

International Pollutants Elimination Network (IPEN) and the Global Struggle for a Toxics-Free Future for All: A Critical Review

Prepared by Householders' Options to Protect the Environment (HOPE) Inc. (Australia)

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Executive Summary

Protecting People and Planet from Toxic Harm — A Shared Responsibility

Across the world, communities are living with the hidden costs of chemical pollution in the form of contaminated water, unsafe products, and fragile ecosystems. The *International Pollutants Elimination Network (IPEN)* stands at the forefront of efforts to end these harms, linking more than 600 civil-society organisations in over 120 countries.

This report, prepared and published by HOPE Australia Inc. (Householders' Options to Protect the Environment), offers a balanced, critical review of IPEN's global role and relevance in advancing chemical safety and environmental justice.

A Catalyst for Global Change

IPEN operates at the intersection of science, policy, and community action. It has been instrumental in global progress on:

- Lead-paint elimination and safer manufacturing standards
- Toxic plastic additive reduction and PFAS phase-out
- Strengthening the Stockholm, Basel, and Minamata Conventions under the United Nations Environment Programme (UNEP) framework

By supporting citizen-science projects and capacity-building across the Global South, IPEN gives voice to communities most affected by pollution yet least represented in international decision-making.

Navigating Constraints and Critiques

IPEN's partners often operate with limited resources and laboratory capacity, in regions where enforcement systems are weak.

While this has occasionally drawn scrutiny over methodological rigour, IPEN continues to improve transparency, training, and collaboration with accredited laboratories.

Its openness and commitment to sharing methods demonstrate integrity and learning within real-world constraints.

Why It Matters for Australia and the World

For HOPE Australia, IPEN's story mirrors our own mission: empowering communities, fostering environmental stewardship, and linking local action with global responsibility.

Supporting IPEN strengthens the civic infrastructure that makes environmental treaties work in practice.

Governments can enhance treaty effectiveness by resourcing community monitoring and integrating IPEN data into policy design.

Industry and investors can rebuild trust through open data, safer production, and genuine partnership.

Philanthropy and civil society can expand capacity and education for a new generation of environmental advocates.

A Call to Partnership

A toxics-free future is not only a technical objective but a moral imperative.

It demands cooperation across sectors and borders, uniting those who craft policy, those who shape markets, and those who live with the consequences.

It is hoped that shining a spotlight on IPEN's work will inspire further collective action to address this critical issue.

Glossary of Terms and Acronyms

Key Institutions and Frameworks

UNEP (United Nations Environment Programme) – The leading United Nations agency coordinating global environmental activities and supporting the implementation of environmental treaties, including those on chemicals, waste, and pollution prevention.

INC (Intergovernmental Negotiating Committee) – A UNEP-convened body of member states and observers responsible for negotiating new multilateral environmental agreements, such as the *Global Plastics Treaty*. Civil-society groups like IPEN participate as observers and technical contributors.

COP (Conference of the Parties) – The governing body of a multilateral environmental agreement, composed of representatives from all member states (Parties) to the treaty. COP meetings review implementation, adopt decisions and amendments, and set future priorities. IPEN participates regularly in COPs for the Stockholm, Basel, and Minamata Conventions, and in the ongoing negotiations toward a Global Plastics Treaty.

MEAs (Multilateral Environmental Agreements) – International treaties that address global environmental issues through collective commitments; includes the Basel, Stockholm, and Minamata Conventions.

Secretariat – The administrative body supporting the implementation of a specific treaty or programme, typically hosted or co-hosted by UNEP.

SAICM (Strategic Approach to International Chemicals Management) – A voluntary global policy framework established under UNEP in 2006 to promote the safe management of chemicals and waste throughout their life cycles. SAICM concluded its mandate in 2023 with the adoption of the Global Framework on Chemicals (GFC) at ICCM5, which now carries forward its mission and governance functions.

GFC (Global Framework on Chemicals) – Adopted at the Fifth International Conference on Chemicals Management (ICCM5) in Bonn in 2023 as the successor to SAICM. The GFC is a voluntary, multi-stakeholder framework that strengthens global cooperation on chemicals and waste management, sets 2030 targets aligned with the Sustainable Development Goals, and reinforces linkages with the Basel, Rotterdam, Stockholm, and Minamata Conventions.

ICCM (International Conference on Chemicals Management) – The governing forum of SAICM, where governments, industry, and civil society meet to set strategic priorities for global chemicals policy.

Sida (Swedish International Development Cooperation Agency) – The government agency of Sweden responsible for administering official development assistance. Sida funds international initiatives that promote sustainable development, poverty reduction, human rights, and environmental protection.

WHO (World Health Organisation) – A specialised agency of the United Nations responsible for international public health. WHO sets global health standards, coordinates responses to health emergencies, and provides scientific guidance on disease prevention, environmental health, and chemical safety. It collaborates closely with UNEP and IPEN on reducing human exposure to hazardous chemicals and promoting the right to a healthy environment.

Key Treaties

Basel Convention – The *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal* (1989), regulating the export, import, and disposal of hazardous waste.

Stockholm Convention – The *Stockholm Convention on Persistent Organic Pollutants* (2001), seeking to eliminate or restrict the production and use of long-lasting toxic substances.

Minamata Convention – The *Minamata Convention on Mercury* (2013), aiming to protect human health and the environment from mercury emissions and releases.

Global Plastics Treaty (in negotiation) – A forthcoming UNEP-led legally binding agreement addressing plastic pollution across its life cycle, from production to waste management.

Key Networks and Civil-Society Actors

IPEN (International Pollutants Elimination Network) – A global civil-society coalition working to eliminate toxic chemical exposure and promote safe chemical management through research, capacity-building, and advocacy.

HOPE (Householders' Options to Protect the Environment) Inc. – An Australian community-based organisation promoting sustainable living, citizen engagement, and environmental justice through education and advocacy.

NGO (Non-Governmental Organisation) – A non-profit, independent organisation that operates outside government structures to advocate for social or environmental causes.

Key Substances and Concepts

PFAS (Per- and Polyfluoroalkyl Substances) – A large group of synthetic chemicals used in consumer and industrial products for water and grease resistance; persistent in the environment and associated with adverse health effects.

Lead Paint Elimination – An IPEN-led global campaign advocating the phase-out of lead in decorative paints to prevent childhood lead poisoning.

Plastic Additives – Chemical substances added to plastics to modify colour, flexibility, or durability; many are hazardous or persist in the environment.

Persistent Organic Pollutants (POPs) – Long-lived chemicals that accumulate in ecosystems and human tissue; controlled under the Stockholm Convention.

