HORIZON SCAN

Technologies to Combat Environmental Crimes

Guidelines for Participants

This document presents guidelines for participation in the ECO-SOLVE led horizon scan on 'Technologies to Combat Environmental Crimes'. It should be read in conjunction with the Call for Ideas, which can be accessed here. This document explains the background to the project, methodology, benefits of participation, and guidelines for idea selection and framing, as well as providing an overview of the horizon scanning process and expected timeline.

Background and rationale

Law enforcement agencies often struggle to stay ahead of emerging trends and criminal network adaptation in illegal environmental commodity markets. One reason for this is the current underutilization and inaccessibility of data and technologies that would make enforcement more effective. Owing to recent significant technological advancements we have an opportunity to improve responses and equip law enforcement with better tools. Technologies may also have potential to enhance other interventions aimed to prevent or suppress environmental crime beyond law enforcement.

A crucial step in this process is harnessing expert knowledge to identify and prioritise existing and emerging technologies that can be applied to environmental crime. To this end, ECO-SOLVE are undertaking a global horizon scan. The findings of the horizon scan will be published, outlining key technologies, practical applications and providing essential recommendations for stakeholders.

Methodology

Horizon scanning helps organizations and researchers anticipate emerging trends, risks, and opportunities before they become urgent, allowing proactive decision-making. It supports strategic planning, innovation, and resilience by integrating diverse evidence and expert insights. The use of horizon scanning as a forecasting tool can reduce the unpredictability of impacts and allow time and resources to be invested in technological progress, policy change or on-the-ground action.

This study will build on robust methodological approaches used in other horizon scans (Wintle et al., 2017, Sutherland et al., 2010-2018 and Esmail et al., 2020, involving a Delphi-like process, an iterative and anonymous participatory method used for gathering and evaluating expert-based knowledge.

Impact and benefits of participation

Through the open call for ideas and the expertise of carefully selected participants, the horizon scanning process will pre-emptively identify and prioritise existing or future technologies that present realistic solutions to environmental crimes. This approach is both novel and practically orientated: no solution-focused horizon scan has ever been applied to the topic area. Results will be of interest to a wide range of stakeholders and will help inform the priorities and strategy of governments, academics, non-government organisations and the private sector. With each idea evaluated against key criteria (novelty, plausibility and impact), the final prioritised list will identify technologies that are ready for investment or further research, that have previous been overlooked, or that require a change in policy or practice to reach their full potential.

By participating in this scan you will be able to:

- Help identify and prioritise technologies that present potential solutions to environmental crime, which will allow allocation of resources, technological progress or policy change to occur in good time.

- Generate evidence to inform the priorities and strategy of governments, academics, businesses and non-government organisations, and inform necessary changes to regulatory and legal frameworks.

- Benefit from the chance to contribute to high-level environmental crime debates.

- Gain acknowledgement in any resultant publication(s) either as a contributor or potentially as a co-author if you are selected and actively participate in the whole horizon scanning process (unless you wish to remain anonymous).

Submission of ideas

We invite all those interested in contributing expertise and insight to participate. You do not need a deep understanding of environmental crime, or to be working in the area. The threat from environmental crime is complex, linked closely to other crimes, with many different actors and domains affecting it. We are especially keen to hear from those in different institutions, disciplines and sectors.

You may identify ideas in a variety of ways, for example by scanning reports, articles, presentations, websites or other media with storylines based on new discoveries or events. Additionally, you may scan and canvass ideas by discussing informally and formally in your social and professional networks, utilising your expertise and that of others. We encourage you to speak to others within your networks before submission to discuss the plausibility of proposed technologies. Synergies and ideas may arise if you discuss with your colleagues who may not know of this study or do not wish to contribute themselves formally. You may submit ideas in any language but please note that submissions will be translated to English using automated translation software, prior to analysis.

A submitted idea should be:

- An existing or emerging technology that could benefit enforcement efforts or other interventions aimed to address environmental crimes.

- Globally relevant, although the initial submission may be framed to a specific region/locality.

- Related to one or more elements of illicit commodity supply chains (sourcing, transport mechanisms, marketplaces, consumer demand, legal and regulatory frameworks, convergence with other criminal

activities).

- Applicable to detection, prevention, and/or prosecution of environmental crimes.
- A technology that is not widely known by potential users or that is currently underutilised, or which will require a change in practice, policy and/or further research in order to be widely adopted.

Contributed ideas could reflect a range of scales, from broad themes to specific, localised issues. Please remember that even if a technology/idea has not have been developed specifically for environmental crime, it may still be valuable.

Examples of ideas could relate to:

- Monitoring and enforcement of environmental commodity supply chains, including illegal sale and transport.
- Detection of illegal environmental activity, including wildlife trade, poaching, deforestation, mining, fishing, or land degradation.
- Legal supply chain resilience to illicit activity.
- Analysis of large datasets to identify environmental crime patterns.
- Species and origin identification for enforcement purposes.
- Digital evidence of environmental crimes, including online illegal wildlife trade and waste trafficking.

