A contribution to the global follow-up and review in the 2016 High Level Political Forum (HLPF) on the work of the United Nations Environment Programme

The following contribution is sent in response to the invitation from the President of ECOSOC, H.E. Ambassador Oh Joon, for UNEA to offer substantive inputs to the 2016 HLPF showcasing UNEA's contribution towards the 2030 Agenda in general, and particularly for the Sustainable Development Goals (SDGs) and respective targets that are substantial to UNEA's mandate.

The Second Session of UNEA convened on 23-27 May 2016 and adopted 24 resolutions on key environmental issues, including a resolution on the "Delivering on the 2030 Agenda for Sustainable Development." The relevant outputs of UNEA to the theme of leaving no one behind are included in the summary below.

UNEA considered and guided UNEP's alignment of its strategic planning with the 2030 Agenda and its 17 SDGs through the Medium Term Strategy (MTS) and Programme of Work (PoW). In its "Vision 2030" captured in the MTS, UNEP aims to reduce environmental risks and increase the resilience of societies and the environment as a whole with the overarching goal of promoting the environmental dimension of sustainable development, and bringing socio-economic benefits. UNEP's key priority areas (7 sub-programmes) also provide the building blocks for addressing the SDGs. Each has developed an outcome map towards a 2030 objective in response to relevant SDGs and targets and has aligned its indicators at impact level with relevant SDGs indicators allowing for the monitoring of the environmental dimension and reporting to UNEA, the General Assembly, ECOSOC and the HLPF. In this regard, UNEA resolution L.6 "Delivering on the 2030 Agenda for Sustainable Development" calls for increased synergies across UNEP sub-programmes in order to contribute more effectively to the 2030 Agenda.

I. INTRODUCTION

(a) Environmental dimension of the 2030 Agenda and SDGs

1. The 2030 Agenda for sustainable development represents a paradigm shift to replace today's growth-based economic model with a new model that aims to achieve sustainable and equitable economies and societies worldwide and ensure greater public participation in decision-making, in line with Principle 10 of the Rio Declaration on Environment and Development. The 2030 Agenda is strongly grounded in international human rights standards and sets out a transformative vision for people and planet-centred, human rights-based, and gender-sensitive sustainable development. It has equality and non-discrimination as its centrepiece with the overall aim "to leave no one behind" by "reaching the furthest behind first" and by ensuring that SDG targets are met "for all nationals and peoples and for all segments of society".

2. The environment plays a pivotal role in lifting people out of poverty, in ending hunger, in growing our economies, in building peaceful, just and inclusive societies, and in promoting the health of our people and this planet.

3. More than half of the Sustainable Development Goals have an environmental focus or address the sustainability of natural resources: poverty, health, food and agriculture, water and sanitation, human settlements, energy, climate change, sustainable consumption and production, oceans and terrestrial ecosystems. Over 86 targets are concerned with environmental sustainability, including at least one in each of the 17 Goals.

4. Integration across all SDGs means that progress on one cannot be achieved without progress on the other Goals. For example, building resilience and reducing vulnerability in human populations (SDG 1) requires access to food (SDG 2) and sustainable food production systems (SDG7 7), a reduction in losses owing to

disasters (SDG 11) and a strengthened resilience to climate change (SDG 13). The emphasis on the interlinkanges between the three dimensions is present in all 17 SDGs, making the 2030 Agenda truly integrated.

(b) Global environment outlook in the context of the 2030 Agenda, including linkages between environmental quality and human rights, health and wellbeing

5. The 2030 Agenda highlights critical links between development, the environment, wellbeing and the full enjoyment of a wide range of human rights. The mutually supportive nature of those linkages has several dimensions. Environmental degradation is felt daily by millions of people around the world, including the most vulnerable, and negatively impacts ecosystems and biodiversity. Unsustainable patterns of production and consumption threaten our ability to achieve sustainable development and to successfully meet the challenges of the future.