Cross-Cutting Terms

Citizen Science – Community participation in scientific research through data collection or monitoring, enhancing inclusivity and awareness.

Environmental Justice – The equitable distribution of environmental benefits and burdens, ensuring all people can live, work, and thrive in safe environments.

Global North / Global South – Terms describing geopolitical and economic divisions, with the “Global South” often referring to developing or less industrialised nations facing higher environmental burdens.

Sustainable Development Goals (SDGs) – Seventeen global objectives adopted by the United Nations in 2015 to promote social well-being, economic prosperity, and environmental protection by 2030.

Toxics-Free Future – The shared vision of a world where chemical production and use no longer cause harm to people or the environment, and central to the missions of IPEN and HOPE Australia Inc.

1. Introduction

In an era when climate change dominates public discourse, a quieter but equally pervasive crisis continues under the radar, that of chemical and pollutant exposure. Ubiquitous industrial compounds - heavy metals, persistent organic pollutants (POPs), plastic additives, “forever chemicals” like PFAS - infiltrate air, water, soil, food systems, and human biology. These substances have been shown to disrupt endocrine systems, affect neurological development, change immune function and influence ecosystem resilience.

At the same time, air pollution (a subset of chemical exposure risk) remains responsible for an estimated 8.1 million deaths globally in 2021, making it the second-leading risk factor for mortality worldwide. Moreover, roughly 99% of the global population live in places where outdoor air pollution exceeds WHO guideline limits. Yet many low- and middle-income countries lack robust monitoring, and data gaps persist, making independent civil society monitoring crucial.¹

It is in this contested space, where governments, industry, and science converge, that civil society networks like International Pollutants Elimination Network (IPEN) play a critical role. Founded in 1998 to support the Stockholm Convention on Persistent Organic Pollutants (POPs), IPEN today links over 600 participating NGOs in more than 120 countries and campaigns to eliminate hazardous substances, strengthen chemical policies, and amplify public health safeguards.²

This piece is a critical review of IPEN’s work: its aspirations, its documented achievements, its structural and strategic limitations, and the tensions it must navigate in influencing global chemical governance. The aim is to provide decision-makers (including governments, donors and regulators) with an objective assessment of IPEN’s areas of contribution, the challenges it encounters, and ways its efforts could be directed more effectively.

Through an analytical lens that blends evidence, institutional critique, and policy relevance, this review aims to bolster stronger, more equitable chemical governance. IPEN represents both an exemplar of NGO-led transnational advocacy and a case study in the difficult balancing acts inherent in global civil society work. Its journey of evolution, adaptation and influence in this changing context has lessons for broader efforts to govern pollution in the 21st century.

2. Organisational Overview

2.1 Founding, Name & Evolution

The International Persistent Organic Pollutants (POPs) Elimination Network (IPEN) was established in 1998 as a non-government organisation (NGO) platform with the explicit purpose of promoting a robust global treaty to eliminate these toxic chemicals.³ Both in anticipation, and during the negotiation phase, of what would become the Stockholm Convention, IPEN sought to ensure civil society, particularly those from low- and middle-income countries, had a seat in shaping the treaty. Over time, IPEN expanded its mandate from treaty advocacy to support for implementation, capacity building, and broader chemical policy engagement. In 2019, IPEN formally changed its name to reflect a broader scope beyond POPs, adopting “International Pollutants Elimination Network” to encompass work on diverse toxic chemicals, plastics, and waste issues.⁴ IPEN is registered in Sweden as a non-profit, public interest organisation.⁵

2.2 Mission & Strategic Role

IPEN’s stated mission is simple: *A Toxics-Free Future for All*.⁶ This mission is formally expanded upon through three interlinked declarations that serve as both membership commitments and strategic pillars. The Stockholm Declaration (2001) anchors IPEN’s origins in the campaign to eliminate persistent organic pollutants (POPs). It binds participating NGOs to the goal of ending the production and use of these long-lived, bio-accumulative chemicals that threaten human health and ecosystems.⁷

The Dubai Declaration (2006) expands this focus, affirming that all chemicals should be produced, used, and disposed of in ways that, “eliminate significant adverse effects on human health and the environment” (p. 1). It broadens IPEN’s mission beyond POPs to encompass a comprehensive vision for global chemical safety.⁸

The Minamata Declaration on Toxic Metals (2013) deepens this scope by addressing mercury, lead, and other metals of concern. It commits the network to promoting safer alternatives in artisanal and small-scale gold mining, ending trade in mercury, and remediating contaminated sites.⁹

Together, these declarations operationalise IPEN’s mission: Stockholm provides the founding baseline, Dubai defines the aspirational horizon, and Minamata embeds the network’s evolving work on metals. NGOs joining IPEN must endorse all three, making them both symbolic and practical expressions of the organisation’s collective vision.¹⁰

In practice, IPEN acts as a bridge between local actors and global treaty or policy processes. Member NGOs collect data at country level, expose chemical hazards locally, then feed that evidence into international negotiations, treaty review processes, and public awareness campaigns. IPEN also plays a role in agenda setting by nominating chemicals for listing under treaties such as the Stockholm Convention, participating in SAICM (Strategic Approach to International Chemicals Management), and pushing for robust plastics treaties.¹¹

2.3 Governance & Structure

IPEN’s headquarters is in Göteborg, Sweden. IPEN’s governance is organised in a federated, regionally inclusive model. It is governed by a Steering Committee and an Executive Committee, chaired by IPEN’s two Co-Chairs. Eight IPEN member organisations function as IPEN Regional Hubs in their respective regions. The Secretariat comprises 15 staff and expert advisors as well as personnel and long-term experts based in other countries who facilitate regional strategy, capacity-building, coordination, and serve as liaisons to global operations.³

Funding for IPEN comes from a variety of philanthropic and other sources, but since 2016 its major benefactor has been the Swedish International Development Cooperation Agency (Sida).³ Sida is a government agency working to create better living conditions for people living in poverty and under oppression around the world. Sida works on behalf of the Swedish government and parliament, and the agency’s activities are funded through Swedish tax revenue.¹²

2.4 Strengths & Constraints Inherent in the Model

The network model offers several advantages:

- **Local legitimacy & reach:** Because advocacy and data generation are rooted in member NGOs, IPEN can draw on local knowledge and legitimacy.
- **Flexibility & nimbleness:** Without the overhead of a centralized bureaucratic hierarchy, IPEN can pivot across pollutants or campaign fronts.
- **Amplification:** It aggregates disparate initiatives into coordinated global pressure, potentially punching above the weight of individual NGOs.

