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Legal Environment Assessment for Health and Pollution

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An operational guide to conducting national regulatory and policy assessments to promote effective pollution control and protect public health

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List of abbreviations and acronyms

DALY	disability adjusted life year
GBD	global burden of disease
GDP	gross domestic product
IHME	Institute for Health Metrics and Evaluation
LEA	legal environment assessment
LMIC	low- and middle-income country
NCD	non-communicable disease
NEMA	National Environmental Management Act
PCB	polychlorinated biphenyls
PM	particulate matter
POP	persistent organic pollutant
SDG	sustainable development goal
SES	social and environmental standards
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USD	United States Dollar
WASH	water, sanitation and hygiene
WHO	World Health Organization
YLD	years lived with disability

Foreword

Pollution of air, water and soil poses serious threats to health and human rights and undermines efforts towards sustainable development. According to the latest data, air pollution is the second largest risk factor for death, accounting for 8.1 million deaths globally in 2021. Most strikingly, the vast majority of these deaths occur in low- and middle-income countries, especially in South Asia and African regions, highlighting the dramatic inequalities in environmental health across the globe.

The 2024 Sustainable Development Goals (SDG) Report finds that only 17 percent of the SDG targets are on track, with only six years time to meet our commitments. None of the targets on pollution are on track, and as seen in Annex 2, this is particularly concerning given the links between pollution and several SDGs. To accelerate progress towards the SDGs and fulfilling our pledge to leave no one behind and reach the furthest behind, much greater attention must be given to the topic of pollution.

Reviewing and improving pollution legislation and law enforcement is an effective first step that any country can start with. Developing a country's legislative environment to help reduce and prevent pollution, while making linkages with pollution's public health impacts can facilitate all aspects of the implementation of the 2030 Agenda for Sustainable Development. This manual provides guidance on how to undertake a national legal environment assessment (LEA) for health and pollution. It can assist governments, civil society and other key stakeholders to develop evidence-informed policy and strategy, to review and reform laws and policies based on human rights considerations, and support increased capacity to achieve enabling legal environments for effective pollution responses.

This manual is also particularly timely. In 2021, the United Nations Human Rights Council adopted a resolution recognizing the human right to a clean, healthy and sustainable environment. While the resolution is not legally binding, its near-unanimous adoption and international recognition provides a foundation for these LEAs and can be seen as a step-by-step template for how to integrate the right to a healthy environment into domestic laws.

UNDP's Strategic Plan 2022–2025 stresses the need for transformative solutions to safeguard the health of the planet and people for current and future generations. It acknowledges that multidimensional development challenges ranging from the COVID-19 pandemic to climate change, unrest, and conflict, provide us with an opportunity to do things differently and help us see a renewed moment of choice.

In its HIV and Health Strategy 2022-2025, UNDP commits to assist countries to implement integrated development solutions to address the nexus of health, environment, and the climate crisis. The team has years of experience in producing LEAs and supporting their national implementation across priority topics. The first LEA manual on HIV was published in 2014, and a manual focusing on tuberculosis in 2017. LEAs have been implemented in more

than 30 countries, leading to changes such as the repeal of harmful laws, greater access to justice and services for affected populations, more inclusive health governance processes, capacity building of public officials, and strengthening of national institutions. Our hope is that similar results can be achieved through the use of this manual.

We are witnessing a growing momentum and movements across the globe, with young people, women, and others making compelling legal cases to secure their rights to a healthy environment and address pollution and climate change. The Summit of the Future, which will take place in September 2024, will also be an important forum to unify world leaders to forge a new international consensus on delivering a better present while safeguarding the future for new generations. Revisiting laws, policies and regulations offer one of the most impactful ways to make positive changes.

Mandeep Dhaliwal, Director; HIV and Health Group, UNDP

1

Introduction: Why Conduct a Legal Environment Assessment on Pollution?

1.1 About this LEA manual

1. Introduction: Why conduct a Legal Environment Assessment on pollution?

Pollution is one of the largest contributors to disease and premature death in the world. It is responsible for approximately 9 million premature deaths annually, or 16 percent of global mortality [1]. The World Health Organization (WHO) estimates that 99 percent of the world's population breathes air containing dangerous levels of pollutants, and harmful chemicals are found in the tissues of humans in the world's most remote locations [2,3].

Understanding of the full health impacts from different types of pollutants is not complete. Estimates of the health impacts from air pollution are the most accurate: In 2021, exposure to air pollution was estimated to result in 8.1 million premature deaths. 58 percent of these deaths were estimated to occur due to ambient $PM_{2.5}$ exposure, 38 percent due to household air pollution, and 6 percent due to ozone pollution [4].

The health toll from chemical exposures is less clear. Among toxic chemicals, the best data exists for lead, which is estimated to have resulted in 900,000 premature deaths and the loss of 21.7 million years of healthy life in 2019 [5]. Unfortunately, robust estimates on the death and disability toll associated with other chemicals are not available. However, based on expert surveys, the WHO has estimated that total annual deaths attributable to chemicals likely exceeds 2 million [6].

The impacts of pollution are overwhelmingly weighted toward low- and middle-income countries (LMICs). It is estimated that over 90 percent of all deaths attributable to pollution currently occur in LMICs [7]. Within these LMICs, pollution's toll is largest among the poor, minorities and marginalized populations. As a result, these under-served and under-represented groups are more likely to be burdened by diseases and disabilities that prevent economic mobility.

Pollution's toll extends beyond health, causing significant negative impacts to economic development.[1] At the individual level, pollution disproportionately affects the most vulnerable populations [8] and those with the least means to protect themselves, perpetuating a cycle of intergenerational poverty. At the societal level, pollution reduces workforce productivity, drives up healthcare spending and suppresses gross domestic product (GDP) by an estimated 2 percent per year in LMICs [9]. For example, UNDP estimates that Nigeria loses US$11.6 billion annually due to premature mortality associated with ambient air pollution, US$1.5 billion due to lost productivity from illness and spends 38.7 million in associated healthcare costs [10].

In addition, Nigeria loses US$2.9 billion from morbidity and premature mortality associated with exposure to household air pollution [11]. The World Bank estimates that air pollution alone costs the global economy US$225 billion annually in lost labour income [12]. Pollution

1 Besides causing intergenerational poverty and reduced productivity, pollution also hinders economic development by putting intense pressure on natural resources and ecosystems, which provide an important source of economic value in many countries.

is not a necessary component of national economic development, and countries that work proactively to prevent and mitigate it can expect a positive return on their investment in the form of smarter and more economically productive citizens, lower healthcare costs, higher educational attainment, and higher tourism rates [13].

Pollution can also disrupt social cohesion and stability. In some countries, pollution and environmental degradation have been a leading cause of political protest and a contributor to mass migration [14,15,16]. Likewise, elevated levels of lead in a child's blood can increase the likelihood of drug use, violent criminal behaviour and incarceration [17]. This is a potentially significant issue for many countries, as in LMICs, nearly half of all children have elevated blood lead levels [18,19].

Laws and policies are a key tool in disincentivizing polluting activities, protecting vulnerable populations and promoting cleaner models of production and consumption. However, countries around the world face a variety of common challenges in effective pollution regulation. Assessing the existing legal framework for pollution regulation helps with identifying what is needed for an improved response.

The primary purpose of the legal environment assessment (LEA) is to reduce pollution levels and improve environmental health by reviewing relevant laws, regulations and policies and identifying key challenges, priorities and opportunities for an improved response. It is an assessment of a country's legal and policy framework related to a particular health issue. In the context of pollution and health, it is important to understand how the legislative environment influences pollution prevention, mitigation, remediation, and the promotion of environmental health, and how the existing framework can be strengthened.

The LEA also aims to assess the effectiveness of the legal framework in protecting and promoting rights. Revisiting laws related to pollution can also help countries to implement the Sustainable Development Goals and the pledge to leave no one behind (see **Annex 2**). Many other international treaties with increasingly urgent agendas could also benefit from the LEA approach, including the Paris Agreement.

In more detail, an LEA focused on pollution and health is an opportunity to:

- Increase political will and broaden engagement to address pollution though improved awareness of the cost of inaction on pollution challenges (in terms of public health, economic productivity, ecological services and other losses);
- address major societal drivers of disease, disability and premature death;
- establish multi-sectoral technical collaboration to address pollution;
- promote evidence-based decision-making and intelligent resource allocation to address pollution.

While the LEA process includes the creation of an analytical report, this by no means the end of the process. Importantly, the analytical phase is followed by a process of engaging with national stakeholders to use the analysis to effect positive changes in the regulatory environment.

1.1 About this LEA manual

This manual provides operational guidance on how to undertake a national LEA on pollution and health, including guidance on identifying relevant legal frameworks, what to review and who to include in the process.

This manual includes:

- background information on key pollution sources, types and health impacts;
- links to resources on legal frameworks for pollution control and protection of environmental health;
- information on planning for an LEA, including how to ensure that the assessment process is consultative, participatory and inclusive of a range of key stakeholders and populations;
- details of timeline and operational considerations in conducting an LEA;
- practical steps on undertaking an assessment, including recommended methodologies for identifying and analysing national laws and policies, and information on vulnerable populations and environmental justice issue;
- recommendations for obtaining feedback on and finalizing the assessment;
- ideas for dissemination of the LEA with key stakeholders;
- suggestions for moving forward from the assessment towards action planning for strengthening legal and policy frameworks for pollution control; and
- case studies, examples, and detailed annexes on specific issues.

The first aim of a LEA is to identify those rights, treaties, laws, regulations, policies, and practices that impact pollution control and environmental health. A range of laws (not just environmental laws) are implicated because pollution and environmental health are cross cutting issues touching on resource extraction, industrial development, environmental monitoring, infrastructure, taxation, access to information, discrimination and environmental justice, indigenous rights, and many other legal and policy matters. The LEA process examines the substance of these laws, policies, and practices and how they are implemented in a country to determine the extent to which the legal framework effectively mitigates pollution and protects public health, particularly among the most vulnerable.

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Pollution is a broad topic and trying to assess all legal issues pertaining to all forms of pollution and health can become overwhelming. This LEA uses the definition adopted by the Lancet Commission on Pollution and Health, which defines pollution as: "unwanted, often dangerous material that is introduced into the Earth's environment as the result of human activity, that threatens human health, and that harms ecosystems" [20]. This excludes water, sanitation and hygiene (WASH)-related pollution.

The findings of a national LEA should form the basis for recommendations for law and policy reform, strengthened implementation and enforcement of the pollution-related legal framework and measures to improve access to justice. This can support countries in meeting national, regional and international commitments to protect rights and promote sustainable development and healthy environments. LEA reports aim to provide support for evidence-informed national policies and strategies.

1.1.1 Important points to consider and limitations of the Manual

Adjusting to national priorities, norms and standards.

This LEA manual focuses on the types of laws and policies that are common across countries, on contaminants and associated health impacts prioritized by WHO, and on social, economic and human rights issues highlighted by the Lancet Commission on Pollution and Health. However, the manual does not account for all possible pollution challenges and priorities, nor does it account for every possible type of law, regulation, policy or guideline. Conducting the national LEA is a local task, and this manual does not aim to impose a uniform format. Country teams may need to tailor the LEA scope, process and content to the national context.

Sensitivities around development standards and pollution.

While conducting the LEA, country teams may encounter opinions suggesting that pollution is a necessary consequence of development and that high-income countries went through polluting phases during their development but now want to deny LMICs the same opportunity. While the part about the history of high-income countries polluting is undeniably true, pollution as a necessary consequence of development is refuted in the Lancet Commission on Pollution and Health. If country teams encounter this opinion, a more thorough review of the Commission's analysis may be beneficial in informing a conversation about perceived trade-offs between pollution control and economic development.

Vested interest groups with misaligned or competing agendas.

Fossil fuel, agriculture and fashion industries are ranked among most polluting industries globally, followed by food retail, transport and construction. These industries are politically and economically powerful and it is possible that their representatives try to influence processes that might alter or limit their activities. This is good to acknowledge when planning the LEA and implementing its recommendations. UNDP has a significant anti-corruption programme portfolio, and along with WHO and partners has good experience in developing and implementing strategies to mitigate potential interference from industry.

Looking beyond the law.

Some of the issues identified as priority concerns for pollution control and public health (e.g., the need to raise awareness among lawmakers, law enforcers and healthcare providers) are not strictly legal issues. Protective laws and policies are also often ineffective due to weak access to justice and law enforcement practices. Accordingly, LEA teams may need to look beyond the law and include a review of access to justice and law enforcement issues to gain a comprehensive understanding of the strengths and weaknesses of the current legal and policy framework. Additionally, data on national health and economic impacts from various pollution challenges may need to be gathered to facilitate the prioritization of particular issues.

Dealing with urgency and resource constraints.

This manual suggests a five-stage process for conducting the LEA. In some countries, there may be limited time and budgets that prevent an extensive and consultative LEA. While it is possible to conduct an LEA without undertaking all proposed steps, it is important to ensure the process is consultative and involves the participation of key stakeholders.

Dealing with gaps and weaknesses in the legal and policy framework.

The assessment will likely highlight strengths and weaknesses in a country's legal and policy framework. These findings cannot create a protective legal and policy framework in and of themselves but can support reform. Where the LEA finds weaknesses, country teams and stakeholders need to follow up the assessment process with strategic recommendations and planning for a way forward. Some issues, such as informal livelihoods, corruption, and cultural attitudes, are not easily remedied through laws and may require long-term strategies to deal with.

