

U.S. Proposed Theme for the Third UN Environment Assembly (UNEA-3)

The United States applauds the work of the Secretariat in gathering ideas and laying out potential themes for UNEA-3. While the three proposed areas each has strong merits, we would like to advocate for the adoption of the first proposed thematic area: **pollution**. This theme is timely, clear and holds great potential to raise UNEP's profile with broad, impactful outcomes. It is significant in scope and substance, and supports themes associated with the High Level Political Forum in both 2017 and 2018. It highlights an area of growing global concern and builds on recently released World Health Organization (WHO), World Bank, United Nations Children's Fund (UNICEF) and academic studies (with other major studies scheduled for release before UNEA-3). It has the potential to inspire citizens and generate partnerships with the private sector, media and civil society.

Pollution's impacts on health are widespread and compelling; its effects on individual livelihoods and the global economy, including agriculture, fishing and many other economic sectors, are further reasons to spotlight this issue. Governments and citizens bear the costs of pollution's impacts in productivity losses, agricultural losses, health care costs, and expenses for emergency response. The United States further believes the pollution theme would play to UNEP's strengths and reinforce the pollution issues associated with many of the Sustainable Development Goals (SDGs), including those under review at the UN High Level Political Forum on Sustainable Development (HLPF) in 2017 ("healthy lives") and 2018 ("transformation towards sustainable and resilient societies"). Moreover the UNEP Global Environment Outlook (GEO)-6 regional assessments, released earlier this year, all include pollution in the key findings.

Convening UNEA member states and stakeholders around the multifaceted theme of pollution could bring collective attention to this issue and promote concrete action that will support improved health and economic outcomes.

Air pollution alone has been identified as the world's fourth largest killer, causing 6.5 million premature deaths per year¹. Other pollutants, such as lead, mercury, and persistent organic pollutants, also have devastating health effects. Children are highly susceptible and often suffer life-long health effects from exposure to these pollutants. A recent UNICEF study indicates 300 million children live in areas with toxic levels of outdoor air pollution. A new World Bank report estimates the economic welfare cost of air pollution at over \$5 trillion per year.

Numerous forms of pollution from a variety of land, sea, and air-based sources undermine the health of the ocean. Two of the most prevalent types of **marine pollution** are nutrient pollution and marine debris. When not managed properly, marine debris finds its way into our waterways, and ultimately the ocean, where it entangles sea creatures, damages habitats, and can break down into small pieces that are eaten by marine animals, including the fish we eat. Plastic debris can also accumulate pollutants such as PCBs. Nutrient pollution emanates from diverse sources including agricultural runoff and sewage and wastewater discharges. It overloads marine environments with high concentrations of nitrogen, phosphorous, and other nutrients, which can produce large algal blooms. The decomposition of these algae consumes oxygen, which in turn creates "dead zones," hypoxic, or oxygen-depleted, areas where fish and other marine life cannot

¹ *World Health Statistics 2016*, WHO, Geneva

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thrive. Toxic algal blooms also harm economies as they can severely disrupt the fisheries and tourism upon which many communities depend.

UNEP is generally accepted as the lead on environmental aspects of pollution issues in the international system. UNEP has a **comparative advantage** in this area, given its wide portfolio of capacity-building work on chemicals, waste and air quality and its convening power with environment ministries worldwide. Following Member States' adoption of a landmark air quality resolution at UNEA-1, UNEP has expanded its air quality activities, including by reporting on country policies and programs to reduce air pollution. We also see potential for UNEP to collaborate with WHO and other international organizations that can bring complementary skills, stakeholders and resources to the table. Global philanthropy and health-related stakeholders, especially those that provide essential health data, also have a positive role to play.

Indeed, in keeping with the SDG crosscutting theme of access to data, the pollution theme could include access to information as a subtheme. Data is the foundation of the science policy debate and UNEP is at the forefront of data collection and dissemination. Information is critical both for governmental pollution control programs and for individual families to make the best possible decisions about how to reduce their risk and protect their health and livelihoods. Data is also essential for measuring and messaging the economic costs of pollution to relevant policymakers. Collecting data on pollution is an increasingly apt topic for engagement by civil society and the private sector, as well as citizen scientists, and we can foresee UNEP engaging all of these in a successful UNEA-3.

To review, the world is facing huge pollution challenges:

Air Quality

A new **WHO air quality model** shows that 92% of the world's population lives in places where air quality levels exceed WHO limits.