However, this structure also imposes constraints:

- **Coordination complexity:** Ensuring consistency, quality control, and coherence across 600+ NGOs and different regions is a continual challenge.
- **Resource inequality:** Member NGOs in resource-poor contexts may struggle to contribute actively, potentially skewing influence toward better-funded groups.
- **Dependence on external funding:** As a network of NGOs, IPEN relies on grants, foundations, and philanthropic donors, which can limit long-term autonomy or introduce donor-driven priorities.
- **Governance tensions:** Ensuring equitable representation and decision-making among Global South and Global North members is a delicate balance, especially as IPEN steps into high-stakes global treaty debates.

3. Current Focus Areas

3.1 Chemicals & Health

3.1.1 Lead in Paint

Among IPEN's most visible and enduring campaigns is the Global Lead Paint Elimination Campaign, which has generated extensive data across dozens of countries documenting continued lead contamination in decorative and industrial paints.^{13 14} Through its local NGO network, IPEN has been instrumental in driving progress toward regulation, and by 2024 more than thirty countries had adopted or advanced bans or restrictions on lead paint.² Partnering with the Global Alliance to Eliminate Lead Paint (UNEP/WHO), IPEN also helps to embed the issue within multilateral policy frameworks. The campaign's achievements are significant, providing credible, localised data to support policy change and setting benchmarks such as the 90 ppm total lead limit adopted in UNEP model law.¹⁵ Yet enforcement remains a persistent challenge. In many regions, illegal or informal manufacturing and importation continue unchecked, and testing infrastructure is weak. Even where regulations exist, capacity constraints can limit effective implementation. Moreover, as newer chemical threats gain visibility, sustaining political urgency for lead paint elimination demands renewed public communication and funding momentum.

3.1.2 Highly Hazardous Pesticides (HHPs)

IPEN has made highly hazardous pesticides (HHPs) a major focus of its chemicals and health work, particularly in low- and middle-income countries where such substances are still widely used. In its 2024 report, IPEN and partners documented HHP contamination in soil, food, and water samples from 43 countries, highlighting links to acute poisoning, chronic illness, and ecosystem decline.¹⁶ The network advocates for a global phase-out of HHPs, promoting safer agroecological alternatives and urging financial institutions and development agencies to end support for pesticide-intensive farming. Through its participation in the Strategic Approach to International Chemicals Management (SAICM) process and treaty dialogues, IPEN has pressed governments to integrate the precautionary principle and human-rights-based approaches into agricultural chemical policy.¹⁷ Yet progress remains slow: entrenched corporate interests, gaps in national regulation, and limited farmer training continue to perpetuate dependence on hazardous agrochemicals, especially in export-oriented crop sectors.

3.1.3 Plastics & Waste

IPEN has emerged as a leading civil society voice in the Global Plastics Treaty negotiations, publishing annual scorecards and detailed policy briefs to assess treaty drafts against public health and environmental criteria.^{18 19} IPEN's distinctive contribution has been amplifying scientific evidence, as highlighted in UNEP's *Chemicals in Plastics* report that reframes the plastics crisis not merely as a problem of waste and litter but as one of toxic chemical exposure throughout the product life cycle.²⁰ This perspective has influenced several national delegations and helped integrate language on chemical additives into treaty discussions. IPEN's transparent scoring tools also provide negotiators and observers with accountability mechanisms. However, in its December 2024 *Plastics Treaty Scorecard* and related position papers, IPEN concluded that the Chair's draft text released on 1 December 2024 was not strong enough to protect human health, warning that without upstream controls on plastic production and chemical additives, the agreement risked becoming merely a 'waste treaty' focused on downstream cleanup rather than prevention, reflecting entrenched industrial resistance and the political compromises that tend to dilute global agreements.^{21 22}

3.1.4 Toxic Recycling & E-Waste

Beyond plastics governance, IPEN has challenged prevailing narratives around recycling, arguing that allowing contaminated materials to re-enter the market under the guise of recycling perpetuates toxic chemical exposure.²³ It exposes the presence of brominated flame retardants, pesticides, persistent organic pollutants and heavy metals in recycled plastics and e-waste streams, drawing attention to the disproportionate burden borne by developing nations that receive waste exports.²⁴ The network's advocacy has succeeded in expanding the policy conversation from recycling rates to recycling safety, but the terrain remains complex. Scientific uncertainties over additive toxicity, entrenched informal recycling economies, and weak enforcement across transboundary waste flows

continue to hinder progress. The scale of illegal e-waste trade and the limited monitoring capacity in recipient countries present persistent structural barriers.

3.2 Global Treaties & Advocacy

3.2.1 Stockholm Convention & Chemical Listing

Within the Stockholm Convention on Persistent Organic Pollutants, IPEN plays an influential role in nominating new chemicals for global elimination. Its advocacy helped advance reviews of chlorpyrifos, medium-chain chlorinated paraffins, and long-chain PFAS for inclusion under the treaty.²⁵ This work strengthens scientific transparency and amplifies public-interest participation in technical deliberations. Yet the process itself is protracted and consensus-driven, often stretching over several years, and final treaty decisions are sometimes weakened by political and industrial lobbying. As a result, implementation gaps remain between global commitments and domestic action.

3.2.2 Minamata Convention & Mercury Work

IPEN's ongoing involvement in the Minamata Convention focuses on monitoring mercury in small-scale gold mining and consumer products, pressing for accelerated phase-outs and tighter supply-chain control.²⁶ The network's field data and advocacy have successfully spotlighted unregulated mercury use in artisanal mining sectors, encouraging national policy responses. However, the enforcement realities are difficult as informal mining communities are dispersed, oversight is minimal, and resources for substitution are scarce. In many regions, the lack of baseline data hampers targeted intervention, and fragmented funding means that sustained engagement is difficult to maintain.

3.2.3 SAICM "Beyond 2020"

Under SAICM, IPEN continues to advocate for a stronger 'Beyond 2020' framework guided by the precautionary and prevention principles, robust financing, and greater accountability. Earlier in the intersessional process, IPEN also proposed the potential for binding mechanisms to strengthen implementation.²⁷ Civil society pressure has succeeded in embedding stronger human-rights and capacity-building language in negotiation drafts. Yet, because SAICM remains non-binding, progress relies on voluntary action and donor willingness, and consensus among more than 180 participating states remains elusive. The absence of enforcement and sustainable finance mechanisms poses ongoing obstacles to achieving real impact.