6. Ecosystems and the services they provide, such as food, water, disease management, climate regulation, and spiritual fulfilment, are preconditions for the full enjoyment of human rights, including rights to life, health, water, and food. At the same time, efforts to promote environmental sustainability can only be effective if they occur in the context of enabling legal frameworks, and are greatly informed by the exercise of certain human rights, such as the rights to information, public participation in decision-making and access to justice

7. The Earth System provides the basis for all human societies and their sustainable development. People need clean air to breathe, safe water to drink, healthy food to eat, energy to produce and transport goods, and natural resources that provide the raw materials for all these services. However, the more than 7 billion humans alive today are collectively consuming the Earth's resources at accelerating rates and intensities that surpass the capacity of its systems to sustainably absorb and neutralize the adverse effects on the environment.

8. Current consumption and production patterns and the depletion of natural resources and environmental degradation associated with it are already constraining the overall prospects for sustainable development, human rights and wellbeing. In 2012, an estimated 12.6 million premature deaths globally were attributable to the environment that is responsible for 23 per cent of all deaths worldwide. The higher prevalence of non-communicable diseases is attributable to exposure to chemicals, poor air quality and unhealthy lifestyles.

9. The 2016 regional GEO assessments greatly contribute to clarifying the link between development and environment. While development can lead to both environmental improvements and environmental degradation, policy decisions on development can result in health improvements or impacts. Policy pathways do exist to improve both environmental quality and human health, and regional collaboration on development can be the key to realising these co-benefits.

(c) Overview of UNEA and UNEP contributions to the 2030 Agenda

10. With its overarching environmental mandate, universal membership and full involvement of major groups and stakeholders, the United Nations Environment Assembly (UNEA) constitutes the world's highest-level decision-making body on the environment. The second session of UNEA was prepared under the overarching theme *"Delivering on the environmental dimension of the 2030 Agenda for Sustainable Development"* with the expectation of ensuring a contribution to the implementation, follow-up and review of

the 2030 Agenda, as well as addressing the most critical environmental challenges facing the world today upon which the realization of sustainable development is dependent.

11. In its resolution L.6 "Delivering on the 2030 Agenda for Sustainable Development" UNEA commits to contributing to the effective implementation of the environmental dimension of the 2030 Agenda for Sustainable Development in an integrated manner, through setting the global environmental agenda, providing overarching policy guidance and defining policy responses to address emerging environmental challenges, undertaking policy review, dialogue and exchange of experiences, fostering partnerships for achieving environmental goals and resource mobilization. Relevant UNEA-2 outcomes, including its 25 adopted resolutions and decisions, are therefore expected to be transmitted to the 2016 session of HLPF to inform its deliberations and be integrated into its respective outcomes.

12. UNEA-2 resolution L.6 "Delivering on the 2030 Agenda for Sustainable Development" also highlights UNEP's important role in the follow-up and review of the progress in implementing the environmental dimension of sustainable development including the provision of policy relevant information through assessment processes such as the Global Environment Outlook, as a contribution to the Global Sustainable Development Report, and to the annual Sustainable Development Goals Report, all of which should support HLPF's work. In this regard, UNEA commits to convey the main messages of its sessions to the High Level Political Forum to support its function in the follow up and review of the 2030 Agenda for Sustainable Development. The resolution requests UNEP's the Executive Director to prepare a report for consideration by the United Nations Environment Assembly at its next session, reporting on the Programme's contribution to the implementation of the 2030 Agenda for Sustainable Development with a view to forwarding the report to the HLPF for its consideration.

13. UNEP has undertaken a consequent work to avoid duplication in the follow-up and review processes by analysing the synergies between Multilateral Environmental Agreements (MEAs) and SDGs. This was mainly done through a mapping of both MEAs and SDGs indicators which is available and accessible on the SDG portal (uneplive.unep.org/portal). The exercise helps Member States to streamline their follow-up and review with ongoing commitments and shows the important contribution of the MEAS in the follow-up and review of the 2030 Agenda through reporting on the SDG Global Indicator Framework.