<http://www.who.int/mediacentre/news/releases/2016/air-pollution-estimates/en/>

UNICEF estimates almost one in seven of the world's children, 300 million, live in areas with the most toxic levels of outdoor air pollution, exceeding international limits by at least six times.
http://www.unicef.org/media/media_92979.html

A 2016 World Bank study estimated indoor and ambient air pollution created \$5.11 trillion in welfare losses in 2013. East and South Asia suffered the greatest losses in relation to their economic size (over 7 percent of Gross Domestic Product (GDP)).
<http://documents.worldbank.org/curated/en/781521473177013155/pdf/108141-REVISED-Cost-of-PollutionWebCORRECTEDfile.pdf>

In the 2016 Global Report on Urban Health, WHO & UN Habitat call for action to “transform urban mobility” noting that “urban transport can be transformed to be healthier, safer and more sustainable” and citing that “recent estimates have indicated that as many as 3.3 million people die prematurely every year from exposure to fine particulate matter, the type of air pollution that is most strongly associated with motor vehicle exhaust and other forms of

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combustion.” UNEP reports that **half the countries in the world have no vehicle emissions standards**.http://www.unep.org/transport/airquality/AQ_GlobalReport_Summary.pdf. UNEP serves as the Secretariat for the Partnership for Clean Fuels and Vehicles, which promotes low-sulfur fuels and cleaner transport options.

Lead

UNEP reports **lead paint** is causing massive loss of IQ and human potential due to preventable childhood lead exposure. This translates into economic losses equal to \$134.7 billion annually in Africa, \$699.9 billion in Asia and \$142.3 billion in Latin America/Caribbean.

<http://www.lead safepaint.org/governments/what-is-the-economic-impact-of-lead-in-paint/>

Marine Pollution

The rising problem of **marine litter, particularly plastics and marine pollution**, and the threat it poses to human and animal health, marine ecosystems, and the world’s fishing industry was highlighted both at UNEA-2 and the Our Ocean conference, held in Washington, DC in September, 2016. A recent study estimated that about 8 million metric tons of plastic waste ended up in the ocean in 2010. <http://www.sciencemag.org/content/347/6223/768.full>

Excess nutrients resulting from industrial and agricultural activity have profound impacts, from pollution of water supplies to the undermining of important ecosystems and the services and livelihoods they support. Dead zones cover about 1 percent of the continental shelf and more than 550 have been identified worldwide, although a more accurate count is likely greater than 1000. <https://www.nrdc.org/onearth/devil-deep-blue-sea>

Hypoxic areas have doubled in frequency every 10 years since the 1960s, largely due to increases in nutrient-filled runoff. <http://economics.ucdavis.edu/events/papers/Kling117.pdf>

Global Environmental Outlook regional reports

Pollution is identified in each of the **UNEP Global Environmental Outlook-6 regional assessments** as a key finding and ongoing challenge (see annex for regional break outs).

Strengthening and Raising Awareness of UNEP Programs and Activities

A strong UNEA-3 focused on the theme of pollution could enhance and build on many of UNEP’s existing partnerships, programs, and activities and its cooperation with Member States, stakeholders and International Organizations. Such UNEP efforts include:

- The Global Program of Action for the Protection of the Marine Environment from Land-Based Activities, including work on nutrients, untreated wastewater, chemical pollutants and marine litter.
- The 10-Year Framework of Programs (10YFP) for Sustainable Consumption and Production (SCP), which works to develop, replicate and scale up SCP and resource efficiency initiatives at national and regional levels, decoupling environmental degradation and resource use from economic growth.
- The UNEP International Environmental Technology Center’s efforts on waste management technologies.
- The International Resource Panel’s activities.

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- UNEP's promotion of resource efficiency and economic development through waste prevention (e.g. reduce, re-use, recycle and re-design).
- UNEP's work with governments to identify significant sources of marine plastic debris and microplastics, identify cost-effective preventive measures, and undertake such measures nationally, including through regional and international cooperation and in cooperation with industry.
- UNEP's urging of the phase-out of primary microplastic particles in products, including, wherever possible, products such as personal care products, industrial abrasives and printing products, and their replacement with organic or mineral non-hazardous compounds.