3.3 Emerging Pollutants

3.3.1 PFAS ("Forever Chemicals")

In recent years, IPEN has positioned PFAS as one of the defining chemical issues of the decade. Its global reports document contamination across multiple regions and highlight severe regulatory gaps.²⁸ Through these efforts, IPEN helped promote the listing of long-chain perfluorocarboxylic acids under the Stockholm Convention.^{29 30} The network's influence lies in its ability to frame PFAS as a systemic rather than isolated problem, linking industrial production, consumer products, and waste pathways. However, the technical and political challenges are formidable. PFAS encompasses thousands of compounds with varied toxicity, complicating regulatory design³¹, and in some countries inadequate laboratory or regulatory capacity impedes effective testing and tracking. The European Chemical's Agency (ECHA), in their 2024 status update, highlights monitorability as a limiting factor in PFAS restriction proposals³², and IPEN's country-level PFAS reports document gaps in monitoring infrastructure across regions.²⁹ In parallel, some industries have pushed for incremental phase-outs rather than sweeping bans, resulting in a strategic slowing of comprehensive regulation.²

3.3.2 Nanomaterials, Endocrine Disruptors & the Climate-Toxics Nexus

IPEN also engages with the next generation of emerging pollutants, including nanomaterials and endocrine-disrupting chemicals, while drawing links between chemical and climate crises.^{33 34} Its forward-looking stance promotes precautionary regulation, encouraging policymakers to act before irreversible harm occurs. By connecting pollution control with climate mitigation (e.g. through opposition to waste incineration and open burning), IPEN reinforces an integrated planetary-health perspective.³⁵ Yet the scientific uncertainty surrounding

new materials can limit traction with policymakers wary of acting without full risk consensus. Moreover, the global focus on climate change often sidelines pollution in funding and policy priorities, constraining IPEN's reach and resourcing in this domain.

4. Successes

Despite limited resources compared with governments and multilateral agencies, IPEN has achieved notable successes in shaping global policy, generating independent scientific data, and empowering communities to take part in environmental decision-making.

4.1 Policy Influence

IPEN has been a consistent contributor to international treaties that address hazardous substances. As previously discussed, a prominent example is its role in accelerating the phase-out of lead in paint. Working with more than 100 partner NGOs across Africa and Asia, IPEN supported advocacy that led to strengthened national regulations in countries including Cameroon, India, and the Philippines, where permissible lead levels in paints were tightened to align with international best practice.³⁶ IPEN has been at the table and contributed to the global mercury phase-out under the Minamata Convention since inception, submitting NGO evidence during treaty negotiations and continuing to monitor national implementation through civil-society networks. Its advocacy has helped maintain momentum toward the elimination of mercury use in artisanal and small-scale gold mining and consumer products, reinforcing the Convention's focus on public health and environmental justice.³⁷

In addition to lead paint and mercury campaigns, IPEN has been influential in securing new listings under the Stockholm Convention and pushing bans or tighter controls on highly hazardous pesticides (e.g. endosulfan) and flame retardants.³⁸ Over time, dozens of chemical substances have been added or restricted in part because of NGO submissions and pressure that IPEN convened.

4.2 Data Generation:

One of IPEN's hallmarks is the production of independent, scientifically robust data from regions where official monitoring is weak or absent. Beyond discrete monitoring projects, IPEN's research portfolio spans an extensive range of contaminants and exposure pathways, forming one of the most comprehensive civil-society data sets on toxic pollution in the developing world. Its partners have undertaken coordinated sampling and laboratory analysis of heavy metals, pesticides, mercury, brominated flame retardants, chlorinated paraffins, and PFAS in paints, consumer goods, plastics, food chains, and human biomonitoring studies. The results are compiled into publicly accessible databases, fact sheets, and global status reports that inform UN treaty deliberations and national reforms.³⁹ This body of evidence has been crucial in substantiating civil-society positions during negotiations on the Stockholm and Minamata Conventions and, more recently, the Plastics Treaty process. Collectively, IPEN's data-driven research has transformed anecdotal local experience into quantifiable, policy-relevant science, providing the evidentiary bridge to many of its most visible case successes.

To illustrate their work, some relevant case studies are presented here:

Case Study 1. Lead Exposure in Children near Informal Smelters (Africa)⁴⁰

In several African countries, small-scale lead-acid battery recycling and smelting often occur within or adjacent to residential areas, exposing nearby communities (especially children) to severe health risks. IPEN partner organisations conducted environmental and biomonitoring studies around informal and licensed recycling sites in Ghana, Tanzania, Cameroon, Kenya, Mozambique, Nigeria, and Tunisia. These investigations revealed dangerously high levels of lead contamination in soil and household dust, with some child blood lead measurements far exceeding World Health Organisation reference values. The results prompted local awareness campaigns, remediation efforts, and renewed calls for governments to strengthen enforcement of recycling standards. At the international level, the findings contributed to discussions under the Basel and Minamata Conventions on managing lead waste and phasing out informal recycling. IPEN's work illustrates how community-based science can bring global visibility to an overlooked source of toxic exposure and drive policy reform at multiple levels.

Case Study 2: Toxic Additives in Consumer Plastics ⁴¹

To expose hidden chemical hazards in everyday products, IPEN coordinated multi-country sampling of toys, packaging, and household goods. Laboratory analyses found brominated flame retardants, phthalates, and short-chain chlorinated paraffins in recycled plastics sold across markets in Southeast Asia, Eastern Europe, and Latin America. Many of these additives are banned or restricted under the Stockholm Convention yet continue to circulate through global recycling streams. The project's findings influenced national regulators to re-examine recycling standards and fed into IPEN's submissions advocating for stronger provisions on chemicals in the Plastics Treaty negotiations.

Case Study 3: Hazardous E-waste and Contamination Hotspots ⁴²

In partnership with local organisations, IPEN investigated toxic contamination at informal e-waste dismantling sites in Ghana, Nigeria, and the Philippines. Laboratory analyses of soil and dust revealed high concentrations of brominated flame retardants and other persistent organic pollutants, in some cases hundreds of times above international safety thresholds. These findings documented clear exposure risks for workers and nearby residents, informed national advocacy for safer waste-handling practices, and contributed to global policy discussions under the Basel and Stockholm Conventions.

Case Study 4: Vietnam Blood Lead Follow-Up (2022) ⁴³

In Tan Hiep Commune, Dong Nai Province, IPEN's partner the Research Centre for Gender, Family and Environment in Development (CGFED) re-sampled 20 children previously found to have elevated blood lead levels and conducted X-ray fluorescence testing on wall paints and toys in their households and preschools. The mean blood lead level in 2022 was 4.75 µg/dL (range 3.59 to 9.77 µg/dL), lower than the 2021 mean of 5.96 µg/dL, but still above the US CDC reference value of 3.5 µg/dL for all participants. The study correlated higher blood lead levels with home exposure to lead-containing objects, suggesting persistent, multi-source contamination. This concrete biomonitoring effort is one of the clearest examples of IPEN-associated human exposure measurement published under its banner and gave clear impetus to their successful advocacy in this area.