14. The inaugural Science-Policy Forum, held in the framework of UNEA-2 concluded that policy relevance and legitimacy need to be embedded into the science-policy interface, with a geographical and expert balance and an inclusive co-design process. It was agreed, that the time lapse between knowledge and action needs to be shortened by joining forces across national boundaries, promoting a closer interaction between disciplines and across different contexts. It was suggested that the science-policy interface needs to develop a range of boundary organisations to support cross-linking and communications between the scientific research and the policy communities.

II. RESPONSES TO THE ECOSOC PRESIDENT'S TEMPLATE

(a) Assessment of the situation regarding the principle of *"ensuring that no one is left behind"* at the global level

15. In an effort to ensure that no one is left behind, UNEP has identified human rights and equity as one of its four core principles underpinning its approach to the 2030 Agenda. It has long recognised and elaborated the main dimensions of the interrelationship between human rights and environmental protection and recognises its responsibility to articulate and advocate the human rights-environment linkages to UN System

entities in the context of the 2030 Agenda. UNEP has worked towards the development of a policy guidance to be able to integrate human rights into its organisational culture and programmatic activities, and effectively leverage its contribution as part of the UN System to the implementation of the 2030 Agenda. The Policy guidance supports internal training and capacity building, expanding the evidence base, and systematically broadening UNEP's Partnerships to achieve the integration of human rights. It is anticipated that the culmination of these efforts will enable UNEP to fully realise the complementarity of environment-human rights linkages in the development of its next Medium Term Strategy and contribute to the achievement of the Agenda and the 17 SDGs for all.

16. UNEA-2 Resolution L.6 on Delivering on the 2030 Agenda for Sustainable Development stresses the importance of respecting, protecting and promoting human rights and gender equality and recognising the role of indigenous peoples and local communities in delivering the environmental dimension of the 2030 Agenda.

17. The interrelationships between human-rights and the three dimensions of sustainable development need to be recognised, understood, taken into account and fully embraced for "*ensuring that no one is left behind"* in the implementation of the 2030 Agenda. Environmental sustainability and the promotion of human rights are closely intertwined and have complementary objectives that are at the core of sustainable development.

18. The right to a healthy environment is now recognised in many national constitutions and regional instruments, with over 90 national constitutions recognising some form of environmental rights since the mid-1970s. Many subnational governments also recognise such rights in the absence of their lack of recognition through a national constitution. About two thirds of the constitutional rights refer to health; alternative formulations include rights to a clean, safe, favourable or wholesome environment. Some States have included more detailed rights, such as rights to receive information and to participate in decision-making on environmental matters.

19. Efforts tend to focus primarily on curative rather than preventive approaches with regards to health. With 23%[1] of the total premature deaths being linked to environmental and modifiable factors in 2012 (12.6 millions deaths globally), affecting primarily the poorest who depend most on natural resources, other complementary strategies need to be put into place to improve health and well-being. Poor air and water quality are among the primary environmental risks that affect health worldwide. However, exposure to hazardous chemicals, through the inadequate workplace and waste management, climate change, ecosystem degradation, unplanned urbanization and unsustainable lifestyles also add to the burden of disease[2] and adversely impact health and well-being.

20. The world's poorest 3.5 billion people tend to rely directly on the environment for their basic needs, such as water, food and shelter. The degradations of these ecosystem services affect them most as they have no alternatives. Poor people, children and the elderly[3] are particularly at risk. Poor air quality is especially burdensome on the poor, women, and children. Indoor air quality affects women and children as they are exposed to fumes from cooking, and outdoor air pollution affects the poor who are unable to protect themselves by moving around in cars or by means of other protection, and those who make a living on the

[1] WHO (2016) *Preventing disease through healthy environments. A global assessment of the burden of disease from environmental risks*

[2] The WHO global burden of disease (GBD) measures burden of disease using the disability-adjusted-life-year (DALY). This time-based measure combines years of life lost due to premature mortality and years of life lost due to time lived in states of less than full health.