2

Defining and categorizing pollution types for the LEA

2. Defining and categorizing pollution types for the LEA

2.1 Defining pollution and the scope of the LEA

The definition of pollution can change significantly depending on the context. The scope of each LEA is up to country teams to decide based on national challenges and priorities. This manual recommends a limited scope on pollutants that cause the most direct impacts to human health, and which are most amenable to regulatory control. Depending on the location, these likely include indoor and outdoor particulate air pollution, toxic chemicals, and other highly hazardous wastes. The suggested scope excludes greenhouse gasses, non-toxic municipal waste, ocean plastics, light, noise, and sewage. The suggested scope is not a judgement on the relative importance of different types of pollution and waste, but rather reflects the LEA's focus on the nexus of pollution and public health.

UNDP's portfolios on health, nature, climate and energy are directly relevant to the subject matter of this document. Within the environment portfolios, teams working on chemicals, water, oceans, food and agriculture, and climate change can offer further guidance on addressing soil, water and air pollution. UNDP's Social and Environmental Standards (SES) underpin the organization's commitment to mainstream social and environmental sustainability in its programmes and projects and are an integral component of UNDP's quality assurance and risk management approach to programming. Given the LEA's focus on environment, health and human rights, the program potentially touches on all eight SES standards. Relevant areas of work within these portfolios, including the SES approach, are listed in **Annex 4** with links to key resources.

2.2 Environmental media and contaminant type

Environmental laws often address pollution challenges according to the environmental media that are being protected from a specific contaminant. Categories of environmental media typically include air, water and soil, but regulations may further disaggregate these media depending on their use or location. For example, regulation of pollutants in water may separate drinking water, natural freshwater systems and marine and coastal waters. Regulations of pollutant levels in soil often distinguish industrial soils, agricultural soils and residential soils.

Legal distinctions are also often made between environmental media that are accessible to the public versus those encountered in occupational settings (e.g. ambient outdoor air versus air inside a factory). These distinctions exist because of the type of person likely to be exposed to such media and the potential duration of that exposure. For example, in an occupational setting, it is likely that exposures are limited to adults during work hours, whereas in a public setting, exposures include more vulnerable age groups such as the very young and very old

and are not limited to working hours. Different levels of pollution in occupational settings versus public and residential settings also impacts relative exposure levels by gender.

Health risks of pollution exposure also depend on gender (as a social concept) and sex (as a biological concept). For instance, exposure to air pollutants is linked to worsening maternal health outcomes [21], including increased rates of pregnancy loss and complications. This is particularly relevant to the developing world where the exposure levels are higher and women often bear a burden of household tasks including cooking. Also some pollutants, such as lead (Pb), can harm unborn and breastfed children due to mother's exposure.

Many environmental laws and regulations use two forms of categorization simultaneously, first targeting a specific environmental media and then regulating the allowable concentrations of a specific contaminant type. For example, a regulation may set a maximum concentration of lead in drinking water, or the maximum concentration of mercury released into outdoor air from an industrial smokestack.

2.3 Contaminants of high concern and pollution source types

While there are tens of thousands of potentially dangerous pollutant types in the world, each country has its own unique challenges. WHO has identified 10 contaminants of major public health concern, listed in alphabetical order in **Table 1**, that are believed to drive the majority of the pollution-related negative public health outcomes globally.

Table 1. Contaminants of major public concern according to WHO

1. **Air pollution**
Air pollution typically refers to inhalable particulate matter that is less than 2.5 micrometres in width (also called $PM_{2.5}$) suspended in indoor or outdoor air [22]. These fine particles are the most damaging to health because they can penetrate deep into lung tissue and impair lung function. Air pollution may also refer to larger particles up to 10 micrometres in width (PM_{10}) and other types of contaminants, including ozone.
2. **Arsenic**
Arsenic is a metal element distributed throughout the Earth's crust that can form various toxic compounds. Soluble inorganic arsenic is one of the most dangerous and can lead to chronic arsenic poisoning, which may cause skin lesions, gastrointestinal symptoms, diabetes, cardiovascular diseases, developmental toxicity, and cancers [23]. Exposure to arsenic often comes through ingesting contaminated groundwater and foods.

3. **Asbestos**
Asbestos is a fibrous mineral commonly used in pipe insulation, floor tiles, roofing materials, other building materials and in vehicle brakes and clutches [24]. There are six types of asbestos, each made from long and thin fibrous crystals that can be released into the air when the material is disturbed. Exposure is typically through inhalation. Breathing asbestos fibers can cause lung cancer and scar-like tissue in the lungs, resulting in decreased lung function that often progresses to disability and death.
4. **Benzene**
Benzene is an organic hydrocarbon that is clear and highly flammable. Benzene is found in crude oils and gasoline, and as a by product of oil-refining. It is one of the most used chemicals in industrialized countries, being used as a solvent and chemical intermediary to produce a variety of other chemicals. People are typically exposed to benzene through inhalation. Benzene is known to cause cancers [25].
5. **Cadmium**
Cadmium is a heavy metal released into the environment through human activities such as tobacco smoking, mining, smelting and refining of nonferrous metals, burning of fossil fuels and municipal waste (especially batteries and plastics), production of phosphate fertilizers, and recycling of cadmium-plated steel scrap and electronic waste. Cadmium can travel in the atmosphere and bioaccumulate in animals. Exposure is often by way of contaminated food. Cadmium can affect the kidney, the skeletal system and the respiratory system and is classified as a carcinogen [26].
6. **Dioxins and dioxin-like substances**
Dioxins are a class of persistent organic pollutants (POPs) addressed under the Stockholm Convention on POPs. They are often byproducts of combustion and industrial processes such as bleaching of paper pulp with chlorine and metal smelting. This class of pollutant includes polychlorinated biphenyls (PCBs), released from the disposal of large-scale electrical equipment and waste. Exposure generally occurs through consumption of contaminated food. However, acute exposures can occur in occupational settings. Dioxins are carcinogenic and cause neurodevelopmental problems, and impacts to thyroid hormones, liver and tooth development. Breastfed infants are particularly at risk [27].
7. **Inadequate or excess fluoride**
Fluoride is a chemical with beneficial effects within a certain exposure range, particularly in reducing the incidence of dental caries, but negative effects from prolonged excess exposure in the form of skeletal fluorosis. Excessive fluoride intake often results from consumption of groundwater naturally rich in fluoride, particularly in warm climates, or where water high in fluoride is used to irrigate crops and prepare food.

8. **Lead**

Lead is a toxic heavy metal and one of the best studied chemicals in terms of its prevalence and impacts on human health. Lead is released into the environment through metal refining and smelting, and the recycling of e-waste and used lead-acid batteries (e.g., car, truck and motorbike batteries and those used in telecommunications towers and uninterruptable power supplies). Lead exposure also comes from the use and consumption of lead-contaminated products, including lead-based paint, some spices, foodstuffs, ceramic cookware made with lead-based glaze and "aluminium cookware" that is in fact made with mixed recycled metals. However these exposure sources are not considered environmental "pollution," per se. Most lead exposure happens through ingestion of contaminated dust and soil. Children are particularly vulnerable, and it is estimated that approximately 800 million children (one-third of all children globally) have a concentration of lead in their blood that is sufficient to cause permanent brain damage and loss of intellectual capacities. Lead also affects the hematologic, gastrointestinal, cardiovascular, and renal systems [28].

9. **Mercury**

Mercury is a heavy metal that can exist in three forms: elemental or metallic; inorganic (e.g., mercuric chloride); and organic (e.g., methyl- and ethyl mercury). Mercury is typically released into the environment from coal-fired power stations, waste incinerators and as a result of gold mining. Small-scale and artisanal gold mining is the largest source of mercury emissions globally [29]. Once in the environment, elemental mercury is transformed into methylmercury, which can bioaccumulate in aquatic animals. Exposure is typically through inhalation of elemental mercury through industrial or mining processes, or through consumption of contaminated fish and shellfish. Mercury exposure can affect the nervous, digestive and immune systems, lungs, kidneys, skin and eyes [30].

10. **Highly hazardous pesticides**

Pesticides are released into the environment intentionally to suppress insects and other pests. However, some countries also have stockpiles of obsolete pesticides in disrepair that leak to the environment. Exposure is often the result of consumption of residues on foods and possibly in drinking-water. Pesticides are a broad classification of chemicals and health effects vary by type.

Pollution sources are often categorized into three types: point source pollution, distributed or diffuse pollution, and naturally occurring pollution. A point source pollutant is one that results from human activities and is released from a single emission point in a fixed location, such as a factory smokestack or effluent pipe. Point sources are perhaps the most amenable to strict regulation because they are comparably easy to identify, can be monitored, and associated pollution can often be reduced through the addition of pollution control equipment.

Distributed or diffuse pollution sources refer to many emissions points that are not fixed in one location, such as cars, pesticide application or agricultural burning. Distributed pollution sources can be difficult to effectively regulate as they are smaller in scale, move around, and are often the result of activities by many thousands of private citizens rather than a limited number of companies.

Naturally occurring pollution is the result of natural Earth processes and thus cannot be regulated as such, although its impacts can be mitigated through regulating activities that bring people into contact with it. An example of naturally occurring pollution is arsenic in some groundwaters in South Asia. While the existence of the arsenic cannot be regulated, governments can influence the depth of wells to reduce the levels of arsenic in the water being drawn.

2.4 Informal economic activities

In many countries, significant pollution releases occur as a result of informal economic activities [31]. These include illegal activities and activities that may not be illegal per se, but where the operator has not registered or obtained a license. Examples of potentially polluting informal activities may include the recycling of used lead acid batteries (found in cars, trucks, and motorbikes), the recycling of electric and electronic waste, artisanal and small-scale gold mining, brick and tile making, leather tanning, auto repair and metalworking shops, and other types of manufacturing, processing, repair and recycling conducted in micro-enterprises. The challenge is that many of these activities are conducting an industrial activity that can only be done safely with pollution control equipment, but these operations are conducting the work with rudimentary tools and no means to prevent pollution.

One reason such enterprises often pollute is that the level of investment in facilities, equipment, material inputs and personnel is commonly low. In brickmaking, for example, traditional kilns are notorious sources of air pollution because they are fired with cheap, highly polluting fuels. With small-scale and artisanal gold mining, miners often use toxic mercury to separate gold from the accompanying dirt and rock. In the case of informal lead acid battery recycling, the process of breaking open the plastic battery case, dumping the sulfuric acids and crudely melting the lead plates inside releases lead into the environment at each step.

Addressing pollution from informal activities can be complex, as the people conducting these activities require a livelihood and may have few alternatives. Strict regulatory enforcement may be ineffective without other activities to realign incentives, integrate informal actors into the formal sector, or otherwise provide alternative livelihoods. One helpful resource for addressing pollution from informal operations is the Basel Convention's Revised Draft Guidance On How To Address The Environmentally Sound Management Of Wastes In The Informal Sector. Additional resources on this subject are available in the Resources (**Annex 4**).

Photo: © UNDP

3

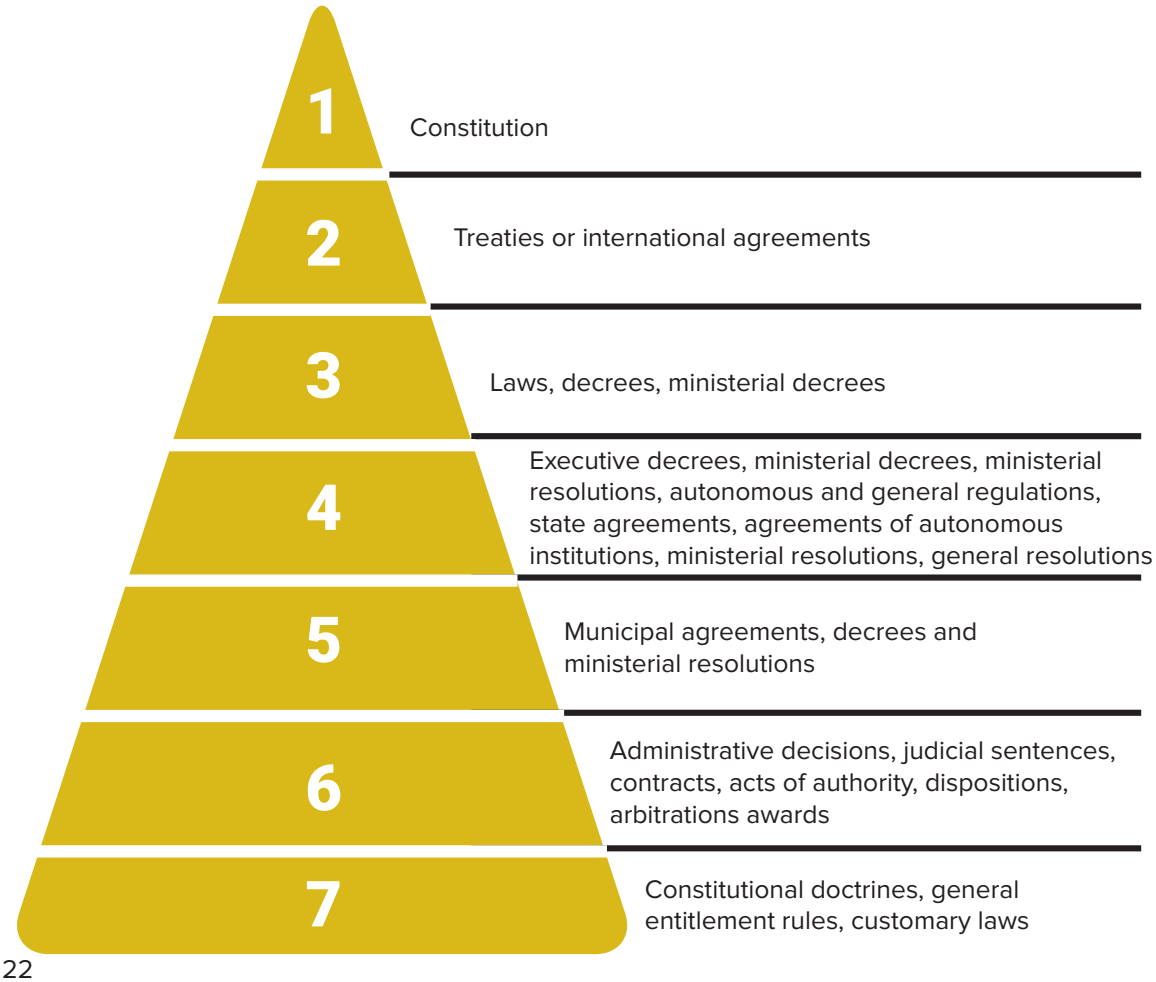
Legal and policy frameworks for controlling pollution and protecting environmental health

3. Legal and policy frameworks for controlling pollution and protecting environmental health

This section of the LEA manual describes a possible framework for organizing a review of laws and policies and includes a discussion of the role of constitutional rights to a healthy environment and framework environmental laws. These two latter issues are specifically highlighted because they are often the foundation and origin of other substantive and procedural laws that dictate how pollution is regulated.