Case Study 5: IPEN's Plastic Additives & Circular Economy Mapping ⁴⁴

IPEN's *Plastic's Toxic Additives and the Circular Economy* synthesises data from multiple countries on chemical additives (e.g. flame retardants, PFAS, phthalates) found in consumer plastics, recycled materials, and waste streams. It draws attention to how banned POPs and endocrine disruptors are recycled into new goods, impeding a safe circular economy. IPEN has used this evidence to submit formal inputs to UN chemicals and waste treaty bodies, highlighting the need for global tracking of plastic chemical composition and stronger import/export controls of hazardous plastics.

Such grassroots-based science not only fills data gaps but also provides communities with evidence to challenge polluting industries and governments. IPEN also oversees lead pigment and paint trade compliance checks, cataloguing lead chromate exports and consumer paint contamination across multiple countries, then using that data in advocacy to strengthen national regulation. Together, these efforts, both direct and indirect, underscore IPEN's strategic role in data generation and its ability to convert such data into normative influence, capacity enhancement, and public visibility.

4.3 Capacity Building:

Beyond policy and data, IPEN has invested significantly in strengthening civil-society capacity across regions. For instance, its Central and Eastern Europe (CEE) initiative '*NGO Capacity Building in the CEE Region*' supported expert NGO teams in 15 countries to engage in chemical-safety advocacy. In the Eastern Europe, Caucasus and Central Asia (EECCA) region, a 2015 workshop in Almaty (Kazakhstan) brought NGOs from Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan into decision-making processes on chemicals. In Latin America and the Caribbean, IPEN's regional hub convened a November 2021 webinar on aerial pesticide spraying, engaging NGOs from Mexico, Argentina, Chile and Brazil in policy-raising and peer-knowledge exchange to strengthen their role in chemicals regulation. More recently in November 2023 IPEN convened its Africa Regional Meeting in Accra, bringing together local NGOs from across West and East Africa for multi-day workshops in chemicals monitoring and public-participation strategy. In another instance, its *Capacity-building and Community Participation* training materials have supported civil society in low- and middle-income countries to engage in chemicals-risk monitoring and advocacy using multilingual toolkits and peer-learning networks. ⁴⁵

These regional efforts, often complemented by technical assistance, follow-up mentoring, and knowledge exchanges, help embed advocacy and public-participation skills that persist beyond individual project cycles.

4.4 Public Awareness:

IPEN's campaigns bridge the technical and political realms, translating complex chemical science into messages that resonate with both policymakers and the public. During negotiations toward a Global Plastics Treaty, the network has consistently emphasised the need for open and transparent participation, cautioning against procedural rules that could marginalise civil-society engagement. Through its *Quick Views* statements and the Stop Poison Plastic platform, IPEN has argued that meaningful inclusion of affected communities, workers, and independent experts is essential to equitable and effective treaty outcomes.^{46 47} These interventions help ensure that frontline perspectives and lived experiences are not sidelined in high-level debates, reframing chemical and plastic pollution as matters of justice, human rights and intergenerational responsibility, rather than narrow technical issues.

At national levels, IPEN's public-awareness work has made chemical safety concerns visible through multilingual toolkits, media partnerships, and consumer product testing campaigns. Investigations on lead in paint, mercury in skin-lightening cosmetics, and toxic additives in plastics have generated mainstream coverage in more than 50 countries, spurring public demand for safer products and stronger regulation. By translating laboratory findings into accessible narratives, IPEN connects science to everyday life, amplifying pressure on governments to act in the public interest.

Together, these initiatives demonstrate that a coordinated civil-society network, armed with credible data and grounded in community advocacy, can shape international norms and national practices in ways that materially reduce toxic exposures and expand environmental accountability.

5. Ongoing Advocacy

IPEN's advocacy is active and evolving across multiple levels through its science and policy work, international treaty processes and national campaigns, and its constant revision of framing as the global narrative shifts. The following is a summary of some of this work.

5.1 Treaty Processes in 2025

5.1.1 Plastics Treaty / INC Sessions

IPEN remains closely engaged in the plastics treaty process. At the recent second part of the fifth session of the UNEP's Intergovernmental Negotiating Committee (INC-5.2, August 2025) in Geneva, nearly 60 IPEN members from 27 countries participated. Here IPEN made a raft of recommendations to enhance regulatory controls⁴⁷, supported by its scorecard assessments²¹ and new studies on toxic plastic exposures linked to delegates and waste workers.

In its March 2025 brief *The Plastics Treaty in 2025: IPEN Views on the Chair's Text*, IPEN argued that while the draft Chair's text incorporates a potential reduction in plastic production, "it will require significant revisions to ensure that the Treaty can meet its objective of protecting human health and the environment."²² The plastics treaty negotiations are expected to continue through 2025, and IPEN pledges to maintain pressure for stronger chemical controls and upstream measures rather than only waste management.²¹

5.1.2 Strengthening Global Governance: SAICM 'Beyond 2020' and the GFC

As global attention turns toward the post-2020 agenda for sound chemicals and waste management, IPEN has played an active role in shaping the contours of the *Strategic Approach to International Chemicals Management (SAICM) Beyond 2020* process. This initiative, coordinated under the United Nations Environment Programme (UNEP) with support from the Inter-Organisation Programme for the Sound Management of Chemicals (IOMC), aims to establish a renewed, multi-sectoral framework to accelerate progress toward the 2030 Agenda's targets on chemical safety.

IPEN has been a consistent participant in the *Intersessional Process* leading to the 2023 Bonn Conference, where the Global Framework on Chemicals (GFC) was formally adopted as the successor platform to SAICM.⁴⁸ Representing more than 600 civil-society groups worldwide, IPEN's delegation contributed technical input and civil-society perspectives to negotiations on global objectives, targets, and indicators. Through written submissions and side-events, the network advocated for the precautionary principle, stronger protection from highly hazardous pesticides (HHPs), and binding measures to eliminate the most harmful chemicals. These positions helped shape the final text's emphasis on human-health protection and environmental justice.⁴⁹

IPEN also coordinated regional consultations across Africa, Asia-Pacific, and Latin America to consolidate NGO input ahead of the Bonn meeting, ensuring that the GFC reflected concerns from countries where regulatory capacity remains limited. Within the new framework's structure, IPEN has endorsed commitments to:

- Promote transparent chemical information systems and public access to hazard data.
- Support phasing out lead paint and other legacy pollutants through national action plans.
- Advance gender-responsive and human-rights-based approaches to chemicals management.
- Strengthen financial and technical assistance for low- and middle-income countries via the Special Programme and GEF-related mechanisms.