Activities

Several proposals for pollution- and SDG-related activities are listed below:

UNEP could consider creating a pollution-themed Training Pavilion outside of the plenary hall with practical sessions focused on how to take action to reduce pollution and support healthy lives and strong economies. This would also be a creative way to engage external stakeholders, who could serve as both trainers and trainees. Topics could include:

- A training session on effective legislation, implementation, and enforcement frameworks to address lead in paint and/or air pollution (a concrete follow up on the UNEA Resolution 2/19 on the Montevideo Program).
- Best practices with regard to public messaging on air pollution, including targeting public messaging to the world's most vulnerable citizens.
- Sessions on how countries can use the Regulatory Toolkit from the Partnership for Clean Fuels and Vehicles to work towards introduction of requirements for 50 ppm and below sulfur fuels. A potential side event or workshop may engage countries through their regional groups and discuss how they might collaborate to address shared barriers and opportunities in their respective regions.
- A session on developing National Waste Assessments to better understand how to reduce and prevent plastics and trash from entering the marine environment. Trainers could include representatives from the Bali Strategic Plan for Technology Support and Capacity Building (BSP), the Cartagena Convention Secretariat and/or the Parties.
- Sessions on replicating successful efforts to build climate resilience and healthy communities, featuring the results of soon-to-be-completed pilot projects under UNEP's Global Adaptation Network (which includes partners from faith-based and youth organizations).

Other actions:

- Member States could demonstrate their commitment to addressing pollution by adopting a dedicated resolution at UNEA-3 on **Lead Paint**. Awareness of the UNEP-WHO Lead Paint Alliance is high, in no small part due to the significant attention it garnered at UNEA-2. A resolution could be accompanied by a session in the plenary or an event where Member States can pledge to establish appropriate national regulatory frameworks

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to stop the manufacture, import, export, and sale of lead paints and products coated with lead paints, supported as needed by ongoing efforts by UNEP and WHO to develop a model law on lead paint through the Lead Paint Alliance.

- Member States could pledge support for UNEP and participating countries' work on the Global Partnership on Nutrient Management.
- Building on the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities, Member States could pledge to put in place necessary policy frameworks that incentivize, promote, and support sustainable forms of agriculture that optimize nutrients use, and call on UNEP to build science-based consensus for sustainable production and use of nutrients (from wastewater and other forms) for ensuring food and energy security in the transition to a green economy.

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Annex: Selected Pollution-related key findings in the UNEP Global Environmental Outlook-6 regional assessments

Africa

- Indoor air pollution is a major problem across Africa, responsible for an estimated 600,000 deaths per annum. Due to reliance on biomass sources of energy for cooking, lighting and heating, 90 per cent of the region's population is exposed to this harm. Africa is called upon to invest in quick win solutions such as better ventilated housing and clean cook stoves, while also adopting medium to long-term measures to provide clean forms of energy such as electricity.
- Growth in urbanization, industrialization, motorization and the emission of mineral dust from deserts have increased outdoor air pollution in Africa. The observed trend in levels of outdoor pollution requires the implementation of transport solutions that include setting standards for the condition of road vehicles and investing in sustainable mass transport systems.
- Despite recent improvement, about 40 per cent of Africa's population still does not have access to potable water, and 70 per cent lack adequate sanitation facilities--water-borne diarrheal infections are responsible for almost 8 per cent of annual deaths. This suggests an urgent need to invest in low-cost technologies for wastewater management, as well as the delivery of safe drinking water.
- Land productivity remains low, a result of mineral poor soils and land degradation caused by inappropriate farming practices, deforestation, mining activities, and desertification. Africa is therefore called upon to embrace the Comprehensive Africa Agriculture Development Programme and its associated technologies for irrigation and fertilizer use, whilst nurturing the continent's agro-biodiversity to result in higher yields per unit area.
- Africa faces both enormous environmental management challenges and equally huge opportunities... clean and healthy air, water, land and biodiversity are necessary to support this transformation. All efforts must thus be taken to ensure the protection and integrity of these resources that are critical life-support systems for sustained human wellbeing.

Asia and the Pacific

- Sulphur dioxide and nitrogen oxide emissions have been reduced in the region, but ambient concentrations of ozone and fine particles have continued to increase.
- Trans-boundary smoke haze pollution, due to open biomass burning and improper land-use practices, is becoming the key regional air quality problem in Southeast Asia, and highlights the urgency of multilateral solutions and regional cooperation.
- Indoor air pollution from burning poor quality fuels or biomass, impacts women and children throughout the region contributing to health effects.

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- Water scarcity and deteriorating water quality are commonplace throughout the region; contamination of water sources from human and livestock sewage a major concern.
- Widespread contamination of ground water by pharmaceutical and personal care products, nanomaterials, and organochlorides increase the exposure to human health risk, especially for women and young children.
- Water-related diseases and unsafe water contribute to 1.8 million deaths annually and 24.8 million disability adjusted life years in the region. Pollution caused by plastic debris and microplastics is an increasing concern.
- Municipal solid waste generation is expected to rise from 870 million tons in 2014 to 1.4 billion tons annually by 2030. New and complex waste streams like e-waste, food waste, construction/demolition waste, disaster waste and marine litter are emerging.
- Uncontrolled dumping is still the main waste disposal method in the region, leading to leachate run off, methane emission, spontaneous combustion, and other problems. Recent emergence of waste-to-energy investment programs could be further enhanced to provide better waste disposal.