Pollution is typically regulated through a multi-layer framework of constitutional provisions, multilateral environmental agreements, national laws, executive orders, ministerial regulations and rules, provincial and municipal ordinances, judicial decrees and all associated enforcement mechanisms. To make sense of these layers of authority and their relation to each other, it is important to start with an understanding of the national legal hierarchy. While such hierarchies differ from country to country, the example in **Figure 1** is fairly common. In the chart below, a legal instrument will supersede any conflicting instrument. For example, in the absence of legal provisions giving a municipal authority jurisdiction over a specific subject matter, if a municipal resolution conflicts with a national law over the same subject matter, a court may rule that the municipal resolution is void.

Figure 1. Example of a national legal hierarchy [32]



3.1 Organizing an analysis of the state of environmental rule of law

Within the field of environmental law, there is a specific discipline focused on the implementation and enforcement of environmental laws known as environmental rule of law. This concept is central to an LEA focused on pollution. UN Environment Programme's report entitled Environmental Rule of Law – First Global Report describes key issues related to the environmental rule of law and suggests a framework for analysing strengths and weaknesses in a given jurisdiction. The framework described in the report and summarized below could serve as a template for organizing the LEA analysis. It suggests approaching an analysis of the state of environmental rule of law by examining the following four key elements:

Institutions

Most countries have laws directing a national environment ministry or agency to implement environmental laws. Many other institutions – multilateral, regional, and national organizations, as well as traditional, indigenous, and local organizations – may also have authority to enforce environmental laws. The strength and effectiveness of these institutions is often due to:

- clear and appropriate mandates;
- effective and efficient coordination with other institutions (vertically and horizontally);
- adequate human, technical and financial resources;
- adequate systems for information collection, management and use;
- appropriate environmental auditing and institutional review mechanisms; and
- leadership, political will and anti-corruption measures.

Civic engagement

While strong governmental institutions, as described above, is one of the main pillars, environmental rule of law requires a whole-of-society approach that includes a key role for civil society. Civil society groups and affected communities contribute immensely to holding institutions accountable, protecting civic space, monitoring and reporting rights violations and infractions including by non-state actors and seeking redress and access to justice. The three pillars of successful civic engagement include:

- access to information;
- public participation; and
- access to justice.

Rights and duties

Rights and duties provide agencies the authority to implement and enforce environmental laws, people the ability to seek justice and companies the obligation to act responsibly. A rights-based analysis can elevate the importance of environmental protections and ensure legal protections and remedies are available equally and equitably. Important issues pertaining to rights and duties include:

Substantive rights such as:
- rights to a healthy environment;
- rights to non-discrimination; and
- rights of free association, free expression, and freedom of assembly.

Procedural rights:
- access to information;
- public participation;
- access to justice;
- free, prior and informed consent;
- mandatory environmental impact assessments; and
- effective legal remedies.

Justice

A fair, transparent justice system that efficiently resolves environmental disputes quickly, affordably, peacefully, and effectively is critical to establishing lasting environmental rule of law. The key issues regarding justice include:

- access to justice (including jurisdictional accessibility, financial accessibility and geographical accessibility and access to specialized knowledge);
- adjudications (including fair proceedings, qualified judges acting with integrity, specialized courts and tribunals and reasoned and transparent decisions); and
- effective remedies (including preventive and declaratory orders, fines and other monetary penalties, compensation, corrective orders, imprisonment and probation, administrative enforcement and mechanisms to neutralize "threats" or orders not yet implemented such as constitutional protection acts).

LEA implementing teams will benefit from a careful review the UN Environment Programme report on the environmental rule of law.

3.2 Constitutional and international rights to a healthy environment

Many of the laws, regulations and policies in a country can be traced to a constitutional right or duty that the law aims to uphold or protect. In some countries, the constitution explicitly recognizes a right to a healthy environment. In other countries, the constitution recognizes a related right and a court or tribunal has found that the explicitly stated right (for example, the right to life) implicitly includes the right to a healthy environment. As of 2017, 150 countries had enshrined a constitutional right to a healthy environment, and in October 2021, the United Nations Human Rights Council adopted a resolution recognizing the human right to a clean, healthy and sustainable environment. While the Council's resolution is not legally binding, its near-unanimous adoption and international recognition eases the right's further integration into international law and facilitates increased domestic implementation.

The recognition of the right to a healthy environment, whether from a constitution or international body, is important from a legal perspective because such rights are often accompanied by implementing laws to uphold and protect the right. These may include procedural rights to receive information, to participate in decision-making and to obtain access to justice systems and remedies, as well as substantive laws protecting the environment from specific forms of degradation. For example, the Philippines has enacted Rules of Procedure for Environmental Cases designed to "protect and advance the constitutional right of the people to a balanced and healthful ecology" and aimed at providing a "simplified, speedy and inexpensive procedure for the enforcement of environmental rights and duties" [34]. The French Environmental Code includes a substantive right of the people to breathe air which is not harmful to their health, which is further supported by more detailed rules and regulations about air quality and emissions [35]. UNDP is currently engaged in an initiative in Thailand to establish clean air legislation providing substantive rights to breathe air that does not undermine existing rights to life and health.

National and regional courts have used the right to a healthy environment to impose duties on States to effectively protect the right. For example, in a landmark 2020 decision, the Inter-American Court of Human Rights ruled that Argentina had violated the right of indigenous Lhaka Honhat groups to a healthy environment because the State lacked substantive and procedural protections adequate to uphold and enforce the right in the context of illegal logging and degradation of indigenous lands. The Court ordered reparations and actions to provide access to adequate food and water, for the recovery of forest resources and to maintain indigenous culture.

Human rights and the environment

In 2019, a Special Rapporteur for the Human Rights Council published a report on human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. The report focuses on the right to breath clean air. The major issues highlighted in the report are: 1) adverse impacts of poor air quality; 2) effects of air pollution on the enjoyment of human rights; 3) human rights obligations relating to clean air; and 4) good practices. The full text is available here.

Implementors of the LEA should establish whether a jurisdiction explicitly recognizes a right to a healthy environment, whether a tribunal has recognized an implicit right to a healthy environment, what procedural and substantive legislation exists to protect that right and whether such enabling legislation provides equitable and effective legal access and substantive protection.

In some countries, rights are established through judicial precedent or treaties, without being codified in constitutions and statutes. Establishing whether a jurisdiction recognises the rights to a healthy environment, for example, may require looking to judicial decisions and interpretations of rights to health, natural resources, and protection of indigenous populations. healthy environment, what procedural and substantive legislation exists to protect that right and whether such enabling legislation provides equitable and effective legal access and substantive protection.

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3.3 Framework environmental laws

In addition to constitutions, another important foundation and origin of pollution-related laws and policies are framework environmental laws. A framework law aims to define the primary principles, objectives, and authorities of an aspect of law or sector-specific legislation without codifying all of the specific statutory provisions. By 2017, 176 countries had established framework environmental laws [38]. In South Africa, for example, the National Environmental Management Act 107 (NEMA) of 1998 is regarded as the main framework of environmental legislation. NEMA aims to “provide for co-operative, environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for coordinating environmental functions exercised by organs of state…” An example of establishing such principles is found in NEMA Chapter 1 Section 2 Article 2, which states “Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.”

While most countries now have framework environmental laws, many were based on existing laws from other countries and do not necessarily represent the challenges and priorities of the countries to which they were imported. Moreover, framework environmental laws often lack key provisions, objectives and desired outcomes against which to measure the laws' performance. One example of a particularly successful framework law is Kenya's Environment and Management Co-ordination Act 1999, which has been adapted and amended to reflect the national context and priorities. In Kenya, for example, the framework environmental law relaxes standing rules to allow anyone—not only injured parties—to bring a case seeking to protect the environment, thus greatly expanding who has access to judicial remedies.

3.4 Challenges to effective pollution control

A variety of common challenges to effective pollution control exist. First, regardless of the strength of environmental laws, the full implementation and enforcement of such laws is a challenge in high-, middle- and low-income countries alike. As noted in Environmental Rule of Law – First Global Report, achieving sound environmental protection requires not only the existence of adequate laws, but that they are widely understood, respected and enforced for the benefit of all people [41].

One common challenge is that environmental ministries are often among the weakest, with comparatively small budgets and little political clout. This is a significant detriment to environmental law enforcement. Why would a company invest in pollution control if there is little likelihood of enforcement and a low cost to noncompliance? This challenge is fundamentally one of political will. Ministries generally cannot increase their own budgets and authority within a government. It is up to the legislative and executive branches to empower environmental ministries to fulfil their mandates by providing political, financial, and legislative support.

Another common challenge is that the authority to enact and enforce rules aimed at preventing pollution is often spread across several agencies within a government, creating potentially overlapping and confusing mandates and jurisdictions. Compounding this complexity is the fact that legal controls on pollution often exist at the municipal, provincial, federal and international level, and discerning which laws take precedent in a given situation can be a challenge.

Finally, pollution is fundamentally a multi-sectoral issue that concerns natural resource management, industrial development and trade, urbanization, waste management, public health, education, human rights and many other sectors and elements of society. The protection of environmental health (health impacts resulting from environmental risk factors like pollution) often falls between ministries of environment, health and other ministries. Because of this, the response to environmental health issues is often fragmented and uncoordinated [42].

4

Planning for a Legal Environmental Assessment

4. Planning for a legal environmental assessment

LEA planning aims to ensure that the process is transparent, well-organized, inclusive, and focused on national priorities. Thorough planning, consultation and preparation involving a range of stakeholders will increase awareness and foster buy-in and support from key stakeholders and ensure that the LEA is relevant to the country.

The following steps are intended to be suggestive, not prescriptive. With that in mind, the planning stage of an LEA may involve some or all of the following steps:

Step 1	Develop a budget
Step 2	Recruit the LEA task team
Step 3	Elaborate a communication and coordination strategy
Step 4	Develop a monitoring and evaluation framework
Step 5	Identify key stakeholders
Step 6	Hold one or more consultative meeting(s) or national dialogue to discuss national pollution and environmental health challenges and to agree on the purpose, nature and scope of the LEA
Step 7	Establish a representative Technical Working Group (TWG) to lead the assessment
Step 8	Brief the TWG on the relevant background information about pollution and environmental law, as well as health and human rights issues
Step 9	Plan for the legal and policy assessment

4.1 Step 1: Develop a budget

LEA budgets may vary between countries. A detailed budget with estimated costs for the different stages of the LEA is needed to inform decisions about implementation and focus. To enable meaningful participation by stakeholders, a full accounting of the costs of communication and coordination should be included. Communication and coordination costs may include:

Step 1	Develop a budget
	• Telephone and Internet access; • transport, including vehicle hire, fuel, reimbursement of travel; • meeting material, such as printing and taking notes for the agenda, minutes, organizing refreshments etc., as required; • facilitation of regular communication (as agreed during the inception period) among the Technical Working Group and stakeholder group; • media liaison and drafting press releases and liaising with journalists and media professionals; and • coordination of internal and peer review processes to ensure quality of material produced and publicized through the LEA. Examples of LEA materials could include the draft and final report, summary reports, press releases, social media and other tailored thematic discussion of the LEA.

4.2 Step 2: Recruit the LEA Task Team

The recruitment of a capable LEA Task Team for the research and implementation of the LEA is vital to success. It is recommended to recruit at least two consultants (one national and one international) who will provide technical support and guidance throughout the LEA process in close collaboration with the Technical Working Group (TWG) which is established as Step 4.7 below. For recommended qualifications, see the generic Terms of Reference for the implementing team included in **Annex 1**.

4.3 Step 3: Develop a communication and coordination strategy

Regular communication with stakeholders is key to ensuring a smooth LEA engagement process. Having a clear coordination framework that is understood by relevant participants increases their confidence in the process and avoids misunderstandings. Possible stakeholder communication strategies include:

Step 3	Develop a communication and coordination strategy
	• regular updates (for example, through a weekly email) that include a summary of actions taken and upcoming key activities; • clear reminders about decision points and input needed from all stakeholders; • updates from the TWG with other stakeholders; • strategic and transparent sharing of information as appropriate; and • documenting the process—including the challenges as well as the opportunities—and promoting critical reflection among the implementing team and TWG.

4.4 Step 4: Develop a monitoring and evaluation framework

A monitoring and evaluation plan should be developed prior to the LEA and implemented throughout to assess the LEA's process and impact. Gauging the effectiveness of policies and programmes requires the establishment of qualitative and quantitative baselines at the outset. Monitoring and evaluating the influence of an LEA is challenging, especially because the potential impact may only come to fruition after several years. Ultimately, the monitoring and evaluation should reflect the specific objectives of the LEA as agreed among the national stakeholders.

