Civic monitoring for environmental enforcement
Exploring the potential and use of evidence gathered by lay people

HIGHLIGHTS
→ Civic monitoring is a powerful source of evidence for law enforcement. Action in court through evidence gathered by lay people (i.e. people not officially responsible for doing so) can signal unaddressed demands.

→ The emersion of a spontaneous civic environmental monitoring initiative indicates the potential presence of distrust but can also be an occasion for cooperation between citizens and authorities on a shared issue.

→ Civic environmental monitoring is also contributing to the provision of public services. Embracing these practices can be an opportunity for authorities to make governance models more inclusive and responsive.

→ Performing civic environmental monitoring should be recognised as a rightful contribution to official enforcement of environmental law.

Figure 1 – A ‘civic sentinel’ gathering evidence of oil in water
All pictures displayed were taken during fieldwork by the SensJus project

What is the potential of introducing evidence gathered by lay people for environmental litigation in European courts? Which barriers need to be removed? Could civic monitoring be conceived also as a form of environmental mediation and avoid issues escalating to court? How can the use of civic evidence be legitimised on the basis of existing and new rights? How would governance models have to adapt?

SETTING THE SCENE
An inquiry into an emerging practice

Since 2020, the European Commission’s Joint Research Centre (JRC) has been examining the potential of civic environmental monitoring as a source of evidence for law enforcement, focusing on environmental litigation (i.e., the court) and mediation (i.e. extra-judicial settings). The inquiry addresses an urgent need to understand emerging possibilities of the practice. The work is conducted by the ‘Sensing for Justice’ (SensJus) research project, which is funded as a Marie Skłodowska-Curie Action and hosted at the JRC’s Digital Economy Unit (Ispra, Italy).

Methods and approaches

The multi- and inter-disciplinary research performed within the framework of SensJus focuses on how people use monitoring technologies or their senses to gather evidence of environmental issues. These practices can be called ‘civic environmental monitoring’ and the people performing them can be referred to as ‘civic sentinels’. See Box 1 – Glossary of key terms. The inquiry explores whether and how civic environmental monitoring can be an effective new way to find evidence about environmental wrong-doing and to leverage this evidence in different institutional fora, such as courts.

The research combines legal, case-law and scientific literature review with ethnography and deploying field research on selected case studies, while also embracing art-based research methods [1]. Key case studies include the ‘Formosa case’ of civic sentinels that brought to court a petrochemical company based substantially on lay evidence and won (U.S) [2] and the ‘AnalyzeBasilicata’ case where people monitored environmental health issues associated with oil extraction.
(Italy), which became an alert for public prosecutors and practitioners such as lawyers, doctors etc. [3]. The work engages with all actors, from the civic sentinels to legal practitioners to enforcement agencies, using experimental methods such as graphic novels and story-telling [4; 5].

**Box 1: Glossary of key terms**

- **Environmental law enforcement** = the set of actions that governmental actors take to ensure compliance with environmental legislation and to prevent incompetence.
- **Environmental litigation** = court cases on environmental issues involving citizens, companies and/or governmental and non-governmental actors.
- **Environmental conflict mediation** = ways to address an environmental conflict outside of court (e.g. through alternative dispute resolution techniques – ADR).
- **Civic environmental monitoring** = the use by ordinary people of monitoring devices (e.g., sensors) or their senses (e.g., smell; hearing) to detect environmental issues.
- **Civic sentinels** = people spontaneously performing civic environmental monitoring without any duty to do so; in other words, watchful people that intervene upon need.

**CIVIC EVIDENCE IN LITIGATION AND MEDIATION**

**The use of civic evidence in litigation**

- Civic monitoring is a powerful source of evidence for claiming justice and damages in environmental litigation for wrong-doing by public or private actors, as the ‘Formosa’ case demonstrates [2].
- Civic action in court is a signal of unaddressed demands, as individuals and communities may be unsatisfied with private actors’ conduct and/or (the lack of) official enforcement by government.
- The role, use and weight of civic evidence in litigation differs greatly between countries and jurisdictions, as well as there are variations in the type of litigation involved. Case-specific inquiry is needed for such research. Such variation also adds a layer of complexity in regulating the field.
- Existing non-governmental actors and networks, such as the European and the U.S. Citizen Science Associations, may be well-placed to offer guidance both to ordinary people that wish to have their evidence considered, and to practitioners and institutions that are confronted with such evidence.