In considering technologies that can be applied to environmental crime enforcement, please be conscious that our objective is to inform the priorities and strategy of governments, academics, businesses and non-government organisations, and inform necessary changes to regulatory and legal frameworks.

Idea submissions

You may submit up to 3 ideas as part of the horizon scan, through the online Call for Ideas. In submitting ideas, you will be asked to provide the following:

- Basic information about yourself and your work, but with the option of not providing identifiable information. This information will help contextualise ideas and understand which ideas are seen to be important by people working in different sectors or regions.
- A short title of up to 20 words that states and summarises each proposed idea.
- Description (200 words or less) further explaining the technology(ies), their practical application and perceived implications for efforts to combat environmental crimes. You should reference any relevant evidence.
  - These descriptions should also clearly demonstrate how and why an idea meets the following criteria of novelty, plausibility and impact:
    - **Novelty:** not already widely used among those actively working to address environmental crimes, though it may be an area of current development; and
    - **Plausibility:** the likelihood of the technology coming to fruition and strengthening responses to environmental crime; and

- **Impact:** the wider implications and magnitude of its potential benefit to environmental crime enforcement and related policy interventions.

Submitted ideas should not simply state a need, gap or an open question. For example, the following is not a suitable idea for this study: "there is a serious need for more research into AI technologies to monitor online illegal wildlife trade". Ideas should not promote individual research or business interests. Ideas should also be supported with evidence and tangible examples of application benefits.

You may spend as much or as little time as you wish on preparing your submission. However, clear presentation of your suggested ideas will increase the chance that they are given appropriate consideration during the later shortlisting process. Furthermore, a subset of those who submit well-researched contributions accompanied by links to evidence (i.e., papers, reports, etc.) will be invited to participate as panellists in the short-listing and review phases of the horizon scan. Participants fully involved in these later stages will be acknowledged as co-authors on the final publication.

The horizon scanning process

Below is an outline of the key stages of the horizon scanning process. Please note if you are invited to be a panellist in the short-listing and review stages further detail will be provided.

1. **Call for Ideas.** A global online call for contributions is widely disseminated via appropriate networks and social media. The ideas received are reviewed and condensed by the ECO-SOLVE team, with duplicates merged and submissions that are not compatible with the research requirements removed, to form a 'long list' of emerging ideas, thematically organised and anonymised.

2. **Short-listing of responses:** A number of participants are recruited from the original contributor pool to form an assessment panel and are asked to score submitted ideas. Scores are used to rank ideas in terms of novelty, plausibility and impact to form an initial short list. The shortlist is circulated back to participating panellists, who are given the opportunity to put forward reasoned argument and/or evidence to "save" any of the ideas that did not make the shortlist.

3. **Investigation of ideas.** Panellists are tasked with further researching and investigating each of the short-listed ideas. Each panellist is assigned 3-4 ideas (not their own) from the short-list to investigate further, ensuring that each idea is closely examined by multiple individuals.

4. **Review workshop.** A horizon scanning workshop is undertaken to collate participants' findings and facilitate structured discussion. Ideas are validated and reorganised based on the discussion.

5. **Rescoring of ideas.** Panellists are asked to independently and anonymously score the revised ideas again to produce a final ranked list. Once this list is agreed, participants are asked to contribute written input and help finalise idea descriptions, policy relevance and recommendations to be included in the research paper output.

6. **Publication.** A research paper is drafted and published to present findings and make practical recommendations for key stakeholders, with participants invited to contribute to the drafting and review process, and acknowledged as co-authors.

Proposed timeline

ACTIVITY	DEADLINE
Call for Ideas launched	December 2025
Submission deadline	February 2026
Assessment panel recruitment/Longlist circulated	March 2026
Stage 1 scoring	April 2026
Shortlist of ideas produced	May 2026
Review workshop	June/July 2026
Stage 2 scoring	July 2026
Drafting of report	Sept – Nov 2026
Report publication	November 2026

Contact: If you would like to know more about ECO-SOLVE or have questions about the project, please contact Lauren Young, Analyst, at lauren.young@globalinitiative.net

Global Initiative Against Transnational Organized Crime

The Global Initiative Against Transnational Organized Crime (GI-TOC) is an independent civil-society organization head- quartered in Geneva. Comprising prominent law enforcement, governance and development practitioners, our network is committed to exploring innovative strategies and responses to organized crime. For more information about the GI-TOC, visit our website.

ECO-SOLVE

ECO-SOLVE is a three-year EU-funded project within the European Union's Global Illicit Flows Programme, aiming to bring new approaches to global responses to environmental crime. The programme is designed around three key workstreams to address the issues hampering current law enforcement responses: data for disruption; multilateral dialogues; and community engagement. A key component of the project is the Data Cooperation and Governance (DCG) Platform, which aims to drive global cooperation toward improving use of data and technologies in enforcement responses. For more information about ECO SOLVE, visit our website.