Some suggested areas for review at baseline and upon completion of the LEA (and 6-12 months afterward, if resources allow) include:

Step 4	Develop a monitoring and evaluation framework
	• the experiences of stakeholders related to access to pollution information, access to justice and the protection of rights related to pollution and environmental health (this may also include feedback from agencies tasked with regulatory enforcement); • attitudes, opinions and awareness related to national pollution control measures and enforcement mechanisms; • data concerning environmental pollution levels as well as environmental health data regarding health outcomes attributable to pollution exposures; • strategic litigation related to pollution issues; • measurements relating to awareness about pollution, health and the law among participants; and • awareness of existing actions and initiatives relevant for the LEA.

Documenting and sharing lessons learned can help other countries undertaking LEAs.

4.5 Step 5: Identify key stakeholders

Before beginning the consultative processes and establishing a Technical Working Group, it is important to identify key people and agencies that affect and are affected by pollution issues. Key stakeholders should include a broad range of individuals or organizations working in different sectors or at different levels in the country, as well as people living in areas particularly impacted by pollution. These may include:

Step 5	**Identify key stakeholders**
	• representatives of communities particularly affected by pollution; • civil society organizations (particularly those focused on the environment, public health, child and maternal health, gender, environmental justice, human rights, indigenous rights, informal workers); • legal, environmental and health-based academics; • government offices (e.g., agencies responsible for environment, health, finance, natural resource management, industrial development and trade, transportation, tourism, education); • statutory bodies (e.g., Human Rights or Law Commission, Ombudsperson); • traditional authorities; • academia and research institutions; • parliamentarians; • members of the judiciary; • UN agencies and international organizations; • representatives of private sector enterprises that are regulated under pollution control laws and/or are known to release relevant pollutants; and • unions and communities conducting informal economic activities.

It is worth noting that while it can be difficult to identify those stakeholders that are most affected by pollution, building a broad coalition of affected communities and populations to engage in the LEA process can result in much stronger campaigns for action and improvement in the later stages of the LEA process.

4.6 Step 6: Hold a consultative planning meeting

A consultative planning workshop that includes diverse stakeholders is a useful way to start a national LEA. Such a workshop may aim to:

Step 6	Hold a consultative planning meeting
	• raise understanding of key pollutants, associated health impacts, legal issues and the importance of an LEA in strengthening pollution control; • ensure a transparent, participatory approach; • clearly define the LEA's purpose, nature, scope and methodology; • agree on oversight and reporting mechanisms for the stages of the LEA, including the purpose and composition of a Technical Working Group; • identify key stakeholders to participate in consultations; and • brainstorm on relevant laws, policies, and resources to be reviewed.

As noted above, one of the issues to discuss during the consultative planning meeting is the scope of the LEA. LEA teams and local stakeholders can define the specific scope of the LEA and should not include all forms of pollution. Indeed, the impact of the LEA may be greater if the focus is narrowly tailored to pollution issues that are suspected to take the greatest toll on public health or present other urgency.

Section 2.2 of this manual includes a subsection on contaminants of high concern identified by WHO. While these are certainly not the only pollutant types that could be included within the scope of the LEA, they may provide a useful starting place for a stakeholder dialogue regarding the LEA's scope. As noted above, the geographic scope of the LEA (national, sub-regional, regional) should also be clearly defined.

4.7 Step 7: Establish a Technical Working Group

A Technical Working Group (TWG) is useful to support and oversee the LEA process and advance recommendations after the LEA. Ideally, the role, composition and functioning of the TWG should be discussed at the consultative planning stage, and the Terms of Reference agreed on by the TWG itself at its first meeting. It is important for the TWG to identify from the beginning the timespan of its involvement.

The TWG should comprise no more than 15 representatives from a range of sectors, institutions, and organizations. It should also seek representation from individuals with a range of skills, experience, and competencies, as well as those with direct experience and understanding of pollution and environmental health issues. Experts on areas of environmental law, industrial pollution, toxicology, trade, governance (including on procedural aspects of law) etc. may be called on by the TWG to provide useful insights without being members of the group.

The composition of the TWG should seek to balance representation between government, civil society, and other groups as well as to ensure gender, ethnic and religious diversity, and representation of social minorities. The selection of government representatives should balance the need for people who are senior enough to influence decisions, but not so senior that they are removed from technical aspects of regulatory enforcement.
There should be clarity in the roles and responsibilities of the various members of the TWG, including identifying institutions that will provide leadership and those that will provide administrative, financial, and other support to the process. Ideally, the TWG should be supported by key government ministries with technical expertise in, and responsibilities for, the uptake of the final recommendations of the LEA.

The role of a TWG will differ between countries. Roles and responsibilities may include:

Step 7	**Establish a Technical Working Group**
	• Oversight: The TWG can guide and monitor the process to ensure inclusivity and transparency. • Advice: The TWG itself can provide various perspectives and technical inputs on key pollution, health and human rights challenges. • Implementation: In some situations, particularly where resources are limited, TWG members may help collect data or take on the implementation of some aspects of the LEA process themselves. • Communication: TWG members can help mobilize political and public support for the LEA process and recommendations. • Follow-through: TWG members can play a key role in advocating for and monitoring actions to address LEA recommendations.

See **Annex 1B** for a generic Terms of Reference for a TWG.

4.8 Step 8: Develop an inception report

An inception report sets out a clear plan of action for conducting the national LEA, integrating all previous discussions and deliberations into a final road map.

The inception report should include the purpose and scope of the LEA, including:

Step 8	Develop an inception report
	• a brief overview of the contextual background on pollution and health challenges in the country that includes priorities, key gaps and known hurdles; • a consolidated review of any previous work including local and national environmental assessments. Also assessments by UN entities, the World Bank, national and international civil society or research groups, the country's development cooperation framework, as well as national burden of disease data from the World Health Organization and others; • a brief overview of recommendations and declarations by regional or universal human rights or treaty-specific bodies on pollution, environmental health and the right to a clean environment; • the scope of the LEA — i.e. whether it is national, sub-regional or regional, and whether it will be broad or focus only on particular types of pollution.

In addition to the above issues of scope and purpose, the inception report should describe the LEA's methodologies, activities, timelines, and deliverables, including: 1) a desk review; 2) stakeholder consultations; and 3) national consultative forum(s) or dialogue(s) for presenting draft findings. These methodologies are described in greater detail in the following section. The inception report should also include a broad overview of the roles, responsibilities, and reporting mechanisms of various partners in the process, including the lead organization(s), the researchers and the TWG. The inception report should also mention as a deliverable a final report by LEA Task Team. Finally, it is useful for the inception report to also include a detailed, costed workplan, a reporting and feedback mechanism during the process, a description of the support and resources required for each stage of the process and a description of the intended use and content of the final report.

Finally, the inception report could also include:

- a list of national and international environmental agreements, laws, regulations, policies, research reports, strategies and plans to be reviewed;
- a list of stakeholders to be consulted or surveyed;
- tools to be used in the review process, including tools for analysis of the legal and regulatory framework, questionnaires, surveys and interview guides;
- an outline of the LEA report; and
- minutes of any prior meetings and of the consultative planning workshop.

4.9 Step 9: Identify legal and policy issues for analysis

The LEA aims to determine the nature, extent, efficacy, and impact of the legal and policy framework for preventing or mitigating pollution and protecting public health. Relevant legal issues may include:

Step 9	**Identify legal and policy issues for analysis**
	• Industrial licensing and inspection regimes and emissions regulations • Environmental monitoring requirements and capacities • Public access to environmental data and decision-making • Occupational safety and health requirements • Standards regarding pollutant levels in foods and environmental media • Laws and policies regarding informal economic activities • Judicial access for environmental lawsuits and/or effective judicial remedies • Regulatory enforcement mechanisms and deterrents for non-compliance • Incentives for stronger environmental performance • Environmental justice and rights of marginalized populations • Protections for environmental advocates and vulnerable populations • Coordination and collaboration between environment and health authorities • Financing for environmental enforcement and monitoring

Additional issues could be identified by interviewing environmental journalists or by reviewing reports on environmental legislation such as UNEP's First Global Assessment of Air Pollution Legislation.

5

Conducting the Legal Environmental Assessment

5. Conducting the Legal Environment Assessment

This section outlines common methodologies that have been used effectively in conducting LEAs in various countries. Legal reviews have generally included a literature review, as well as interviews with key stakeholders.

5.1 Stakeholder consultations

Stakeholder consultations promote an inclusive and participatory LEA and can provide useful perspectives on challenges, priorities, and the effectiveness of existing pollution control measures. Stakeholder consultations also raise awareness and promote dialogue about pollution levels, impacts to human health, associated human rights issues and the purpose of the LEA.

Before conducting stakeholder consultations, it is important to determine: 1) how stakeholders will be consulted; 2) who will undertake stakeholder consultations; 3) what they will be consulted on; and 4) how stakeholder feedback will be integrated into the decision-making process.

The kind of questions to ask in the consultation will be informed by the specific scope of the LEA and the kind of analysis envisaged for presentation in the final report. It is important to prepare the questions according to the group to ensure the questions are relevant to their experience.

Various methodologies may be used for undertaking consultations with stakeholders and care should be taken to ensure that this is done in an ethical way and align with any required formal ethical review and approval processes (see additional discussion on ethical considerations in section 5.2). In structuring consultations, organizers should ensure that the timing, location, and format facilitate reasonable accessibility among stakeholders. Consultations should be conducted with the prior informed consent of the participants, should ensure the safety of all parties and should guarantee confidentiality. Some examples of consultation types include:

- one-on-one interviews with individual representatives of organizations;
- focus groups with individuals with common roles, characteristics, experiences and/or concerns, such as individuals or groups:
    - o living in particularly contaminated areas;
    - o conducting similar polluting activities; or
    - o responsible for similar types of regulatory oversight or enforcement
- site visits for first-hand experience of the impact or implementation of relevant laws and policies and to speak to people at different sites across the country (e.g., industrial areas, contaminated sites, environmental agencies, agricultural areas, polluted urban centers/slums);

- distribution of questionnaires to selected individuals and organizations from different sectors; or
- conducting online surveys.

The feedback from stakeholder consultations should be documented in the form of a brief report analysing the key issues and feedback from each session, including:

- levels of awareness of pollution challenges and human health impacts;
- key pollution and health concerns of various stakeholder groups, including:
  - concerns regarding current laws, regulations and policies;
  - concerns regarding levels of awareness of rights and the ability to access justice; and
  - concerns regarding the ways in which rights are protected;
- impacts of pollution control laws and enforcement mechanisms; and
- recommendations for strengthening the legal and policy framework

5.2 Ethical considerations, review and approval

If the LEA includes the collection of data from people, it may need to observe certain ethical and data protection standards. Such studies are typically reviewed by an institutional review board, which will approve or deny approval of a study based on whether it adequately addresses relevant ethical issues. Two issues of primary importance in human subject research are prior informed consent and confidentiality.

The principle of informed consent means that each interviewee must be asked to consent to the collection and processing of their personal data after being fully informed about the nature of the study, who is involved in it, how the data will be processed and stored, and what the data will be used for.

Confidentiality is concerned with the issue of who has the right to access data provided by the participants. When conducting research, one should always ensure that identities and personal information are confidential, and that no one can connect inputs provided by an interviewee with that person's identity.

To ensure confidentiality, the LEA researchers must ensure that data to be used are in pseudo-anonymized interview notes stripped of personal identifiers as soon and as close as possible to the actual source of the raw information. Access to the data should be restricted to a limited number of individuals within the LEA Task Team. The information contained in the interview notes should be kept by a single person. The dissemination of the report based on the interview notes should be kept to a minimum whenever possible, and it should not be shared in soft copy before the information is validated by the stakeholders who were interviewed.

5.3 Desk review

A desk review of laws, regulations and policies relevant to pollution and environmental health requires looking at many sources of law in a country, and well as relevant guidelines, plans and strategies. Laws regulating pollution are seldom codified in one legal instrument. In most cases, pollution controls are found in various sources and branches of the law and are complemented by a range of regulations, policies, guidelines, plans and strategies. For example, while an environmental ministry may set regulations on certain types of industrial emissions, ministries of economic development and trade may set licencing and inspection requirements from industrial facilities, while municipal ordinances may restrict the location of such enterprises to separate pollutants from residential areas. In this respect, pollution control is often a patchwork of parallel or overlapping authorities and mandates.

In designing a desk review, researchers should consult section 3, which provides an overview of the types and sources of law that influence pollution control, as well as legal issues relevant to effective pollution control. In most countries, the following sources of law and policy may be relevant:

- the national constitution;
- international environmental agreements on environmental protection, pollution control and environmental health;
- environmental framework laws;
- regulations addressing specific media types (e.g., clean air or water laws);
- regulations addressing the use or release of specific contaminants
- laws mandating environmental assessments and environmental consideration in decision-making;
- laws describing industrial licencing and inspection requirements;
- medical and health laws and regulations;
- laws and regulations regarding labour practices, particularly those addressing occupational health and safety;
- laws relating to the rights of indigenous communities;
- laws regarding agricultural practices and food safety;
- customary and religious laws;
- environmental case law;
- national programmes, plans, strategies and guidelines related to pollution and its impact on health;

- annual reports and research reports on pollution and health from civil society organizations, statutory bodies, international and regional organizations; and
- national development plans and strategies, including those developed for, or in collaboration with development partners.

Beyond the review of laws, regulations and policies, LEAs also encompass reviewing how laws are implemented and enforced, the nature and extent of environmental discrimination and how people access justice. This requires mapping the work of various organizations and services in the country and examining documentation such as case law, national environmental assessment, environmental health data, annual reports of civil society organizations, research reports, case studies and any systems designed to monitor compliance or enforcement mechanisms.