[3] 25 per cent of the deaths of adults between the age of 50 and 75 years old are due to environmental factors (WHO (2016) ibid).

streets such as street hawkers, auto cycle drivers and others.

21. While environmental vulnerabilities are often related to socioeconomic conditions, the environmental dimension of the principle of *"ensuring that no one is left behind"* goes beyond it. The global, universal and integrated nature of environmental challenges implies also that the consequences of environmental degradation have the potential to affect everyone at unacceptable levels. Furthermore, environmental vulnerabilities can be exacerbated by factors that have the potential to impact all segments of human societies such as geographic conditions, natural disasters, conflicts or lack of governance over natural resources. From the environmental dimension of sustainable development, *"ensuring that no one is left behind"* therefore not only means targeting actions to enhance the access to natural assets for the poor and vulnerable, as well as to mitigate their exposure to environmental degradation; but it also implies supporting all countries and implementing universal/global commitments to halt environmental degradation, protect the Earth Systems and restore natural resources.

22. Undertaking actions in key environmental areas such as combating climate change, protecting and restoring ecosystems and biodiversity, safeguarding the oceans, improving soils and water, promoting sustainable lifestyles, increasing resource efficiency, reducing pollution and waste, boosting renewable energy and enhancing environmental governance would not only support the direct achievement of most SDGs, but ultimately benefit the poorest and most vulnerable by reducing the environmental risks and costs they bear and promoting a more equal distribution of the socioeconomic benefits derived from the sustainable use of natural resources and the productive opportunities arising from the transition towards a low-carbon future.

23. The definition of those "left behind" varies depending on the type of intervention. Although the common methodology used looks at income distribution, interventions with regards to environment and health linkages tend to take into account the issue of vulnerability, to environmental degradation, targeting those which are most vulnerable to climate change or natural disasters, and to consequences of poor environmental quality such as children. Climate change impacts indeed adds to vulnerability, having different effects on the already endangered livelihoods and the safety of both men and women, as a result of the further reduced quantity and quality of water and sanitation, degradation of the soil, emerging and re-emerging diseases, loss of lives and properties in natural disasters, and forced or voluntary migration.[i] Over half a billion children live in extremely high flood occurrence zones, and nearly 160 million children live in areas of high, or extremely high, drought severity.[ii]

24. However, vulnerability to environment and health inequities are linked to many other social and economic factors. The social and economic position of individuals, in relation to social class, age, gender and ethnicity, as well as education, occupation, livelihood and income levels. These factors determine where people live, what they eat, how and when in the life cycle they are exposed to pollution, and what options they have to change their conditions.

(b) Identification of gaps, areas requiring urgent attention, risks and challenges

25. In May 2016, the United Nations Environment Assembly considered the linkages between environmental quality and human rights, health and wellbeing. Beyond this thematic focus, the scientific evidence put before UNEA revealed the broader drivers of these linkages, which include dynamics related to environmental sustainability such as unplanned urbanization, unhealthy and wasteful lifestyles, exposure to chemicals, unsustainable consumption and production patterns, pollution, depletion and unequal access to natural resources such as water and energy.

26. In this context, **air pollution** has been identified as the world's largest single environmental risk to health: some 7 million people across the world die prematurely each year as a result of everyday exposure to

poor air quality with some groups being more affected than others. In some developing countries, simply preparing a meal is a major risk to health because of indoor air pollution with 4.3 million deaths mostly women and children attributed to household air pollution arising from cooking with solid fuels. Outdoor air pollution disproportionally affects **the poor** who are unable to protect themselves by moving around in cars or by means of other protection, and those who make a living on the streets such as street hawkers and auto cycle drivers. Air pollution is directly addressed in SDG-3 (3.9), 11 (11.6) and 12 (12.4).