Europe

- Air quality is the largest health risk to the pan-European population, with disproportionate effects on children, the elderly and the poor. In 2012, over 500,000 premature deaths in the region were attributable to ambient air quality and 100,000 to indoor air quality.
- More than 95 percent of urban populations are exposed to pollution above the World Health Organization guidelines.
- Lifestyles, consumption and transport patterns have the most influence on air quality in the region. Particulate matter and ozone are the most important pollutants contributing to adverse outdoor air quality.
- Chemical pollution impacts human health and ecosystems across the region, with hazardous chemicals of particular concern owing to their toxicity, shortcomings in their management and a lack of transboundary controls.
- Other concerns include endocrine disruptors in consumer products, hazardous substances in electronic and electrical products, environmentally persistent pharmaceuticals and nanomaterials.
- Mercury pollution is still significant, and emerging issues such as toxic chemicals in consumer products pose challenges.
- Parts of Eastern Europe, the Caucasus and Central Asia have legacy stockpiles of obsolete pesticides, as well as a continued reliance on heavy and highly resource-intensive industries and chemical-intensive agriculture.
- Waste volumes continue to grow. Disposal of waste in landfills is the major environmental challenge in parts of the region, despite progress with recycling.

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- Reducing food waste in the region is a key challenge.
- Plastics waste management is a major challenge given limited recycling options, lack of sustainable substitutes and growing concerns about marine litter.
- Freshwater pollution — mainly from agriculture — to surface waters and groundwater is the main reason for poor water quality, also affecting coastal areas and regional seas.
- Large differences exist in the levels of access to sanitation and safe drinking water, as well as in the collection and treatment of wastewater.
- Microplastics and emerging contaminants — such as brominated flame retardants, certain veterinary and human pharmaceuticals and anti-fouling biocides — have made their way into all the pan-European seas, via rivers.
- Coastal, marine and ocean resources are overexploited. The major threats are urbanization, agriculture, fisheries, transport, industrial development, chemical products and effluents, and energy production.

Latin America and the Caribbean

- Urban areas continue to grow in the Latin America and the Caribbean region (LAC). Urban population increased by more than 35 million people between 2010 and 2015, and is expected to climb to a total of 567 million persons by 2025. In most cases, the concentrations of people as well as the patterns of production associated with urbanization exacerbate environmental degradation.
- Air quality in cities has declined, and in most cities where data are available, the concentrations of particulate matter and ozone are above the WHO guidelines. This increases the vulnerability of urban dwellers to respiratory diseases; more than 100 million people in the region live in areas susceptible to air pollution. Moreover, the impacts of cities are not restricted to the urban area.
- According to the World Water Quality Assessment (2016), it is estimated that 25 million rural people are in contact with polluted surface waters originating from urban areas. This increases health risks and mortality rates in rural areas.
- Human-induced water erosion has been reported to affect as many as 2.23 million square kilometers of land in LAC, and river networks transport these sediments and other landbased sources of pollution to the oceans, impacting coastal ecosystems.
- The World's Water Quality Assessment (2016) states that about one-quarter of all river stretches in LAC are in the severe pollution class; and the number of rural people coming into contact with polluted surface waters is estimated to be as high as 25 million.

North America

- The energy system in the region is undergoing rapid changes, providing challenges and opportunities. Aggressive hydrocarbon extraction methods results in externalities, including the potential for increased air emissions, water use and induced seismicity.

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- New chemical contaminants and new sources of traditional pollutants are manifesting as emerging air and water quality problems.
- The coastal and marine environment is under increasing threat in the region, both from harmful trends regarding some traditional environmental pressures such as nutrient loads, as well as new pressures such as ocean acidification, ocean warming, sea level rise, and novel forms of marine debris.
- Freshwater fisheries are well-regulated in the Great Lakes region and are generally controlled across North America, but face challenges due to factors such as pollution.

West Asia

- Despite some efforts at integrated water resource management and the short lived solutions applied for managing increasing water demand, there is deteriorating water quality, in addition to persistent overexploitation of groundwater resources.
- Air pollution continues to greatly impact human health and the environment; waste management continues to be addressed through ad-hoc initiatives without an integrated waste management outlook.

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