5.4 Data collection

There are a variety of factors that decision-makers may consider when prioritizing certain pollution issues above others. These may include economic factors, national political considerations, commitments made under international environmental agreements and many others. One of the most objective prioritization tools is to use data and estimates of human health impacts associated with different pollution challenges, and to prioritize those that take the greatest health toll. However, as noted in section 2.3, our understanding of the impacts from different pollutants is often incomplete, particularly with respect to chemicals.

One of the most helpful tools in assessing health impacts of pollutants is the burden of disease studies. They use data collected from governments and peer-reviewed research papers to estimate pollution exposure levels among different populations, and scientific literature around the connections between exposure levels and disease incidence and severities to estimate the morbidity and mortality attributable to different pollutants across different geographies. In other words, they estimate how much illness and death is attributed to different pollutants in different places.

Two of the most recognized institutions that release global burden of disease data are the WHO and the Institute for Health Metrics and Evaluation (IHME), which both signed a collaborative agreement in 2018 to work together on a single, annual Global Burden of Disease (GBD) study. The results of this study are published by IHME and are widely used in WHO communications.

5.5 Finding country-specific burden of disease data related to individual pollutants

While many organizations publish summaries of GBD estimates related to specific pollutants, the most effective way to get detailed, country-specific results is to use the data visualization tools at IHME's GBD Compare Viz Hub website. This web-based tool (full guidance in **Annex 3**) takes some practice to effectively navigate, but once a user understands how to manipulate the filters, it is incredibly powerful. For example, not only can this tool display estimates for annual deaths from specific pollutants in a single country (take ambient air pollution in Indonesia, for example), it also allows users to get much more specific results, including:

- the percentage of disease burden from a specific disease that results from exposures to specific pollutants (e.g., 15.2 percent of the disease burden from strokes in Indonesia is attributable to ambient air pollution, whereas only 11.2 percent of the stroke burden results from indoor/household air pollution exposures and 3.8 percent results from lead exposure);
- the impacts of pollution exposure expressed not only a whole number of deaths and disability adjusted life years (DALYs), but also as rates and percentages, which are helpful because whole numbers are influenced by changes in total population numbers, whereas rates and percentages are not;
- how pollution impacts vary across different age groups and sexes (e.g., does indoor/household air pollution result in more mortality among the very young or very old? What about males vs females?);
- how morbidity and mortality from pollutants changed between 1990 (the date of the fist GBD study) and 2021 (the date of the last published results); and
- in some countries, the results can be disaggregated by province/state (e.g., what are the impacts of these pollutants on human health in Indonesia's Central Kalimantan province versus in West Sumatra province).

Photo: © UNDP

6

Feedback and finalization

6. Feedback and finalization

6.1 Overview of the results of the LEA

The completed LEA will have consolidated information and analysis regarding the strengths and weaknesses of regulatory controls on pollution and how those affect public health. While consensus on recommendations and the way forward may be possible, some findings might elicit different opinions.

The results of the LEA will provide an opportunity to generate and facilitate informed debate about the critical issues at the intersection of law, environmental protection, health and human rights in a country. It may also be possible in the future to compare the implications of the key findings (rather than the specific results per se) between national LEAs to look at similarities and differences between legal environments.

6.2 Soliciting feedback from undp headquarters

Prior to finalizing the LEA report, the LEA Task Team should establish an agreed framework for managers to review and provide comments on the draft. A possible review framework could include the following steps:

1) The LEA Task Team submits a complete LEA draft to project managers;
2) Managers provide high-level comments on the draft;
3) The Task Team revises the draft to address all comments and submits the draft back to managers;
4) Managers conduct a line-by-line edit of the document; and
5) The Task Team incorporates edits and translates the edited draft into the appropriate language for a final review by the TWG (see below).

6.3 Soliciting feedback prior to finalization and dissemination

Once a complete draft containing the findings and recommendations has been reviewed by managers, it is recommended that the Task Team create an opportunity for dialogue on key issues, findings and recommendations with the TWG. There are several options for feedback and consensus-building during the LEA process and dissemination of the report findings and recommendations. Some possible processes are discussed below for consideration at country level.

The LEA process may build in various opportunities for the review of draft findings during the assessment, including through:

- regular reports back to the TWG on key issues emerging from stakeholder consultations, of the draft findings of the desk review and draft versions of the LEA report;
- tabling the draft report at various relevant sectoral and multisectoral meetings;
- meeting individually with various stakeholders with updates on the LEA; and
- dissemination of the draft report to a 'readers group' of peers with skills, expertise and experience in pollution control and environmental health for them to provide written comments.

Stakeholders who have participated in the process should have an opportunity to discuss and deliberate on the outcomes and recommendations flowing from the LEA process once the near-final report is available. A consultative validation workshop should aim to:

- thank stakeholders for their participation in the LEA;
- report back to stakeholders on the process of the LEA, including:
    - o which laws, policies and other relevant documents were reviewed, and which stakeholders were consulted (while preserving confidentiality);
    - o how stakeholders' perspectives were incorporated into the LEA; and
    - o any limitations during the process and how these were dealt with;
- report on key issues, draft findings and recommendations made by the LEA;
- provide an opportunity for dialogue on key issues and feedback on the process, findings and recommendations; and
- reach consensus on findings and recommendations, including priority recommendations for strengthening the legal and policy framework.

The complete final report from the LEA is likely to be a long document, ranging from 40 to 100 pages depending on the scope and objectives.

6.4 Producing a final report

The report from the LEA should be finalized after feedback from the Technical Working Group and the consultative validation meeting. The contents of the final report will vary depending on the context, but could include (in actual order):

- the purpose, scope and nature of the LEA;
- the key pollution and environmental human issues of priority national concern that were addressed during the process;
- the methodology and specific activities undertaken;
- a summary of the work plan and time-frame in which the work was undertaken;
- any questionnaires, survey plans, discussion guides and analysis tools that were used during

interviews, focus group discussions and desk reviews;
- laws, regulations, policies, plans and strategies reviewed;
- analysis section that examines strengths/weaknesses of reviewed documents, with a clear way of indicating the specific part of the legislative document (e.g. article, decree, page number) where these are observed;
- key stakeholders consulted during the assessment;
- key findings from the desk review and key informants;
- discussion of the results and key findings, and their implications; and
- recommendations for improving pollution control and environmental health.

The final LEA report is likely to be a long document, ranging from 40 to 100 pages depending on the scope and objectives.

6.5 Summary policy briefing

To make the key results easily accessible for those who do not have time to read the full final report from the LEA, a summary policy briefing based on the final report might be useful. This shorter document could be 2–4 pages and include:
- a summary of the purpose, scope and nature of the national LEA and the priority issues that were addressed during the process;
- highlights from the methodology and specific activities undertaken, including reference to any ethical approval sought and gained (as required);
- a summary of the process and key stakeholders involved;
- a summary of the key results and implications of the key findings;
- proposed recommendations; and
- details of where the full report and further details about the LEA can be found.

6.6 Thematic or issue-based briefs

The LEA process is likely to produce a vast amount of useful information that can be presented in many ways to focus on different critical issues and/or concerns. It may be useful to produce focused thematic summary briefs drawing out specific aspects from the key findings, results, and recommendations from the LEA. This can be particularly useful if a broad LEA scope has been adopted, as a thematic brief can cut to a specific interest area relevant to particular stakeholders.

Thematic or issue-based briefs could be produced, for example, on a priority pollutant type or specific legal areas such as environmental justice or protecting the right to a healthy environment. Ideally, such briefs could be disseminated by relevant authorities, civil society groups and journalists.

6.7 Translation and production of final resource materials

The results of the LEA may need to be accessible and effectively communicated to a range of audiences. Consideration should be given to the language(s) in which the final report is published. Issues to consider include accessibility for:

- national policymakers, legislators and law enforcement officers and other stakeholders;
- participants in the research process;
- the general public in the national context; and
- an international audience and the potential of the LEA results to be a useful resource for other countries.

To the extent that resources allow, the final report and the policy brief should be produced as designed reports (for example, including logos of partners, photographs taken to document the process, pull quotations etc.) and be made available online as PDFs and/or printed for distribution at the national launch event to disseminate the results. The stages involved in the production of these materials include proof-reading, designing, reviewing, a print preview, printing and distribution.

Teams should consider making the report accessible to people with disabilities. This may mean creating versions with larger font, online versions with captioning and including sign language interpretation for events.

7

Dissemination, implementation, and impact

7. Dissemination, implementation and impact

7.1 Purpose of disseminating the results of the LEA

The purpose of this final stage of the LEA is to:

- facilitate dialogue on the final results, key issues and recommendations;
- maximize the potential impact of the findings and recommendations;
- use the evidence to inform law reform processes;
- sustain momentum and generate multi-stakeholder commitment to address key issues that emerged from the LEA; and
- trigger, support and/or sustain multi-stakeholder action to take the recommendations forward.

It is important to consider the target audience for any dissemination activity, and then consider the most appropriate channel of communication and language to reach that specific audience. As noted above, for specific audiences it may also be useful to consider generating specific thematic summary reports tailored to specific issues, key findings and/or key populations to spotlight special attention on timely and critical issues highlighted in the results of the LEA.

There are several different options for disseminating the results of the LEA. Some possible processes are discussed below for consideration at country level.

7.2 Dissemination workshop

All countries should plan to have at least one national dissemination workshop. The objectives of such an event may include:

- disseminate the final LEA report and its findings and recommendations;
- provide an opportunity for discussion on the findings and recommendations;
- prioritize recommendations for strengthening legal frameworks;
- discuss key actions to take forward, potentially including:
    - law review and reform;
    - pollution and environmental health monitoring;
    - access to pollution and environmental health data;
    - access to justice; and
    - sensitizing decision-makers to the costs of inaction and benefits of improved pollution control;
- discussing roles of various partners in taking up recommendations;
- developing a road map for future action to implement recommendations; and
- developing a process for ongoing monitoring and evaluation.

7.3 Media engagement

Engaging the media and generating media coverage of the LEA process and results can promote and inform public awareness and dialogue about key issues. Depending on the resources available, a variety of approaches could be used to promote coverage of the LEA through news stories, in-depth feature coverage and more sustained investigative journalism, and/or through commissioned public service announcements. Channels of communication that could be considered include print, television and broadcast media (such as commercial and community radio) as well as online and other social media. Some possible activities for consideration include:

- press releases, jointly issued by all partners involved in the TWG, to trigger coverage of the national launch event and the release of the final report;
- media fellowships, to support and sustain in-depth investigative reporting of key issues emerging from the LEA through feature stories. Fellowships could include a short capacity development training specifically for journalists and editors on the results and recommendations from the LEA, stipends to support travel costs and provide an incentive for journalists to invest time and energy toward in-depth coverage of the issues, and ongoing mentoring support from a senior 'expert' journalist who can provide technical guidance on the content and style of the features while also potentially assisting journalists to place their stories with other media houses outside their own;
- public service announcements could be commissioned and produced to ensure that regular controlled messages are disseminated consistently; and
- online and social media coverage of the LEA process and results may be appropriate (depending on the reliability and coverage of internet access).

7.4 Small grants for tailored advocacy

Given the participatory nature of the LEA process, one of its greatest strengths will be the breadth and diversity of the partners and stakeholders involved. One way to support partners in advancing the recommendations from the LEA may be to provide small grants for key stakeholders to implement their own initiatives to maximize the dissemination and potential impact of the LEA. This may include developing new and discrete pieces of work, as well as potentially incorporating a focus on the LEA into existing programmes and activities. It may also include specific grants to support the tailored summary reports outlined above.

7.5 Sustaining the process for maximum impact

A report without follow-on action rarely makes a significant impact. It is important to ensure that the LEA does not end with the production of the final report, but rather leads to a consultative process of prioritizing recommendations and advancing key actions to improve regulatory effectiveness. The following actions may be useful in ensuring sustained commitments and progress after the LEA report is complete:

- assigning responsibilities for follow-up work to various institutions;
- designating a structure (such as the Technical Working Group or a new structure specifically set up for the purpose) to coordinate and communicate with the various sectors and oversee follow-up work;
- integrating LEA recommendations and follow-up activities into the existing work of organizations and into national strategies and plans (such as national development plans, national environmental and natural resource management strategies, and UN development assistance frameworks);
- including activities that empower communities and civil society organizations to protect their rights and that build the capacity of state institutions to implement effective pollution monitoring and control activities; and
- promoting linking, sharing, and learning across countries and across the region to increase long-term national and regional knowledge and capacity in pollution control, environmental health, regulatory enforcement and human rights protections.

A

Annexes

Annex 1. **Templates**

Annex 2. **Sample terms of reference for the Technical Working Group**

Annex 1. Templates

Annex 1A: Sample concept note: National LEA

Background and national pollution context

Pollution is one of the largest contributors to disease and premature death in the world today—responsible for approximately 9 million premature deaths, or 16 percent of global mortality. Today, more than 99 percent of the world's population breathes air containing dangerous levels of pollutants, and harmful chemicals are found in the tissues of humans in the most remote corners of the globe [47,48]. As trends toward industrialization and urbanization increase, so do the impacts of these modern pollutants.

Pollution's toll extends beyond health, causing significant impacts to societal stability and economic development. At the individual level, pollution affects the most vulnerable populations and those with the least means to protect themselves, perpetuating a cycle of intergenerational poverty. At the societal level, pollution reduces workforce productivity, drives up healthcare spending and suppresses gross domestic product by an estimated 2 percent per year in low- and middle-income countries [49]. Pollution is not a necessary component of national economic development, and countries that work proactively to prevent and mitigate its spread can expect a positive return on their investment in the form of smarter and more economically productive citizens, lower healthcare costs, higher educational attainment, higher tourism rates and improved social and political cohesion [50].