27. **Lack of access to clean water and sanitation** also reveals environmental factors that greatly affect human wellbeing. It causes 58 per cent of cases of diarrheal diseases in low and middle-income countries. Unsafe water, inadequate sanitation or insufficient hygiene result in 3.5 million deaths worldwide, representing 25 per cent of the premature deaths of children younger than 14. Water and sanitation targets are mostly reflected in relation to SDG 6, but the 2030 Agenda also addresses the critical role of water in achieving sustainable development through a number of other interlinked goals covering aspects of health, sustainable consumption and production, urbanization and oceans. The following goals and targets are particularly relevant: Goal 3 targets 3.3 and 3.9, 11 targets 11.5, 12 target 12.4, 14 target 14.1, 15 target 15.1.

28. **Exposure to waste and chemicals** represents another environmental area requiring further attention and implementation throughout the 2030 Agenda and relevant SDGs such as 3, 6, 11, 12, 13, 14 and 15. The 50 biggest active dumpsites affect the daily lives of 64 million people especially the poorest groups leaving in informal settlements. Some 107,000 people die annually from exposure to asbestos and 654,000 died from exposure to lead in 2010. As a result of their rapid growth and development and greater exposure relative to body weight, fetuses and children are particularly affected by exposure to chemicals and pollutants. It is estimated that a mother can pass as much as 33 per cent of her chemical body burden to her child.

29. **Climate change** continues to represent a major environmental driver that threatens the prospects for achieving global sustainable development. In addition to risks estimated on the basis of different temperature-increase scenarios, there is a greater understanding of the effects of climate change on crucial aspects of the 2030 agenda and human wellbeing such as personal safety, health and nutrition —which are addressed in SDGs 2, 3 and 11, among others. Increased frequency and intensity of natural disasters threaten to derail efforts to eradicate poverty with Small Island Developing States, indigenous groups, smallholder farmers, pastoralists as well as women and children being disproportionally affected. Since the first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change in 1995, 606,000 lives have been lost and 4.1 billion people have been injured, left homeless or in need of emergency assistance as a result of weather-related disasters. Cautious estimates from the World Health Organization (WHO) under a medium-high emissions scenario indicate that 250,000 additional deaths could potentially occur each year between 2030 and 2050 as a result of climate change.

30. **The degradation of ecosystems**, addressed by SDGs 14 and 15, also presents important links to human wellbeing and related SDGS such as 1, 2, 3, 5, 6, 8 and 16. For instance, ecosystem degradation entails major health-related consequences. **Microplastics and nanoplastics in marine ecosystems** may not be biodegradable, as they can sink to the ocean floor where they are not exposed to the sunshine required for biodegradation. Excessive nutrients in fresh and coastal receiving waters from land-based activity leads to eutrophication, negatively affecting ecosystems, and freshwater and marine resource productivity, thereby impacting food security, livelihoods and health negatively especially among the poorest groups that are often the most dependent on natural resources and the environment. Zoonotic diseases, linked to ecosystem disruption, such as avian influenza, Rift Valley fever and Ebola, have also become the source of major pandemics. The outbreak of Zika, for example, is potentially exacerbated as a result of inadequate waste collection and management – the proliferation of tires, plastics and cans in which water collects and which serve as breeding sites for the *Aedes aegypti* mosquito.

(c) Valuable lessons learned on *ensuring that no one is left behind*

31. From the perspective of the environmental dimension of sustainable development and in light of the principle of *ensuring that no one is left behind*, addressing environmental vulnerabilities depends on their integration with social and economic drivers at both the policymaking and implementation levels. This can best be achieved by adopting a human-rights based approach in the implementation of the 2030 Agenda. Applying the rights-based approach for dealing with environmental protection and sustainable development draws attention to key elements and may serve to:

