

Health and Global Policy Institute (HGPI) Planetary Health Project

Submission on the Call for Inputs on Protecting Clean Air

October 16, 2025

This submission by Health and Global Policy Institute (HGPI), an independent, non-profit, and non-partisan think tank based in Japan, responds to the Call for Inputs by the Special Rapporteur on Protecting Clean Air, addressing the serious global health risks posed by air pollution through Japan's experience spanning decades, highlighting the interplay between economic development, public health, regulatory evolution, and socioenvironmental justice.

Japan's Industrial Growth and the Pollution Crisis

Japan offers a compelling case study due to its historical experience transitioning from a period of severe industrial air pollution, characterized by environmental devastation driven by rapid economic growth (1950s–1960s), to becoming a model in modern environmental governance.

The post-World War II period witnessed Japan's most severe air pollution crisis, driven primarily by rapid industrial and economic reconstruction. During the high economic growth period from the mid-1950s to the first half of the 1970s, sulfur oxides and dust emitted from large-scale factories and power plants in industrial districts became the predominant pollutants. The unchecked nature of this pollution produced catastrophic health consequences, with some heavily polluted areas experiencing visibility reduced to merely fifty meters and widespread serious respiratory ailments among residents.

This era was indelibly marked by the emergence of the "four big pollution diseases," which galvanized public consciousness and political action. Among these four major incidents, Yokkaichi Asthma, beginning around 1960, was caused by air pollution and represented an epidemic of respiratory diseases including bronchial asthma caused by sulfurous smoke from the Yokkaichi petrochemical complex in Mie Prefecture. By then, the health and environmental dimensions of pollution could no longer be ignored and necessitated decisive legislation. Japan's approach to air pollution control has thus been historically motivated by the protection of affected communities, especially as a response to public outcry following such health disasters.

The Evolution of Japan's Air Pollution Policies

Japan has since established several air pollution policies that incorporate human rights and socioenvironmental considerations, though explicit integration of a "human rights" framework is more implicit within the broader legal and policy structure than explicitly expressed.

Following the inadequacy of existing measures as demonstrated in serious public health outbreaks, the establishment of the *Basic Law for Environmental Pollution Control* (1967) was enacted, which introduced the concept of environmental quality standards (EQSs) and clarified pollutants emission responsibility. Its enactment coincided with the filing of lawsuits by Yokkaichi asthma patients, highlighting the human and social dimensions of pollution control.

Mounting public outcry and a wave of litigation culminated in what became known as the “Pollution Diet” of 1970, during which 14 new anti-pollution laws were passed. This period marked a turning point in Japan’s environmental governance, leading to a major institutional reform: the creation of the Agency of Environment (*Kankyō-chō*) in 1971—the direct predecessor of today’s Ministry of the Environment. Prior to this, environmental policy had been fragmented across several ministries, including Health and Welfare, International Trade and Industry, and Transport, often resulting in compromises that favored economic growth over environmental protection. The establishment of a dedicated, albeit initially small, “*environmental-only*” organization (*kankyō sen-gyō soshiki*) represented a crucial political shift. It signified formal recognition that a permanent and comprehensive body was necessary to address pollution and, later, broader environmental issues. Although the agency’s budget and authority were initially limited—frequently requiring coordination with more powerful ministries—its establishment was a monumental political move by then-Prime Minister Eisaku Satō. It marked Japan’s first national commitment to prioritize environmental concerns as a matter of policy, elevating environmental governance beyond temporary crisis responses and signaling a departure from the exclusive pursuit of economic growth.

Complementing these institutional developments, the *Air Pollution Control Act* (1968) provided a framework for measures to control emissions of soot and smoke from particulate matters from factories. A subsequent revision in 1970 introduced national uniform emission control and direct penalties in an effort to safeguard human health. Those who were affected by Yokkaichi asthma and advocates successfully utilized the courts to challenge major polluters and assert corporate responsibility, leading to landmark compensation agreements and the establishment of the *Act on Compensation for Pollution-Related Health Damage* (1973). This law established a system for compensating victims not only for medical costs but also for livelihood assistance, demonstrating the incorporation of the polluter pays principle (PPP) into environmental liability schemes—holding that those who cause pollution should bear the costs of remediation and restoration.

By 1970s, while industrial sulfur dioxide concentrations had markedly decreased, the rapid increase in automobile traffic introduced significant traffic-related air pollution (TRAP), notably nitrogen oxides (NO_x) and particulate matter (PM). Epidemiological studies provided evidence that asthma prevalence was significantly higher among children living in roadside areas, underscoring the urgency to protect vulnerable populations. In response, the *Automobile NO_x Law* (1992) and its subsequent amendment in 2001 to include PM controls (the *Automobile NO_x/PM Law*) led to significant decreases in ambient NO₂ and suspended particulate matter (SPM), contributing to a reduction in the prevalence of asthma and atopic dermatitis in children.

The evolution of these policies was supported by comprehensive monitoring and research systems that enabled evidence-based regulation. Japan operates a nationwide monitoring network, the Atmospheric Environmental

Regional Observation System (AEROS, also called "Soramame-kun"), which provides real-time air quality information to the public. As of 2018, there were 1,464 ambient air quality stations and 409 roadside monitoring stations, which feed data to government agencies for analysis and publication. Complementary meteorological data are collected by the Automated Meteorological Data Acquisition System (AMeDAS), enabling assessments of how weather influences pollutant dispersion.