These efforts demonstrate the evolution of IPEN's role from watchdog and evidence-gatherer to recognised civil-society partner in global governance. By helping to embed public-interest accountability into the GFC's design, IPEN has contributed to ensuring that the "Beyond 2020" framework not only continues SAICM's mission but also reflects the lived realities of communities most affected by toxic exposures.

5.1.3 Stockholm Convention Updates

IPEN has historically influenced Stockholm Convention listings and calls for class-based approaches to persistent organic pollutants (POPs).² In the current era, IPEN advocates that new chemicals under review (e.g. certain halogenated flame retardants or brominated dioxins) be assessed through health-based, class approaches rather than incremental listing. It also contributes interventions to side events and submissions to the Convention's review committees via civil society channels.

5.2 National Campaigns: Lead Paint, Pesticides, PFAS

5.2.1 Lead Paint Phase-Out by 2030

IPEN runs a vigorous global Lead Paint Elimination Campaign. According to its 2023 Annual Report, IPEN supported lead paint elimination activity through 54 NGOs in 41 countries, contributing to progress toward new national lead paint regulations in 14 countries.¹¹

On its projects page, IPEN notes it engages participating organisations in analytical testing of paints, engagement with small and medium paint manufacturers, and governmental advocacy for mandatory regulatory standards.¹⁴

In October 2024, IPEN called for listing lead chromates (a common pigment) under the Rotterdam Convention to strengthen trade restrictions on lead-containing paints.⁵⁰

5.2.2 Stricter Pesticide Controls

While IPEN did not release a stand-alone 2025 campaign document exclusively on pesticides, its recent activities clearly indicate an ongoing global drive for tighter pesticide regulation and phase-out of highly hazardous pesticides (HHPs). Through its chemicals and waste campaign and its network of national NGOs, IPEN has coordinated multi-country chlorpyrifos elimination efforts, publishing a *Guide to New POPs: Chlorpyrifos* ahead of the 2025 Stockholm Convention meetings and urging a global ban without exemptions.⁵¹ At the 2025 COP, parties formally agreed to list chlorpyrifos for global elimination, a decision strongly championed by IPEN.⁵² These actions build on IPEN's broader engagement in the Global Framework on Chemicals (GFC) as outlined in 5.1.2 above. Together, these initiatives demonstrate IPEN's sustained advocacy for stricter pesticide controls, improved monitoring programs, and protection of vulnerable communities from toxic exposure.

5.2.3 Monitoring and Restricting PFAS

IPEN's research on PFAS is a concrete example of filling critical data gaps. Their 2023/2024 study *PFAS in Single-Use Food Packaging from 17 Countries* uncovered that even packaging marketed as “biodegradable” often contained PFAS chemicals.⁵³ This study strengthens IPEN's mandate to push for global regulation of PFAS as a class.

Through its “PFAS” policy tag page, IPEN also disseminates findings and encourages national campaigns to monitor PFAS in consumer goods and push for bans or tighter controls.⁵⁴

5.3 Framing the Future: Rights-Based & Health-Centred Narratives

In July of this year IPEN's Co-Chair Pamela Miller declared, “Safeguarding the human rights of present and future generations, particularly the rights of Indigenous Peoples who are most directly harmed by the plastics crisis, demands that the international community take strong, meaningful action. We need a human rights and human health focused Plastics Treaty to end the threats plastics pose to the Arctic and to healthy environments around the world.”⁵⁵

This framing shifts the discourse from purely technical regulatory targets to moral and legal obligations, potentially strengthening normative pressure on states. This strategic rhetorical shift positions IPEN not only as a technical watchdog but also as a defender of rights at global forums, which can broaden its appeal to justice-oriented stakeholders and legal advocates.

5.4 Filling Data Gaps at the Science/Policy Interface

One of IPEN's signature strengths is generating independent science where governments are weak or silent. Examples:

- Plastic exposure studies: At INC-5.2, IPEN released new studies documenting toxic plastic exposures among delegates and waste workers in Kenya and Thailand, linking negotiation processes to real health risks.⁴⁸
- Global PFAS packaging test: The 17-country study cited earlier is a clear case of IPEN stepping into data voids and furnishing policy-relevant evidence.⁵⁰
- Lead paint analytics: For decades, IPEN and its participating organisations have led paint testing campaigns across countries lacking robust regulatory monitoring.^{45 11}
- Public interest briefings tied to INC / treaty moments: IPEN times release of *Quick Views*, scorecards, and explanatory briefs for treaty sessions, ensuring that science and critique intersect with policymaking rhythms.²¹

Through these interventions, IPEN positions itself as both an advocacy leader and a scientific knowledge generator, bridging gaps for states, negotiators, and civil society.

6. Challenges & Criticisms

The tireless, and oftentimes thankless, work of IPEN in the environmental protection arena cannot be overstated. The successes in which they have been instrumental are significant. Yet whilst it plays a prominent role in global advocacy on chemicals, plastics, and waste, its efforts are not immune to criticism, internal tensions, or strategic constraints.

This next section contains a number of critiques that in no way undermine IPEN's value, scientific voice, moral clarity or its role in amplifying underrepresented environmental justice perspectives. Rather, they expose the strategic, political, and organisational tightropes IPEN must balance as it seeks to influence global governance.

6.1 Capacity and Implementation Gaps

Ambitious global agreements often falter in the transition from promise to practice. Across many environmental regimes, the gulf between commitment and execution remains wide, shaped by uneven institutional capacity, limited technical infrastructure, and competing national priorities. Within this reality, IPEN operates as both

participant and critic, seeking to expose implementation deficits while helping to close them through its networked approach to monitoring and advocacy.

IPEN has become one of the few consistent civil-society sources of empirical evidence from the Global South, supplying data and field observations that often fill critical monitoring gaps within the Stockholm, Basel, and Minamata Conventions. Much of this work relies on screening-level or community-based methods, enabling rapid assessments in regions where institutional monitoring remains sparse. While these contributions have strengthened representation of under-reported contexts, they have also exposed IPEN to occasional scrutiny regarding the consistency and scientific rigour of data collected across its diverse partner network.

Many of IPEN's member organisations work in environments where regulatory agencies lack the personnel, laboratory capacity, and data systems required for systematic oversight. This creates dependency on external funding, voluntary reporting, and fragmented monitoring regimes that seldom capture the full extent of chemical and waste pollution. To bridge these gaps, IPEN's citizen-science initiatives and regional training programmes have helped democratise data collection and expand local technical capacity. These methods, though not always conforming to the precision of formal scientific protocols, have yielded vital indicative evidence from regions where official monitoring is weakest.