Some of our strongest tools in combating the impacts of pollution are laws and policies that restrict or disincentivize polluting activities, protect vulnerable populations and reward cleaner models of production and consumption. However, countries around the world face a variety of common challenges in effective pollution regulation. The Legal Environment Assessment (LEA) is a tool to identify current strengths, weaknesses and opportunities and help countries advance effective responses to pollution challenges.

[Insert 3–4 paragraph overview of country's response to pollution and environmental health challenges, for example:
• National pollution and associated environmental health data
• Broad overview of legal and policy framework in the country in relation to pollution and public health
• Key issues of concern
• Current response, if any, to strengthening legal and policy framework
• Impact on vulnerable populations]

Purpose of the national LEA

The primary purpose of the national LEA is to reduce pollution levels and improve environmental health by reviewing relevant laws, regulations and policies and identifying key challenges, priorities and opportunities for an improved response. The national LEA also aims to assess the effectiveness of the legal framework in protecting rights and promoting universal access to environmental justice. In the process of this assessment, the national LEA may examine the following types of issues concerning pollution:

- Licensing and inspection regimes for industrial operations
- Industrial emissions regulations
- Environmental monitoring requirements and capacities
- Rules concerning public access to environmental data
- Public access to, and participation in environmental decision-making
- Occupational safety and health requirements
- Standards regarding pollutant levels in foods and environmental media
- Laws and policies regarding informal economic activities (e.g., scavengers, waste collectors, refurbishes, recyclers and other unregistered livelihoods)
- Judicial access for environmental lawsuits
- Effective judicial remedies
- Regulatory enforcement mechanisms and deterrents for non-compliance
- Incentives for superior environmental performance
- Environmental justice, rights to non-discrimination and rights of indigenous and marginalized populations
- Safety of, and protections for environmental advocates
- Protections for vulnerable populations
- Environmental health monitoring (e.g., testing for pollution exposure) and access to treatment
- Coordination and collaboration between environment and health authorities
- Financing

The LEA will identify strengths, gaps and challenges in the legal and policy framework in terms of alignment with national, regional and international commitments, best practice and lessons learned from foreign jurisdictions (where relevant).

Importantly, the LEA will include recommendations for strengthening an enabling environment for an effective response to pollution.

Expected outcomes

The outcome of the national LEA is a strengthened regulatory environment for pollution control that is based on the best available data and analysis.

Methodology

A five-stage process will be followed to support the national LEA with the involvement of all key stakeholders and the establishment of a Technical Working Group:

1. Planning
2. Assessment
3. Feedback and finalization
4. Dissemination, implementation, and impact
5. Documenting the process: communication, monitoring and evaluation, coordination

Role of stakeholders involved in the LEA process

Key stakeholders will be meaningfully involved in the LEA process. Their role is to participate in consultations relating to the LEA in a timely manner and provide accurate information and opinions to the best of their ability.

[Provide here a list of all key stakeholders to be involved in the process.]

Annex 1B: Sample Terms of Reference for the Technical Working Group

Pollution is one of the largest contributors to disease and premature death in the world—responsible for approximately 9 million premature deaths, or 16 percent of global mortality [51]. Today, more than 99 percent of the world's population breathes polluted air, and harmful chemicals are found in the tissues of humans in the most remote corners of the globe [52,53].

Pollution's toll extends beyond health, causing significant impacts to societal stability and economic development. At the individual level, pollution affects the most vulnerable populations and those with the least means to protect themselves, perpetuating a cycle of intergenerational poverty. At the societal level, pollution reduces workforce productivity, drives up healthcare spending and suppresses gross domestic product by an estimated 2 percent per year in low- and middle-income countries [54]. Pollution is not a necessary component of national economic development, and countries that work proactively to prevent and mitigate

its spread can expect a positive return on their investment in the form of smarter and more economically productive citizens, lower healthcare costs, higher educational attainment, higher tourism rates and improved social and political cohesion [55].

Some of our strongest tools in combating the impacts of pollution are laws and policies that restrict or disincentivize polluting activities, protect vulnerable populations and reward cleaner models of production and consumption. The Legal Environment Assessment (LEA) is a tool to identify current strengths, weaknesses and opportunities and help countries advance effective responses to pollution challenges.

[Insert 3–4 paragraph overview of country's response to pollution and environmental health challenges, for example:
• National pollution and associated environmental health data
• Overview of legal and policy framework in relation to pollution and public health
• Key issues of concern
• Current response, if any, to strengthening legal and policy framework
• Impact on vulnerable populations]

Technical Working Group objectives

The main objectives of the Technical Working Group (TWG) are to guide and support the national LEA by ensuring that the recommended process to support a national LEA is followed—i.e.:

1. Planning
2. Assessment
3. Feedback and finalization
4. Dissemination, implementation, and impact
5. Documenting the process

More specifically, the objectives of the TWG may be to provide:

- **oversight:** to guide and monitor the assessment process to ensure that it is conducted according to agreed processes and in a way that ensures consultation, inclusivity and maximizes its potential impact;
- **advice:** providing technical input on key pollution and environmental health issues and LEA processes; and
- **implementation support:** supporting and/or actively undertaking the LEA depending on the arrangement with the researcher(s) and the resources available to support the LEA.

Responsibilities of the Technical Working Group

The responsibilities may include:

- guiding the national LEA in accordance with national priorities and recommended guidance, as a multi-disciplinary reference group;
- facilitating fundraising/resource mobilization for conducting the national LEA;
- providing ongoing technical support to the planning, implementation and finalization of the national LEA;
- overseeing and monitoring the LEA throughout each stage of the process;
- raising awareness of the pollution and environmental health issues of priority national concern;
- advocating to strengthen political commitment to the LEA and its outcome;
- reviewing and endorsing the LEA recommendations and supporting action planning to strengthen the legal and regulatory environment;
- reporting back on the outcomes of the process to key stakeholders; and
- developing a process or forum for ongoing monitoring of the outcomes of the LEA, with the involvement of key stakeholders.

Composition and types of members

The TWG should comprise around 10 to 15 representatives. Members should have the following characteristics:

- come from a range of sectors, institutions and organizations key to the national response to pollution and environmental health (note that these may include actors that are not specifically focused on pollution, per se, but may be focused on related issues such as disaster response, climate, gender or indigenous rights, for example);
- skills, experience and understanding concerning pollution-related laws, regulations and policies; and
- experience working on solutions to pollution and environmental health.

The TWG should seek to balance representation between government, civil society, and other groups. It should seek to maintain a gender-balanced representation, as well a geographic representation.

[Include here the list of all members of the TWG].

Duration and meetings

[Include here the timespan of the TWG's involvement and the number of meetings].

Annex 1C: Sample terms of reference for the LEA Task Team

Background and national pollution context

Pollution is one of the largest contributors to disease and premature death in the world, responsible for approximately 9 million premature deaths, or 16 percent of global mortality [56]. More than 99 percent of the world's population breathes air containing dangerous levels of pollutants, and harmful chemicals are found in the tissues of humans in the most remote corners of the globe [57,58]. As trends toward industrialization and urbanization increase, so do the impacts of pollutants. Pollution's toll extends beyond health, causing significant impacts to societal stability and economic development. At the individual level, pollution affects the most vulnerable populations and those with the least means to protect themselves, perpetuating a cycle of intergenerational poverty. At the societal level, pollution reduces workforce productivity, drives up healthcare spending and suppresses gross domestic product by an estimated 2 percent per year in low- and middle-income countries [59]. Pollution is not a necessary component of national economic development, and countries that work proactively to prevent and mitigate its spread can expect a positive return on their investment in the form of smarter and more economically productive citizens, lower healthcare costs, higher educational attainment, higher tourism rates and improved social and political cohesion [60].

Some of our strongest tools in combating the impacts of pollution are laws and policies that restrict or disincentivize polluting activities, protect vulnerable populations and reward cleaner models of production and consumption. However, countries around the world face a variety of common challenges in effective pollution regulation. The Legal Environment Assessment (LEA) is a tool to identify current strengths, weaknesses and opportunities and help countries advance effective responses to pollution challenges.

[Insert 3–4 paragraph overview of country's response to pollution and environmental health challenges, for example:

- *National pollution and associated environmental health data*
- *Broad overview of legal and policy framework in the country in relation to pollution and public health*
- *Key issues of concern*
- *Current response, if any, to strengthening legal and policy framework.*
- *Impact on vulnerable populations].*

Objective of the assignment

The country is embarking on a national LEA to review laws, regulations and policies related to pollution control and environmental health, and to identify opportunities and recommendations for an improved national response. The objective of this consultancy is to set up an LEA Task Team to provide research, analytical, coordination, implementation and writing support throughout the process of the national LEA.

Duties and responsibilities

The **role** of the lead consultant/researcher(s) of the LEA Task Team is to:

- facilitate the implementation of the LEA with the Technical Working Group;
- develop the inception report/concept note and the final report in partnership with the Technical Working Group and in consultation with key stakeholders;
- coordinate the implementation of the LEA with the Technical Working Group and key stakeholders by ensuring that their feedback is taken into account;
- conduct a desk review to examine pollution-related laws, policies, plans and strategies as well as other laws relevant in the context of pollution's impacts on health and rights; and
- conduct focus group discussions and stakeholder consultations.

The **responsibilities** of the lead consultant/researcher(s) of the Task Team may include:

- implementing the national LEA in accordance with national priorities and recommended guidance, as a multi-disciplinary reference group;
- ensuring relevant ethical approval is sought and achieved as required;
- overseeing the quality of the research process, e.g. by ensuring informed consent and that confidentiality is protected throughout the process;
- drafting the inception report, final report and other summary policy briefs or specific thematic briefs as required according to the accepted methodology;
- thoroughly referencing the sources of information (e.g., literature review materials, interviews etc.);
- being responsive to the ongoing technical support from the Technical Working Group and peer review feedback throughout the process;
- reviewing and endorsing the LEA recommendations and supporting action planning to strengthen the legal and policy environment for pollution control;
- reporting back on the outcomes of the process to key stakeholders; and
- collaborating in the process or forum for ongoing monitoring of the outcomes of the legal and policy framework, with the involvement of key stakeholders.

Scope of work

The national LEA should cover:

- a review of all international, regional and national obligations and commitments relevant to pollution and environmental health;
- a review of all relevant current or proposed national laws, including common law (if relevant), statutory law, case law, customary law and religious law; regulations; policies and codes of conduct relevant to pollution control, pollution-related environmental health issues and environmental justice;
- a review of relevant strategies and planning documents relating to pollution, and associated environmental health risks; and
- other research, reports and case studies relating to pollution control issues and associated environmental health issues, such as:
    - Licensing and inspection regimes for industrial operations
    - Industrial emissions regulations
    - Environmental monitoring requirements and capacities
    - Rules concerning public access to environmental data
    - Public access to, and participation in environmental decision-making
    - Occupational safety and health requirements
    - Standards regarding pollutant levels in foods and environmental media
    - Laws and policies regarding informal economic activities
    - Judicial access for environmental lawsuits and judicial remedies
    - Regulatory enforcement mechanisms and deterrents for non-compliance
    - Incentives for superior environmental performance
    - Environmental justice, rights to non-discrimination and rights of indigenous and marginalized populations
    - Safety of, and protections for environmental advocates
    - Environmental health monitoring and access to treatment
    - Coordination and collaboration between relevant authorities
    - Financing for environmental enforcement and monitoring

Methodology, tasks, and deliverables

The LEA will be undertaken using the following methodologies to meet its objectives:
[incorporate the methodologies, stages and deliverables that the country deems appropriate from the suggestions made in this LEA manual, and timeline for deliverables.]

Qualifications and competencies for the Lead Consultant/Researcher(s)

It is envisaged that the LEA Task Team will be made up of 2 or 3 individuals (one international/ lead consultant and one national consultant).

The positions require a strong background in environmental law or policy, as well as an understanding of technical aspects of pollution control and its health impacts.

Advanced knowledge and work experience of assessing and developing legal, regulatory and policy frameworks to respond to pollution and health is required; as is experience in conducting research, including developing interview and focus group discussion tools and conducting interviews, as well as desk research.

Individuals of the Task Team should be considered free of any conflict of interest and neutral towards the issues being screened by the LEA process. For example, a Task Team member that had a financial interest in the outcome of the LEA or in any proposed changes to the law would have a conflict of interest and should not be included. The Task Team should also be viewed as qualified among key stakeholders.

Annex 1D: Example LEA report outline

The following outline is not a required format but provides general guidance on the type of formatting and sections that may be appropriate for the final LEA report.

Acknowledgments

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Abbreviations, Definitions

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Executive Summary

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1.1. Purpose of the Legal Environment Assessment

1.2. Scope of the Legal Environment Assessment in *[country name]*

2. Legal Environment Assessment Process

2.1. Description of LEA Participants and Roles

2.2. Description of LEA Consultation, Research and Analysis Process

3. National Pollution and Environmental Health Context

3.1. Environmental Pollution Challenges in *[country name]*

3.1.1. *[Create subsections for each pollutant in the LEA's scope]*

3.2. Affected Populations

3.2.1. *[Create subsections for each pollutant in the LEA's scope]*

3.3. Environmental Health Impacts from Pollution in [country name]

3.3.1. *[Create subsections for each pollutant in the LEA's scope]*

4. Analysis of National Environmental Law and Policy Framework

4.1. *[Create subsections for each pollutant in the LEA's scope]*

4.1.1. *[Create subsections for each legal/policy issue you analysed. See section 2.9 for a list of possible issues]*

5. Recommendations for Improving Pollution Control and Environmental Health

6. Conclusion

Annex 2. Pollution's relevance to the SDGs

Below is a brief summary of SDGs and specific targets relevant to pollution.