- Help further universal values and norms in support of conservation and social justice.
- Bring greater clarity about the underlying causes of positive or negative impacts of various economic or other activities on human rights and the environment, and the impact of the enjoyment or lack of enjoyment of human rights on environmental protection, thus allowing for better choices among policies and projects.
- Improve outcomes by facilitating positive synergies, and generally improving the governance of natural resources.
- Help to provide common vision and frame activities, programmes and policies above and beyond immediate group interests/divisions by integrating social concerns with environmental goals, drawing on a universal set of norms specifying the rights and responsibilities of all actors.
- Be an effective instrument to ensure the accountability of governments, the private sector and environmental or human rights organizations with regard to the impact of their activities on the environment and human rights.
- Provide stronger cross-sectoral links, which can further efforts toward sustainable development, by providing a framework to integrate social development, economic development, and environmental protection.
- Demonstrate the positive contribution of conserving a safe and healthy environment to human rights and, conversely, increase awareness of the negative impact on human rights of failing to protect critical natural resources and biodiversity.
- Ensure that the science policy interface is mindful of human context and values and alternative views of nature when developing a coherent logic for policy-making.
- Explicitly refer to and take into account citizen science as well as traditional and indigenous knowledge in the science-policy interface, encourage inter-disciplinarity in natural, social and environmental sciences and look for coherence across policy areas.

32. Addressing the furthest behind first brings considerable environment and health benefits. Household air pollution kills prematurely more than 4.3 million people per year, from cooking with solid fuels. Nearly all of these deaths occur amongst people living in low- and middle-income countries[4]. Addressing this problem through the replacement of traditional biomass cookstoves with modern fuel cookstoves, and the replacement of traditional cooking and heating with clean-burning biomass stoves would not only address this issue, with considerable health benefits, but would also represent 25% of the share of total avoided climate warming from Short-Lived Climate Pollutants reduction by 2050.

33. Inequalities may be manifested by an uneven distribution and exercising of substantive and procedural rights related to the environment and natural resources. It will be important to look not only at the situation of the most marginalized, the underserved and the 'hardest to reach', but also to the wealthy and powerful, as such inequality is often the result of disempowerment or discrimination, unequal power relations and an uneven distribution of benefits and costs. It is critical to pay attention to the root causes and underlying determinants of these inequalities, including the legal, policy and institutional processes that

[4] WHO (2014b) *Burden of disease from Household Air Pollution for 2012.*

determine equitable access to and control over natural resources and the environment, especially for the most vulnerable group.

34. The poorest, women, children, elderly, smallholders, pastoralist, handicapped and sick are generally more vulnerable to environmental degradation and climate change, because they often live on marginal or environmentally degraded lands, are over-reliant on natural resources for their survival, have least access to education, prevention, preparedness and early warning and also often lack of alternative livelihood options and social protection or safety nets. Those groups that often struggle on a daily basis to survive are therefore unable to cope with any additional stress factors like natural hazards, epidemics or conflict. While some communities and parts of the population are more vulnerable to the impacts of environmental degradation, the tendency to regard them as a vulnerable class or vulnerable sector should be avoided. These groups are change agents, able to implement solutions and drive improvements.

35. To evaluate the progresses made in leaving no-one behind will require developing methodologies to capture the 'most-left-behind' in the monitoring framework which in itself poses a challenge. It will require additional capacity, new partnerships and innovative approaches involving new data producers and users using multiple data sources including non-traditional data sources. It also implies enhanced legal, institutional and policy frameworks to ensure relevance and reliability of collected information.

36. The transition towards a healthy environment for all, in which *no one is left behind*, can yield significant benefits in terms of economic and social development, poverty reduction, human rights, health and wellbeing. The following examples illustrate effective actions for pursuing environmental, social and economic co-benefits from an integrated perspective

BOX 1 – An integrated vision to ensure that no one is left behind

In developing countries, the **return on investment in water and sanitation services** is estimated at between $5 and $28 per dollar invested. Investments targeted at sustainable, climate change-resilient water, sewage, and solid waste management and facilities can generate important health co-benefits in terms of sanitation by decreasing risks of exposure to infectious agents and water-borne disease for local communities, relieving the burden on public health and increasing labor productivity.