Nevertheless, IPEN's reliance on rapid-assessment tools and voluntary data sharing carries reputational and strategic risks. Industry groups and some treaty delegates have questioned aspects of its sampling consistency, laboratory accreditation, and methodological transparency. While such critiques highlight real challenges in harmonising citizen-generated evidence, they also reflect a double standard in how scientific legitimacy is assigned within global governance, where the absence of official data leaves civil society both filling and defending the evidentiary void. IPEN has responded by publishing clearer methodological notes, partnering with accredited laboratories where resources permit, and framing its results as early-warning indicators rather than definitive risk assessments.

The same structural limitations that hinder implementation also impede learning. Multilateral conventions often struggle to translate new scientific findings or emerging contaminants into policy adjustments, constrained by slow review processes and political caution. For IPEN, this inertia underscores the need for more adaptive, reflexive governance, advocating for systems that can integrate new evidence and adjust course without waiting for consensus among states.

By continually drawing attention to these capacity and learning deficits, IPEN positions itself as both an interlocutor and an innovator: pressing for stronger monitoring and enforcement while demonstrating how civil society can mobilise knowledge in contexts where official systems lag behind. Its challenge lies not in identifying the gaps, but in ensuring that the evidence it helps generate leads to sustained institutional reform rather than short-term acknowledgment.

6.2 Equity and Power in Global Governance

Global environmental governance aspires to fairness but often reproduces the inequalities it seeks to redress. While the principle of *common but differentiated responsibilities* is embedded in most treaties, in practice the burdens of compliance, transition, and enforcement continue to fall disproportionately on the Global South. Wealthier states and industrial actors tend to dominate the negotiation of technical standards and reporting requirements, shaping regimes in ways that reflect their own capacities and interests.

For IPEN, these asymmetries are both a structural constraint and a moral impetus. Its network brings together organisations from regions where pollution burdens are highest but political and financial leverage is lowest. Through its submissions, campaigns, and coalition-building, IPEN seeks to rebalance these inequities, pressing for financing mechanisms, technology transfer, and capacity-building provisions that reflect differentiated capabilities rather than uniform expectations. In doing so, it has positioned itself as one of the few civil-society voices consistently articulating the justice dimension of chemicals and waste policy.

Yet the pursuit of equity within unequal systems presents persistent dilemmas. IPEN's advocacy often depends on funding from Northern donors and foundations, embedding it within the very hierarchies it challenges. Maintaining

independence and credibility requires constant negotiation: amplifying Global South perspectives while engaging constructively with institutions and funders whose frameworks may perpetuate imbalance. At the same time, the network's reliance on voluntary participation means that representation within IPEN itself can mirror global inequalities; smaller or less-resourced groups may struggle to participate fully in technical meetings or to sustain long-term engagement.

Despite these tensions, IPEN's work demonstrates that equity is not simply a distributional question but a procedural one: who defines problems, who generates evidence, and whose knowledge counts in decision-making. By broadening participation and centring voices from affected communities, IPEN both exposes the structural imbalances of global governance and models a more inclusive approach to environmental diplomacy. Its challenge lies in transforming moral legitimacy into political leverage within systems still calibrated to privilege, power and resources over justice.

6.3 Fragmentation and Regime Complexity

Global chemicals and waste governance has evolved through a patchwork of overlapping conventions, voluntary initiatives, and ad hoc partnerships. The Stockholm, Basel, and Minamata Conventions each emerged from distinct problem framings (i.e. persistent pollutants, hazardous waste, and mercury respectively), yet their boundaries blur in practice. Divergent definitions, timelines, and reporting obligations have produced a system rich in mandates but poor in coherence. The result is a labyrinthine policy environment where actors must navigate multiple regimes with limited coordination and inconsistent incentives.

For IPEN, this fragmentation represents both a challenge and an opportunity. The network's presence across these arenas allows it to detect policy disconnects and highlight where narrow treaty mandates fail to address cumulative risks. Its advocacy links issues (e.g. plastic additives, waste exports and toxic recycling) that are often treated separately by different institutions. By tracing the movement of chemicals across production, consumption, and disposal stages, IPEN works to reframe these as interconnected components of a single global system rather than discrete technical problems.

Yet working across multiple regimes also imposes strain. Each convention has its own technical bodies, negotiation cycles, and documentation requirements, demanding significant expertise and continuity from a relatively small civil-society network. The risk of duplication or inconsistent messaging is constant. Moreover, policy coherence is often hampered by legal ambiguity and "soft" obligations such as non-binding guidelines, voluntary frameworks, and lengthy review procedures that delay decisive action. When coupled with the economic inertia of entrenched industries and the influence of investor-protection clauses in trade agreements, these factors can create a subtle form of regulatory chill, discouraging governments from adopting strong controls even when warranted by the evidence.

IPEN's approach has been to act as an integrator within this complex regime landscape. Through cross-treaty submissions, side events, and coalition partnerships, it encourages negotiators to adopt life-cycle perspectives and to align chemicals and waste policies with broader sustainability and climate goals. While such integrative advocacy rarely yields immediate reform, it helps sustain pressure for convergence, reminding governments that piecemeal governance cannot solve systemic pollution.

In many ways, IPEN's effectiveness stems from its ability to operate in the spaces between institutions: connecting issues, communities, and regimes that otherwise function in isolation. The cost of that breadth, however, is continual overstretch; a tension between the ambition to knit fragmented systems together and the resources required to hold them there.

The challenges outlined above do not diminish IPEN's contribution; rather, they illuminate the structural conditions under which civil-society networks must operate in global chemical governance. Capacity shortfalls, power asymmetries, and fragmented regimes are not obstacles unique to IPEN but defining features of the system it seeks to improve. In navigating these, IPEN has demonstrated both the resilience and the moral clarity that underpin its influence.

What emerges from this reflection is not a picture of deficiency but of possibility. The same constraints that limit action also point to where progress can be made through more equitable financing, stronger institutional linkages, and inclusive knowledge-sharing that bridges the divide between formal science and community experience. As IPEN continues to evolve within this complex landscape, its credibility will depend on how effectively it can mobilise evidence, partnership, and public trust to shape the next generation of chemical safety norms.

The following synthesis builds on this foundation. It assesses where IPEN's comparative strengths lie, where further adaptation could enhance its impact, and how governments, donors, and responsible industry actors can help realise the network's vision of a toxics-free future. In doing so, it reframes criticism as a call to collaboration, urging those who share IPEN's goals to see its constraints not as weaknesses, but as catalysts for deeper engagement and shared responsibility.

7. Critical Analysis

The preceding sections have traced IPEN's trajectory from catalytic achievements to the structural challenges that shape its ongoing advocacy. What emerges is a picture of a network that is both vital and vulnerable; one that punches far above its weight in global influence, yet continually negotiates the limits of mandate, capacity, and political space.