SDG Goal	SDG Target	Link to pollution
 **Goal 2** **End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.**	**Target 2.4:** By 2030 ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters, and that progressively improve land and soil quality.	Releases of industrial wastewater into water bodies used for crop irrigation contaminate soils and agricultural products leading to the uptake of chemicals and heavy metals in crops consumed by people and livestock.
 **Goal 3** **Ensure healthy lives and promote well-being for all at all ages.**	**Target 3.4:** By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing. **Target 3.9:** By 2030 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination.	Effective pollution control will directly impact exposure levels and thus associated disease burdens.
 **Goal 6** **Ensure availability and sustainable management of water and sanitation for all.**	**Target 6.1:** By 2030, achieve universal and equitable access to safe and affordable drinking water for all. **Target 6.1:** By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations. **Target 6.3:** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally. **Target 6.3:** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.	To be considered safe, drinking water needs to be free from contamination. This requires robust drinking water production (including treatment) and distribution. A major share of drinking water contamination occurs in homes and neighborhoods with insufficient sanitation and hygiene. Hence, the achievement of SDG target 6.2 is important for the achievement of 6.1. Regarding ambient water quality (target 6.3) clean production and wastewater treatment, and land management methods to reduce nutrient leakage from agriculture need to be scaled up in order to address the overfertilization of water bodies – one of the planetary boundaries transgressed! Pollution and habitat destruction have together contributed to the loss of freshwater biodiversity (target 6.6).

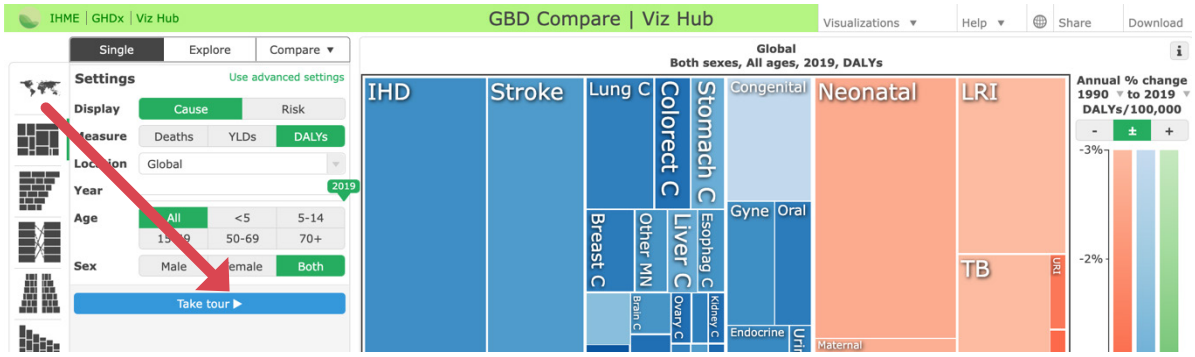
SDG Goal	SDG Target	Link to pollution
 **Goal 8** **Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.**	**Target 8.4:** Improve progressively through 2030 global resource efficiency in consumption and production, and endeavor to decouple economic growth from environmental degradation in accordance with the 10-year framework of programs on sustainable consumption and production with developed countries taking the lead.	Many pollutants are simply industrial inputs or byproducts that were not put to productive use and were thus released to the environment. Transitioning economies to make full use of byproducts and end-of-life products will not only increase efficiency, but will also reduce pollution and its associated impacts.
 **Goal 9** **Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.**	**Target 9.4:** By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.	A truly sustainable industry is one that achieves a closed loop value chain that does not create negative externalities such as pollution.
 **Goal 11** **Make cities and human settlements inclusive, safe, resilient and sustainable.**	**Target 11.1:** By 2030, ensure access for all to adequate, safe and affordable housing and basic services, and upgrade slums. **Target 11.6:** By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.	An efficient and sustainable industrial and commercial economy is one that makes full use of resources to reduces waste. Pollution is, in effect, just a resource that was not put to productive use and was instead released as waste.

SDG Goal	SDG Target	Link to pollution
 **Goal 12** **Ensure Sustainable consumption and productive patterns.**	**Target 12.4:** By 2020 achieve environmentally sound management of chemicals and all wastes throughout their life cycle in accordance with agreed international frameworks and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment. **Target 12.5:** By 2030, substantially reduce waste generation through prevention, reduction, safe recycling, and reuse. **Target 12.8:** By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature. **Target 12.a:** Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production. **Target 12.b:** Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products.	Sustainable production and consumption means decoupling economic activities from the creation of waste. Pollution is waste that degrades the environment and damages health.
 **Goal 13** **Take urgent action to combat climate change and its impacts.**		While the LEA does not focus on greenhouse gasses, measures to reduce particulate air pollution often simultaneously address greenhouse gas emissions.
 **Goal 14** **Conserve and sustainably use the oceans, seas and marine resources for sustainable development.**	**Target 14.1:** By 2025, prevent and significantly reduce marine pollution of all kinds, particularly from land-based activities, including marine debris and nutrient pollution.	Most ocean pollution originates on land. Controlling land-based pollution is critical to conserving and protecting marine environments.

SDG Goal	SDG Target	Link to pollution
 **Goal 15** **Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.**	**Target 15.3:** By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world. **Target 15.5:** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.	Toxic Pollution not only degrades the soils that we rely on for safe food production, but just pollution impacts the health of humans, it equally impacts the health and survival of other species.
 **Goal 17** **Strengthen the means of implementation and revitalize the global partnership for sustainable development.**	**Target 17.7:** Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favorable terms, including on concessional and preferential terms, as mutually agreed. **Target 17.9:** Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation.	Pollution control, and the LEA process specifically, are squarely in line with goals to improve the capacities of developing countries to advance their own sustainable development.

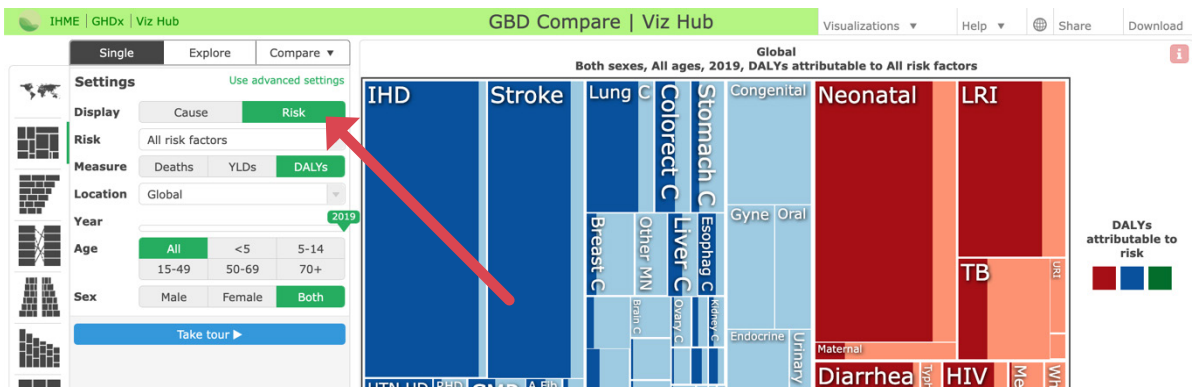
Annex 3. GBD Compare Viz Hub guidance

Start by taking a tour of the site using the blue “take tour” button featured prominently on the left side of the page.



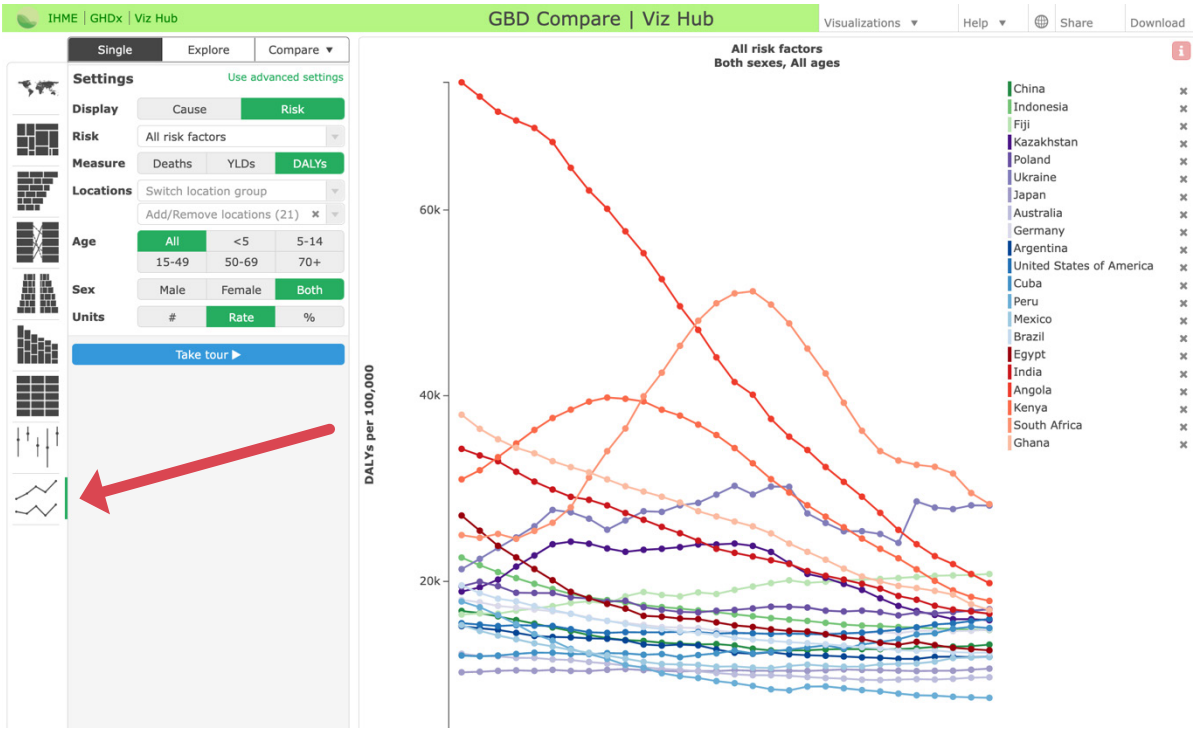
Video tutorials providing more detailed walk-throughs are also available on YouTube. As a primer, below are step by step instructions to extract a specific estimate as an example of how to use the website. Here, we will look for the annual rate of death associated with lead exposure in India, and how that rate has changed since 1990:

STEP 1	Start by navigating to: https://vizhub.healthdata.org/gbd-compare/
STEP 2	In the settings box on the left of the screen next to the word “*display*” select “*risk*.” Pollutants are “*risk factors*” that contribute to morbidity and mortality rather than “*causes*” of mortality and morbidity, as such, when exploring the impacts of pollution, users should start by clicking the “*risk*” button. This will bring up a new filter immediately under “*display*” called “*risk*.”



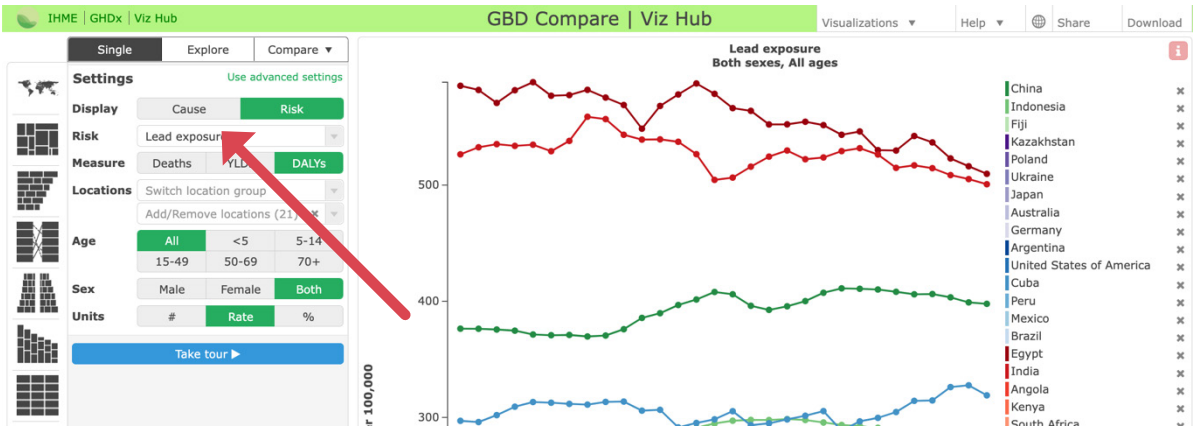
STEP 3

Select the type of chart you want to generate by toggling through the eight options on the left. In this case, a simple line graph (the bottom choice among the eight) will provide the desired results.



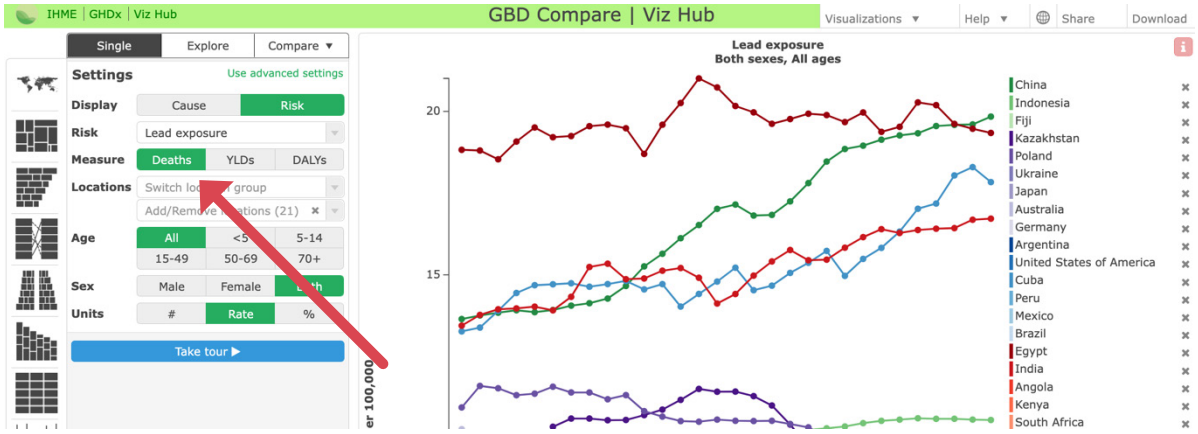
STEP 4

In drop-down menu next to the "*risk*" filter, select the type of pollutant you are interested in (in this case "*lead exposure*".)



