The Scientist–AI System Rethinking Research on War-Related Environmental Contamination

Laboratory of Military Ecotones

New Euro Vision: exhibitions, marketing, research s.r.o.

Overview 2 / Artificial Intelligence and Research on the Consequences of War / 15 minutes

Fragmented knowledge and an unfinished explanation

Separate studies describe substances, sites and episodes.

The relation between these observations requires investigation.

A discipline’s boundary can restrict the research question.

The starting point is the environmental problem.

The military ecotone as the research object

War changes the regime and functions of a territory.

Earlier infrastructure and land use shape the consequences.

Soil, water, biota and human activity form changing relations.

The object exists independently of its scientific recognition.

Scientific questions without political exclusion

Research follows material processes and causal relations.

Political acceptability gives no test of an explanation.

Every causal claim needs identifiable grounds.

The same requirements apply across conflicts.

The scientist–AI working unit

The expert defines the object and evaluates the argument.

AI supports search, comparison and conceptual exploration.

The expert accepts, revises or rejects each output.

The record identifies sources and significant transformations.

Questions determine the reach of AI assistance

A narrow question reproduces a narrow analytical frame.

Broader questions connect knowledge across specialisms.

AI can expose omissions and propose competing formulations.

Fluent language requires source and reasoning checks.

A visible record of conceptual development

The protocol preserves questions and intermediate formulations.

Examples show why a concept became necessary.

Rejected alternatives retain their reasons for rejection.

Later revisions remain comparable with earlier versions.

Freshwater research across heterogeneous sources

Measurements establish conditions at specified places and times.

Event records describe damage and possible releases.

Spatial evidence describes pathways and environmental context.

The system identifies missing links and useful field tests.

A testable investigation of damaged infrastructure

Illustrative case: a damaged facility near a water system.

Compare a new release with earlier contamination.

Examine sediment remobilisation as another explanation.

Select observations that distinguish the alternatives.

Evidence and the limits of a derived connection

Source information remains separate from its interpretation.

Translation and normalisation retain a traceable history.

An AI-generated connection carries its derived status.

Independent observations test the proposed relation.

Conceptual results of the recorded inquiry

Functional inversion describes changes in territorial functions.

Trigger sensitivity explains the importance of system conditions.

Process boundaries depend on carriers and observation time.

The protocol preserves accepted and rejected concepts.

Research capacity and physical verification

AI can reduce repeated information preparation.

The expected gain concerns feasible research tasks.

Access, sampling and laboratory analysis still require resources.

Efficiency claims need assessment in actual projects.

Two laboratories and identifiable responsibilities

Military Ecotones defines and investigates the environmental object.

Information Systems organises provenance and analytical records.

Specialists contribute to the relations under examination.

The expert retains responsibility for scientific claims.

Key takeaways

The research object determines the questions and required expertise.

The scientist–AI system expands feasible analytical work.

Protocols preserve the grounds for revision and criticism.

Empirical investigation tests the proposed explanations.

Sources and published working records

Laboratory of Military Ecotones (2026). The Scientist–AI System.
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A programme that can be examined and continued

Begin with a defined environmental problem.

Preserve the evidence and the path of reasoning.

Specify observations that can change the explanation.

Revise the theory as the object and knowledge change.