7.1 Strengths and Distinctive Contributions

IPEN's greatest strength lies in its ability to connect global norms with local realities. Its distributed structure, linking hundreds of partner organisations across the Global South, that enables it to surface lived evidence of chemical exposure, contamination, and environmental injustice that would otherwise remain invisible to international institutions. The network's credibility rests not only on its technical outputs but on its authenticity, the trust it has earned from communities whose health and livelihoods depend on stronger regulation.

Through strategic engagement in the Stockholm, Basel, and Minamata Conventions, IPEN has ensured that scientific and moral arguments for precaution and substitution remain visible even when political appetite wanes. Its persistence has helped secure stronger treaty listings, advance lead-paint elimination, and elevate emerging pollutants such as PFAS and plastic additives onto global agendas. In a landscape often dominated by corporate and state interests, IPEN continues to hold to its core belief that protection from toxic harm is a basic human right.

7.2 Constraints and Systemic Tensions

At the same time, the network's reach exceeds its resources. Limited funding, reliance on voluntary coordination, and uneven technical capacity among regional partners constrain the scale and consistency of its operations. The very diversity that gives IPEN legitimacy can also challenge coherence. Its member organisations differ widely in context, expertise, and access to decision-making spaces. These structural realities have, at times, left IPEN exposed to critique over the rigour of its data, the representativeness of its evidence, or the feasibility of its demands.

Yet such tensions should be understood as reflections of a broader imbalance in global environmental governance rather than as failings of the network itself. When governments underfund monitoring, when treaties depend on self-reporting, and when industry data remain proprietary, civil society inevitably fills the gaps with the tools available. IPEN's response, to build capacity, to democratise science, and to pursue transparency, illustrates the adaptive leadership required in such a constrained ecosystem.

7.3 Comparative Positioning and Future Opportunities

Compared with larger international NGOs, IPEN occupies a unique niche. It lacks the brand power of Greenpeace or WWF, but compensates through technical depth, policy continuity, and a network that is truly grassroots in composition. Its influence stems less from public spectacle than from persistently being present, prepared, and principled across successive negotiation cycles.

Looking ahead, IPEN's challenge is to consolidate its scientific credibility and policy reach without diluting its activist roots. Partnerships with universities, independent laboratories, and philanthropic science funders could

strengthen the methodological robustness of its monitoring while preserving community ownership of data. Similarly, deeper collaboration with health agencies and environmental ministries could help translate its evidence into tangible policy reform.

7.4 A Shared Responsibility

For governments and industry actors, the lesson of IPEN's journey is not merely that civil society matters, but that justice itself depends on it. Chemical safety is inseparable from social equity; the right to live and work in environments free from toxic harm is a universal human right, yet its realisation remains profoundly uneven. Communities in the Global South, Indigenous peoples, informal workers, and children are too often those who bear the hidden costs of global production and waste systems.

IPEN's work exposes this imbalance and challenges decision-makers to see chemical governance not only as a technical task, but as an ethical obligation. When governments and corporations support IPEN's efforts, by sharing data openly, resourcing local capacity, and respecting community-generated evidence, they help correct the structural inequities that have long defined the global economy. Supporting IPEN, in this sense, is not charity, it is restitution.

For advocates, philanthropists, and the public, partnership with IPEN offers a way to stand with those on the front lines of environmental injustice. Each training initiative, monitoring project, or policy intervention led by the network transforms abstract rights into lived protection for workers, families, and ecosystems. Through collaboration rather than competition, these actors can strengthen the moral architecture of global governance, ensuring that the health of the poor and the vulnerable is treated as the benchmark, not the afterthought, of progress.

Seen through this lens, the critical review is not a verdict but a collective summons. The pursuit of a toxics-free future requires courage from policymakers, accountability from industry, and solidarity from civil society. Together, they form the conditions for genuine environmental justice.

8. Conclusion and Implications

The story of IPEN is one of endurance, conviction, and quiet transformation. Over more than two decades, the network has amplified community voices, strengthened the science-policy interface, and pressed governments to confront the health and environmental costs of toxic pollution. Its influence is not measured in budgets or staff numbers but in its determination to hold open moral space for precaution, accountability, and justice within arenas where economic and political pressures often dominate.

8.1 A Civil-Society Catalyst

IPEN has become an essential catalyst in the global movement for chemical safety. By linking grassroots monitoring with international advocacy, it has shown how evidence gathered under difficult conditions can shift the trajectory of global policy. Its campaigns on lead paint, PFAS, and plastic additives have provided tangible pathways for reform, proving that small, coordinated actions can generate systemic ripple effects. The network's distributed model, grounded in trust and solidarity, remains one of the most inclusive architectures in global environmental governance.

Yet IPEN's experience also reveals how fragile progress can be when civil society is expected to carry disproportionate responsibility for global oversight. Many of the network's partners operate in contexts of political volatility, limited funding, and environmental injustice. To sustain its work, IPEN requires not only recognition but material partnership from governments, multilateral agencies, research institutions, and philanthropy.

8.2 Implications for Policy and Partnership

For governments and multilateral institutions, support for IPEN should be viewed as a strategic investment in the effectiveness and legitimacy of global treaties. By funding monitoring, training, and community engagement, states can expand their own evidence base and strengthen compliance capacity. Integrating IPEN's findings into national planning processes can also help identify policy blind spots and accelerate safer transitions.

For industry and investors, collaboration with networks like IPEN offers a route to rebuild public trust and align with growing expectations for corporate responsibility. Sharing data transparently, supporting independent research, and engaging in good-faith dialogue can demonstrate leadership beyond compliance. The shift to sustainable chemistry and circular production requires precisely this kind of cross-sector cooperation.

For civil society and philanthropy, continued investment in IPEN's infrastructure of knowledge and advocacy is critical. Philanthropic funding can play a catalytic role by building laboratory capacity, supporting digital data platforms, and empowering new generations of environmental health advocates. Collaborative funding models can ensure that the benefits of chemical safety extend to the most affected communities.

8.3 Towards a Toxics-Free Future

Ultimately, IPEN's significance extends beyond chemicals and waste. It exemplifies the civic architecture upon which all sustainable development depends in the form of informed citizens, accountable institutions, and the courage to speak for those unheard. Strengthening IPEN is not simply about eliminating pollutants, it is about reaffirming a principle of shared humanity, where the right to a safe environment is not determined by geography, income, or influence.

If governments, industries, and citizens alike choose to act on that principle - to partner rather than compete, to listen as much as lead - the promise of a toxics-free future becomes more than aspiration. It becomes an attainable expression of justice itself.

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