**Civic monitoring for conflict mediation**

- When there is conflict, civic monitoring can be seen as civic actors expressing both care for a matter of concern [6] and distrust of competent authorities’ interventions [3].
- Civic monitoring may illustrate the existence of differentiated trust towards different public sector entities, such as trust in the judiciary and supranational governmental bodies but scepticism towards the local and regional government.

- When people turn to monitoring an environmental issue themselves, this may enhance their understanding of the complexity behind a problem (participation can be ‘educational’ and people become ‘experts by experience’). Competent authorities - often facilitated by experts - may learn how to recognise and make use of the civic contribution [7], which offers other relevant or otherwise missing evidence. Such recognition (in the form of an official uptake) may alleviate the civic sentinels’ sense of distrust towards institutions [6].
- Cases have also shown that the emersion of a spontaneous civic monitoring initiative in conflictual scenarios can also lead to more active cooperation between citizens and authorities on shared issues, as seen in water quality monitoring in Rome [8].

**LEGAL AND GOVERNANCE ADJUSTMENTS**

- Faced with these innovations in grassroots environmental data streams, legal frameworks and governance models have to adapt and evolve to get the most out of civic monitoring and related data.
- Legislation may need to be either re-designed or drafted from scratch to enable the official use of evidence gathered by civic actors.
- Performing civic environmental monitoring should be recognised, for example as a practice contributing to monitor the SDGs’ implementation and to enforce the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, in light of a new ‘right to contribute environmental information’ when institutions struggle to fulfil their duties [9; 10; 11].
- Civic and institutional actors must decide whether a right to contribute environmental information just creates the ‘possibility’ for authorities to use civic evidence (already possible) or rather ‘obliges’ them to resort to such data, when certain conditions are met (e.g. insufficient or missing official data) [11].
- A right to contribute could shield participants against adverse consequences of monitoring (e.g., legal convictions for trespassing on private property) as witnessed in the field [3; 6] but it is also a regulatory burden for authorities. Moreover, legal recognition may hamper innovation, ‘capturing’ a versatile practice within static boundaries [11]. Lastly, it is important to counter-balance this right with (expert) scrutiny to avoid fabrication of evidence, fake news and ultimately the weakening of the system [12; 13].
- Even if there is no consistent legal recognition of civic environmental monitoring, the practice is already influencing how authorities handle matters pushing adaptations in governance models [2; 3], challenging the allocation of responsibilities and in some cases further reducing official interventions.

- Civic environmental monitoring is also contributing to the provision of public services. It shows that institutional environmental monitoring (as a service) can be performed not only by appointed agencies and experts but also by decentralised civic actors. Embracing these practices can be an opportunity for competent authorities to make governance models more inclusive [14], efficient and responsive [13] and to design enforcement systems based on a mix of actors, competences and procedures.

**QUICK GUIDE** – The project ‘Sensing for Justice’ (SensJus) that curated this policy brief investigates the potential and applications of civic monitoring as a source of scientific evidence in environmental litigation and as a tool for mediation. The project is coordinated by Anna Berti Suman and Sven Schade. It is developed thanks to the Marie Skłodowska-Curie grant n. 891513, under H2020-EU, and to the concluded Dutch Research Council Rubicon fellowship n. 66202117.

See [https://sensingforjustice.webnode.it/](https://sensingforjustice.webnode.it/)

**RESULTS AND OUTREACH**

The research and outreach activities deployed obtained results in different arenas. These include:

- **Scientific outcomes**: providing an array of scientific studies on the factors that facilitate the acceptance of civic evidence in court in usable formats;

- **Training outcomes**: providing resources and training on the potential of civic monitoring to generate evidence and mitigate conflicts, while examining its legal opportunities and implications.

- **Outreach outcomes**: offering an understanding of environmental rights activated by civic monitoring to diverse publics such as school and university students; engaging them in sensorial and emotional experiences on the topic in public places.

