?

Where should monitoring points be located?

Which parameters require continuous monitoring?

Which require laboratory confirmation?

Should sediments be sampled?

Is groundwater connected to the observed problem?

How should upstream and downstream conditions be compared?

What can local organisations realistically maintain after the initial project ends?

The result should be an investigation design, not simply a description of water pollution.

12:50–13:50

Lunch

The conference venue and surrounding area allow discussions to continue informally during lunch.

13:50–14:50

Applied Systems II

Access & Measurement

The afternoon begins with selected short contributions from organisations whose capabilities become relevant once a territory moves from observation to field investigation.

Possible areas include:

Humanitarian Mine Action & UXO

- non-technical survey;
- technical survey;
- mechanical clearance;
- detector data;
- land release;
- marine UXO.

Geophysics

- GPR;
- electromagnetic methods;
- subsurface mapping;
- buried infrastructure;
- groundwater-related investigation.

Robotics & Remote Inspection

- drones;
- autonomous vehicles;
- ROVs;
- hazardous-site inspection;
- GPS-denied environments.

Field Analysis

- portable XRF;
- rapid screening;
- radiation detection;
- field chemistry;
- environmental sensors.

Laboratory Analysis

- soil;
- water;
- sediment;
- hydrocarbons;
- metals;
- explosives residues;
- dioxins;
- PFAS;
- mixed and unknown contaminants.

Water & Groundwater Monitoring

- continuous sensors;
- telemetry;
- sampling;
- hydrogeology;
- contaminant transport.

Applied Evidence Inputs

Selected organisations may provide short inputs.

These are not conventional company presentations.

Each contribution should answer:

What can the method actually measure or do?

What evidence does it produce?

What does it not tell us?

What conditions cause it to fail?

What information is required before it can be deployed?

Where in the current Case Labs could it be useful?

Several inputs will be followed by common discussion.

14:50–16:20

Investigation Design Workshops

The conference then divides into working groups organised by **function**, not by institutional background or academic discipline.

The exact number of groups will depend on the confirmed participants and Case Labs.

Working Group A

Detection & Mapping

Possible participants:

- local territorial specialists;
- GIS organisations;
- Earth Observation companies;
- drone operators;
- geographers;
- field investigators.

Questions:

- What is already visible?
- Which historical imagery is available?
- Which areas should be prioritised?
- Which spatial units should be used?
- Where are the strongest uncertainties?
- What must be verified on the ground?

Expected output

A preliminary spatial investigation model identifying:

priority areas → evidence → uncertainties → field-validation needs.

Working Group B

Access & Measurement

Possible participants:

- mine-action organisations;
- geophysicists;
- local field organisations;
- environmental laboratories;
- soil and water specialists;
- sensor providers;
- engineers.

Questions:

- Where can teams safely enter?
- What must happen before sampling?
- Which methods should be non-invasive?
- Which samples are necessary?
- How many?
- Where?
- How should they be georeferenced?
- Which analyses are required?
- What quality-control system is needed?

Expected output

A practical field-investigation sequence.

Working Group C

Interpretation & Risk

Possible participants:

- environmental scientists;
- hydrogeologists;
- toxicologists;
- public-health specialists;

- GIS/data specialists;
- local experts;
- risk-assessment organisations.

Questions:

- Which hypotheses are being tested?
- What alternative explanations exist?
- Which evidence would distinguish between them?
- What exposure pathways are plausible?
- What does the available evidence allow us to conclude?
- Where would a conclusion exceed the evidence?

Expected output

A structured set of:

hypotheses → evidence requirements → uncertainties → decision thresholds.

Working Group D

Remediation & Recovery

Possible participants:

- remediation companies;
- engineering organisations;
- water companies;
- agricultural organisations;
- infrastructure operators;
- local project anchors;
- investors and development organisations.

Questions:

- What decision needs to be supported?
- Is remediation necessary?
- Which technologies might be feasible?
- What additional information does the remediation team need?
- When can land return to use?
- What should be monitored afterwards?
- Who will operate the system?
- What local capacity is required?
- What could realistically become a pilot project?

Expected output

A preliminary recovery pathway.

16:20–16:50

Coffee Break

Working groups may continue informally or compare their preliminary results with other groups.

16:50–17:50

Common Working Session

What Would a Minimum Viable Investigation Look Like?

Ideal research conditions rarely exist in conflict-affected regions.

There may be limited:

- access;
- time;
- funding;
- historical information;
- laboratory capacity;
- equipment;
- personnel;
- or institutional stability.

The conference will therefore test the concept of a:

Minimum Viable Investigation

This means:

the smallest defensible investigation capable of supporting the next responsible decision.

It is not a lower scientific standard.

It is a decision-oriented investigation design.

For example:

If the question is:

Can this agricultural land return to use?

The minimum investigation may differ from one intended to:

establish complete contaminant transport mechanisms for the next twenty years.

If the decision is:

Should a community continue using this water source?

The investigation may need to produce an answer rapidly.

If the question is:

Which remediation technology should be selected?

A different set of evidence may be required.

The working groups will therefore present:

Decision

Minimum evidence required

Methods

Access requirements

Remaining uncertainty

What happens next

17:50–18:15

Day 2 Synthesis

The day concludes by identifying which ideas have become sufficiently concrete to move into project development.

Possible outputs include:

- investigation protocols;
- maps;

- sampling plans;
- data requirements;
- technology tests;
- local implementation needs;
- monitoring concepts;
- possible pilot sites;
- preliminary work packages;
- and potential consortium structures.

These become inputs for Day 3.

What Day 2 Should Produce

Day 1 asks:

What do we know?

Day 2 must produce something more operational:

where to work;

what to measure;

how to gain access;

which methods to use;

what evidence is sufficient;

what cannot yet be concluded;

and what a realistic first investigation would require.

The result does not need to be a perfect research programme.

It needs to be **a better plan than the one we had in the morning.**

From Investigation to Project

During Day 2, organisers will also identify ideas that show potential for practical continuation.

A possible project may begin with something very small:

- access to one dataset;
- analysis of one satellite time series;
- testing one instrument;
- sampling one site;
- building one GIS layer;
- creating one monitoring station;
- comparing two methods;
- or identifying one local implementation partner.

Not every idea should immediately become a large international project.

In many cases, the correct next step is a **small pilot that reduces uncertainty**.

The strongest directions move to:

Day 3 — What Are We Going to Build?

Evening

There is no mandatory formal evening programme.

Participants are encouraged to continue discussions informally in Prague.

The conference takes place immediately beside Charles Bridge, with the historic centre, Kampa, Malá Strana and the Old Town all within walking distance.

Some participants may prefer dinner and continued project discussions.

Others may simply want to walk through the city after an intensive working day.

Both are entirely appropriate.

The purpose of the evening is not another session. It is time.