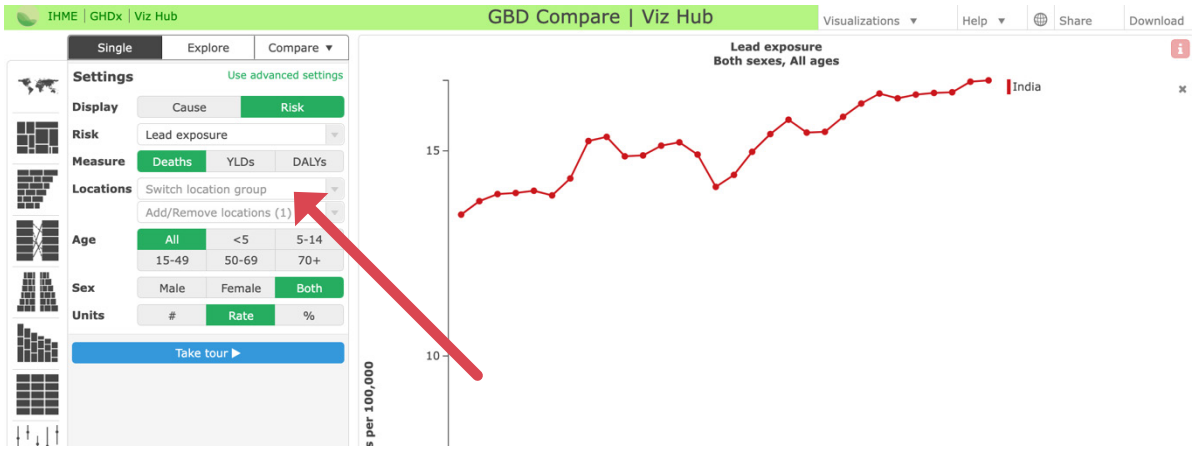
STEP 5

In the filter label "*measure*," select if you want to see numbers related to deaths, years lived with disability (YLD) or disability adjusted life years (DALYs). In this case, we will select deaths.



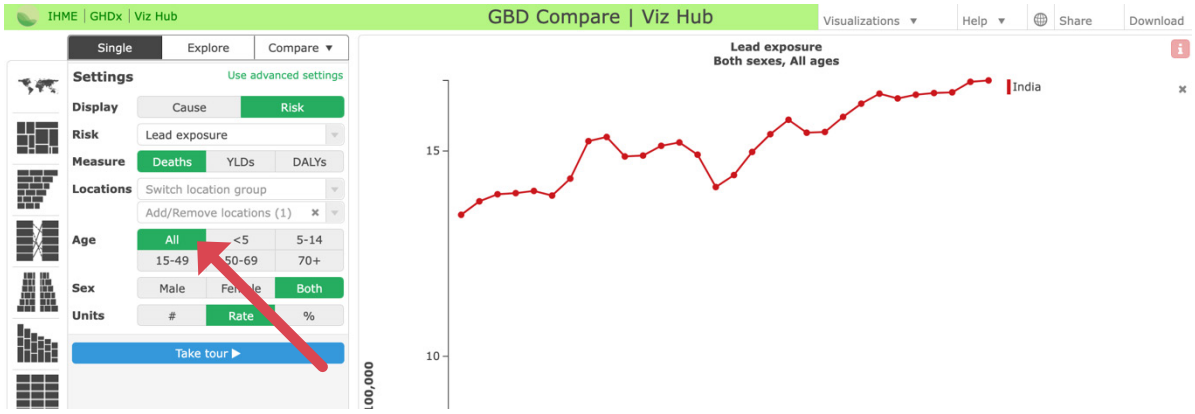
STEP 6

Next to the filter labeled "*locations*," you can select groups of countries such as regions or income groups by choosing such in the "*switch location groups*" box, or you can select individual countries in the "*add/remove locations*" drop-down menu. In this case, we will delete the pre-selected group of countries and select "*India*."



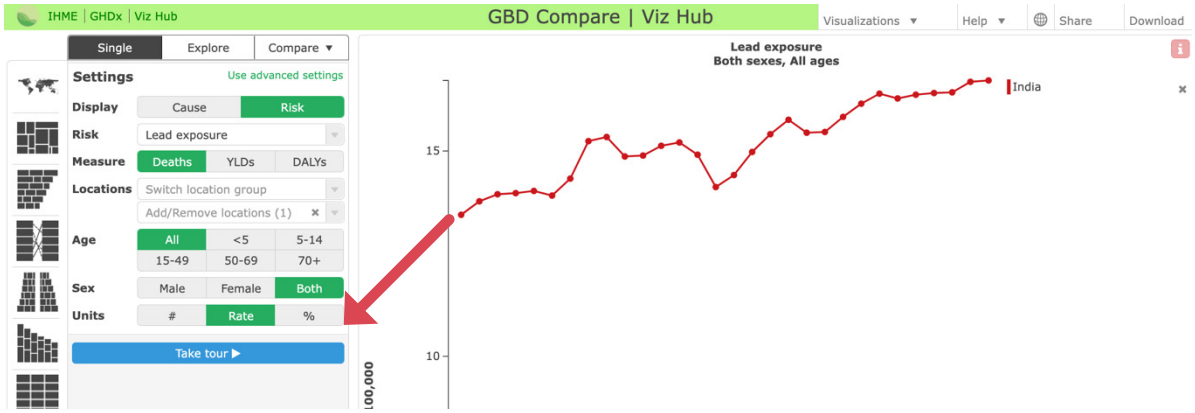
STEP 7

We will then select the age group we are interested in. Here, we will select "*all.*"



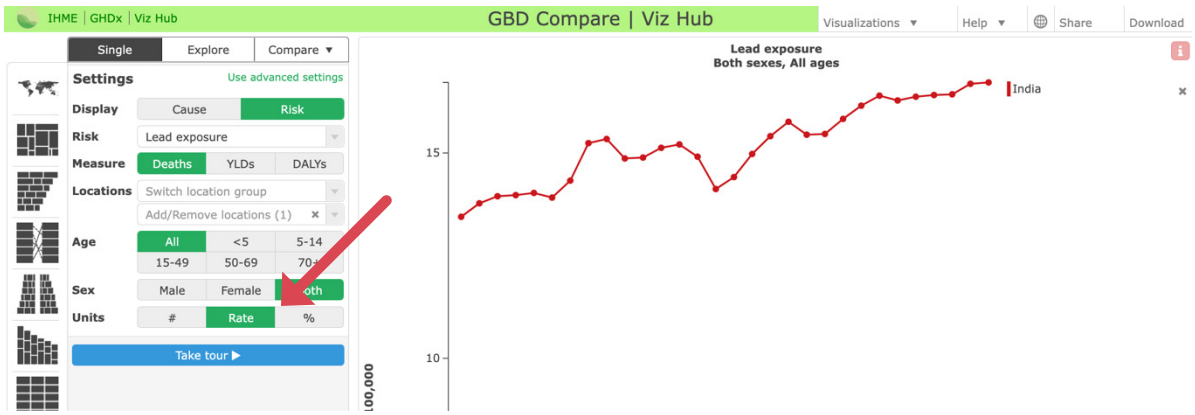
STEP 8

We will then select the sex we are interested in. Here, we will select "*both*."



STEP 9

Finally, select the units we would like the results displayed in. In this example, we are interested in the rate of death from lead exposure, so we will choose a rate (this presents a rate per 100,000 individuals).



Tip: once a chart is created, individual data points can be seen by hovering the cursor over different parts of the chart.

By following the steps above, a user can create the chart below, which shows that the rate of death in India attributable to lead exposure among all ages and both sexes was 13.4 deaths per 100K in 1990, but has increased to 16.7 deaths per 100K in 2019—a nearly 27 percent increase over 29 years.

Figure 2. Rate of death in India from lead exposure per 100K people as visualized using https://vizhub.healthdata.org/gbd-compare/.

Annex 4. Additional resources

Resource Libraries:
United Nations Environment Programme – Document Repository

World Health Organization – Publications (Environment & Health)

World Bank – Open Knowledge Repository

Strategic Approach to International Chemicals Management (SAICM) resources library

Global Alliance on Health and Pollution – Resource Library

General Resources on Pollution and Health:
Lancet Commission on Pollution and Health

United Nations Sustainable Development Goals

Addressing Pollution in the Informal Sector:
Revised Draft Guidance on How to Address the Environmentally Sound Management of Wastes in the Informal Sector

Environmental Regulation, Pollution and the Informal Economy

Informal Sector Pollution Control: What Policy Options Do We Have?

Law and the Environment:
Environmental Rule of Law – First Global Report (UNEP)

Air Pollution:
Global Air Quality Guidelines (WHO)

First Global Report on Air Pollution Legislation (UNEP)

Air Pollution Resources (US EPA)

Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment (UN Human Rights Council)

Chemical Pollution:
The Public Health Impact of Chemicals: Knowns And Unknowns - Data Addendum For 2019 (WHO)

Global Environment Outlook (UNEP)

Global Chemicals Outlook II (UNEP)

Global Mercury Assessment (UNEP)

Global Waste Management Outlook (UNEP)

Global Assessment of Soil Pollution Report (FAO)

International Code of Conduct on Pesticide Management (FAO)

Compendium of WHO and other UN guidance on health and environment - Chapter 5. Chemicals

Lead Acid Battery Recycling:
Consequences of a Mobile Future (World Economic Forum)

Pollution Control and Economic Development:
Scaling Urban Environmental Challenges: From Local to Global and Back

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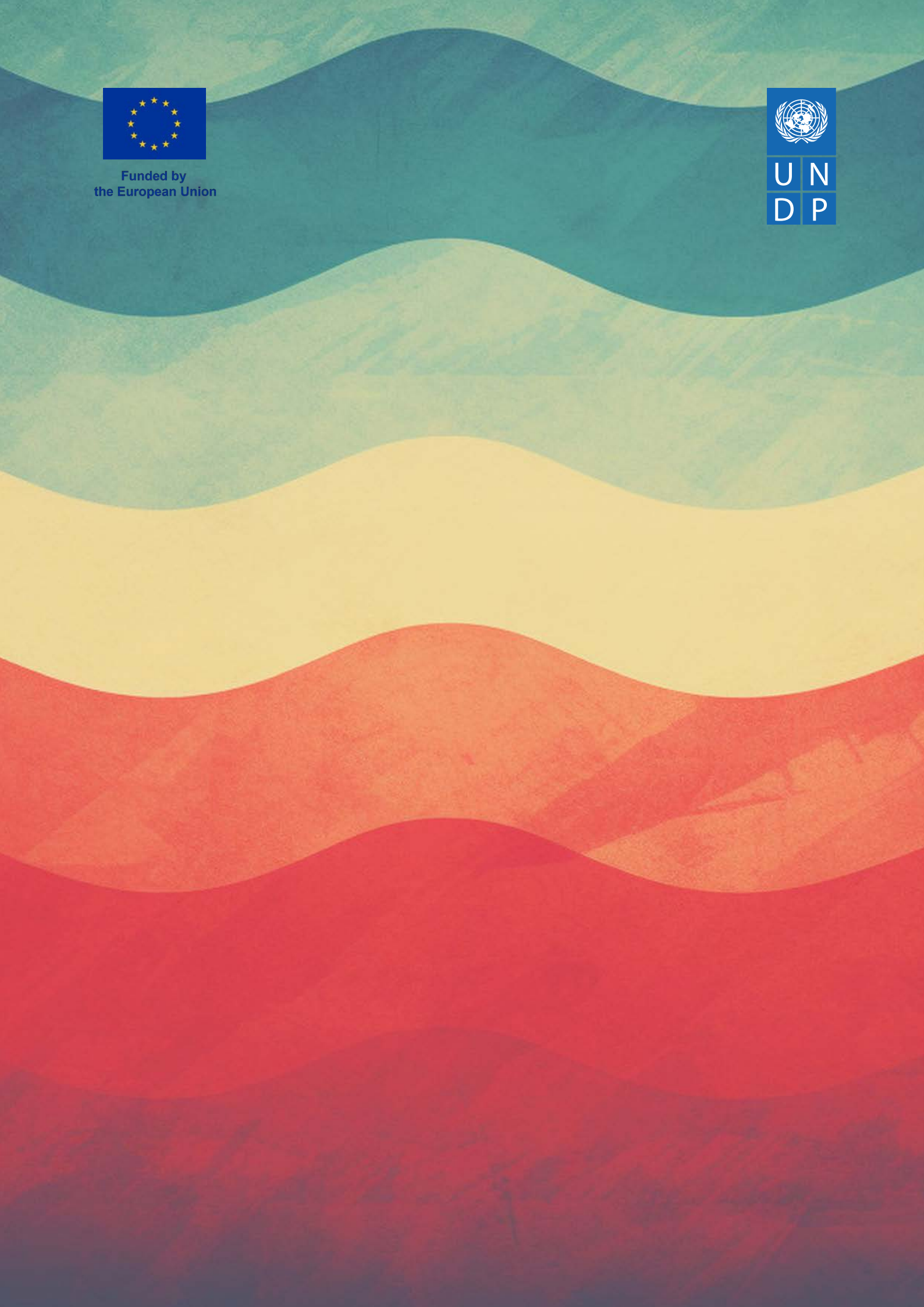
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