Thanks to the knowledge produced, three main societal changes are occurring:

- **Communities and individuals** from our case studies have increased interest in the legal implications of their civic monitoring activities, and are proactively asking for expanding the links between their work and environmental litigation and/or mediation;

- **Practitioners** are expressing attention to the practice, and especially to our case studies that focus on spontaneous initiatives in conflictual scenarios.

- **Youngsters** are getting enthusiastic about civic monitoring for environmental justice and practice it.

Our activities and results benefit especially very local, small-scale and low-budget civic monitoring initiatives that are neither supported by a public agency nor linked with an academic institution, often being deployed in contexts dominated by high distrust and conflict. These initiatives find usable tools, advice and guidance in our research, but also visibility when such initiatives are selected as case studies. In addition, environmental non-governmental actors benefit from our accessible studies where they can draw insights for building intervention strategies. Practitioners such as lawyers and judges find useful resources for understanding the landscape of civic environmental monitoring and its judicial applications. Policy-makers can find in our results the starting point for shaping policy and legislative interventions, to boost the potential of the practice. In particular, there is the need to upscale the actual contribution (now still at small-scale level) that civic monitoring can offer to official enforcement. This could occur by drafting and/or clarifying the European legislative and policy framework (for example building on the Aarhus Convention) setting out what kind of evidence is admissible and valid for enforcement purposes. On such a framework, actors in the field could rely to structurally make use of civic evidence in official enforcement.

At a methodological level, we refined an approach that can be replicated and scaled-up to different research contexts and practical applications. This approach is based on three stages. The first step is to conduct literature, legal and judicial research starting from alerts from communities and individuals affected by an environmental issue. Then, we deploy open-ended observations of potential case studies, shaping the research design together with the actors in the field, embracing co-creation methods. We move to the field physically or through virtual ethnography and art-based methods, deploying action-research techniques, taking an active part in the initiatives studied. Lastly, we share results with our participants and with broader publics in a participatory manner, through inclusive communications such as accessible blog posts, videos, podcast episodes and drawings. We also engage the participants in discussing findings, for example through theatrical performances and sensorial walks. Civic, academic and institutional actors often praise our approach. For example, the Falling Walls Foundation, an international no-profit science platform, judged SensJus as the best Science Engagement initiative.
among projects from around the world, for ‘Breaking the Wall to Civic Evidence of Environmental Harms’ [15].

CONCLUDING REMARKS

Based on the highlights presented in this brief, the following take-away messages can be developed:

- Civic environmental monitoring is a powerful source of evidence for law enforcement, helping to signal unaddressed demands from citizens to institutions.
- The emergence of a civic monitoring initiative shows distrust towards official environmental monitoring but can also be an occasion for cooperation between lay people and authorities on a matter of concern.
- Civic monitoring is influencing the governance of environmental issues and contributing to strengthen the provision of public services. This can make official governance inclusive of what matters to civic actors and more responsive to local concerns.
- Civic monitoring initiatives need to be studied ‘up close’ and with appropriate time through physical and virtual fieldwork so that specific contexts and how and why people perform monitoring can be understood, alongside the impact their monitoring has on institutional decisions and interventions.
- Art-based research methods can enrich the field with insights from hard-to-reach participants, such as low literacy and migrants’ communities; creative and engaging communication strategies are needed to make wider publics aware of the research results.
- Civic environmental monitoring contribution to official enforcement should be recognised under existing (e.g. the SDGs; the Aarhus Convention) and new legal and policy frameworks, starting from the right of every person to contribute environmental information; legislative and policy interventions are also needed to define what kind of civic evidence is admissible and valid for enforcement purposes.
- The practice, overall, shall be seen as a constructive approach to trigger policy and legal interventions. Public administrations might want to look closely at the practice as a dynamic space for innovation.
- Research centres across the EU can act as mediators between the knowledge produced by such civic initiatives and what institutions need, connecting civic actions and enforcement processes. Discussions are ongoing at the JRC on the use of (also civic) science in EU courts [16]. This work can be supported by independent experts and associations that have worked both with civil society and with institutions.

REFERENCES


COPYRIGHT © European Union, 2023