Epidemiological research further informed policy development. Large-scale studies, such as the SORA project (Study on Respiratory Diseases and Automobile Exhaust) and the ongoing Japan Environmental and Children's Study (JECS), have provided robust evidence linking exposure to pollutants—such as fine particulate matter (PM_{2.5}) components and NO_x—during critical periods like pregnancy and early childhood to adverse health outcomes including asthma and neurodevelopmental issues. These studies emphasized the health impacts on vulnerable populations, reinforcing the need for targeted regulatory measures and continuous monitoring.

Further reflecting a broadening of environmental concerns beyond traditional pollution issues, the *Basic Environment Law* was established in 1993. This law replaced the older Basic Law for Environmental Pollution Control of 1967 and introduced the concept of environmental pollution prevention, reflecting the wider scope of environmental problems that now included emerging issues like global warming.

Integrating Health Impact Assessment into Environmental and Social Frameworks

Building on these regulatory measures, the strategic and systematic integration of Health Impact Assessment (HIA) into environmental and social policies has been proposed, though it is still in the early stages. While Japan has a well-established Environmental Impact Assessment (EIA) system, the incorporation of HIA into this framework is gaining attention, particularly in urban planning and public health policy.

In practice, for every policy or initiative, an evaluation committee including diverse stakeholders could:

1. Discuss the types of impacts to be assessed and propose improvements.
2. Conduct evaluations collaboratively.
3. Submit recommendations to improve the program.
4. Continue monitoring impacts even after implementation.

This approach also aligns with the WHO Commission on Social Determinants of Health's Health Equity Assessment (2008), ensuring policies address inequities in health outcomes. Despite this, integrating HIA into Japan's existing EIA framework presents several challenges, including the need for interdisciplinary collaboration, the development of standardized methodologies, and the allocation of resources for comprehensive assessments. However, the growing recognition of the importance of public health in urban planning and environmental policy presents an opportunity to advance this integration.

Nationwide and Local Government Initiatives

Yokkaichi City

Yokkaichi City in Mie Prefecture has a long history of industrial air pollution, which caused severe health impacts, notably Yokkaichi asthma. To acknowledge and address these historical injustices, the Yokkaichi Pollution and Environment Miraikan serves as a center where affected residents share their experiences and lessons learned. In parallel, the International Center for Environmental Technology Transfer (ICETT) promotes the dissemination of environmental knowledge and technologies globally, reflecting the city's commitment to environmental remediation and knowledge-sharing as part of social responsibility.

Osaka Prefecture

Osaka Prefecture has implemented its own air quality standards, largely aligned with national regulations but including additional criteria for CO₂ and odor, demonstrating attention to localized environmental concerns that affect daily life. These standards exemplify preventive environmental governance, which seeks to protect residents' health proactively and hold polluters accountable.

Tokyo

In Tokyo, lawsuits filed from 2007 onwards have sought medical compensation for asthma cases linked to motor vehicle emissions. While compensation payments have decreased over time, these legal actions highlight the persistent struggle for socioenvironmental justice, where affected communities seek recognition, remediation, and accountability for ongoing health burdens caused by urban air pollution. In parallel, the Tokyo Metropolitan Government launched the "TOKYO Atmospheric Information" app in March 2025, providing real-time air quality data to residents across the city. This initiative empowers communities to monitor pollution exposure, make informed decisions, and advocate for healthier urban environments, complementing legal and policy measures while advancing health equity and public participation in environmental governance.

Nationwide Programs

Across 47 areas in Japan, pollution-related health damage initiatives funded by the national government and polluters include asthma programs, with a particular focus on vulnerable populations such as children and those with pre-existing health conditions. These programs demonstrate a commitment to equitable protection, ensuring that historically marginalized or high-risk communities receive attention in environmental health policy. Japan also engages in regional cooperation with Korea and China to mitigate transboundary air pollution, illustrating how environmental equity should extend beyond national borders.

Global and Supply-Chain Considerations

Effective air pollution policy also increasingly requires attention beyond local emissions, incorporating supply-chain

impacts and global consumption standards. Developed countries, including Japan, have a responsibility to address pollution generated not only domestically but also through their global supply chains, recognizing that consumption and production patterns in one country can affect health and environmental outcomes elsewhere.

To operationalize this, Japan has promoted initiatives such as the Green Value Chain Platform, encouraging companies to account for emissions throughout their supply chains—including raw material extraction, manufacturing, transportation, and disposal. By expanding emissions accounting beyond direct operations, companies can identify reduction opportunities, improve sustainability practices, and contribute to cleaner air both domestically and internationally.

Addressing supply-chain emissions also promotes equity, as it ensures that the health and environmental burdens of production are not disproportionately borne by vulnerable populations elsewhere. Integrating this global perspective into air pollution policies complements local and national regulatory measures, reinforcing the broader goals of socioenvironmental justice and sustainable development.

Conclusion

Japan's experience highlights that strategies for controlling air pollution can be designed within a health and social justice framework. This synergy suggests that integrated environmental governance—linking air quality, domestic and international climate policy, and health protection—can maximize public and global health outcomes while advancing sustainable development goals, protecting the right of every human being to clean air.

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