Healthy and sustainable diets could reduce global greenhouse gas emissions (by the equivalent of ca. 0.3 to 0.6 PgC/yr compared to current trends), and protect biodiversity by greatly reducing requirements to expand cropland area to feed a growing global population. Healthy diets are also generally associated with greatly reduced incidence of disease (diabetes, cancer and coronary) and mortality from all causes compared to diets rich in red meat. Investments in preventative workplace health programmes of around $18 to $60 per worker could reduce sick leave absences by 27 per cent.

Benefits from the **elimination of lead in gasoline on a global scale** have been estimated at $2.45 trillion per year, or 4 per cent of global GDP saving an estimated 1 million premature deaths per year. The Vienna Convention for the Protection of the Ozone Layer (1985) and its Montreal Protocol on Substances that Deplete the Ozone Layer (1987) resulted in the successful phase-out of nearly 100 ozone-depleting substances. As a result, up to 2 million cases of skin cancer and many millions of eye cataracts may be prevented each year by 2030. Moreover, by limiting the loss of stratospheric ozone, the Montreal Protocol helps to safeguard food security by reducing ultraviolet damage to crops and marine ecosystems. Cumulative estimates from 1987 to 2060 show that the global phase-out of chlorofluorocarbons (CFCs) alone will result in an estimated $1.8 trillion in global health benefits and almost $460 billion in avoided damages to agriculture, fisheries and materials.

Mitigating climate change and increasing the climate resilience of key health functions would bring large health gains, and as such has been described as “the greatest health opportunity of the twenty-first century”.

For example, implementing proven, cost-effective measures to reduce emissions of short-lived climate pollutants such as black carbon and methane are expected not only to reduce global warming by 0.5°C by the middle of the century, but also to save 2.4 million lives a year from reduced air pollution by 2030.

(d) Emerging issues likely to affect the realisation of this principle

37. The second session of UNEA was presented with an analysis of the environmental impacts of **illegal trade in wildlife and wildlife products**, following a request contained in its resolution 1/3. The analysis compiles and synthesizes, for the first time, evidence on the environmental impacts of the illegal trade in wildlife and the socio-economic consequences of these impacts across a range of taxa and across geographic regions and scales. Illegal trade in animals, plants (including timber and charcoal) and fish is one of the largest sources of criminal earnings in the world ranking alongside trafficking of drugs, people and arms estimated to be worth US$50- 150 billion per year. The global illegal fisheries catch is valued at US$10-23.5 billion a year and illegal logging, including processing, at US$30-100 billion. Those activities directly affect local communities over-reliant on natural resources for their survival leading to violation of human rights. In this regard, Illegal wildlife trade reveals direct interlinkages between SDGs 14 and 15 with SDGs 1, 2, 8, 12 and 16. The follow-up UNEA-2 Resolution L.15 on **illegal trade in wildlife and wildlife products** recognises the important role that the conservation and sustainable use of wildlife can play in the achievement of the 2030 Agenda and in addressing illegal trade and trafficking in wildlife through the development of sustainable and alternative livelihoods for affected communities.

38. The global nitrogen cycle has been profoundly altered by human activity over the past century. The amount of usable or 'reactive' nitrogen produced by humans (about 190 million tonnes per year) is now greater than the amount created through natural processes (112 million tonnes per year). In addition to inefficient application of nitrogen fertilizers, sources of excess nitrogen in the environment are inadequately treated animal and human wastes and fossil fuel combustion in transport and in energy production, which creates nitrogen oxides. **Excess nitrogen in the environment** contributes to many health and environmental problems, including: Coastal dead zones and fish kills due to severe eutrophication or hypoxia; biodiversity loss in terrestrial, freshwater and coastal water systems due to eutrophication and acidification; groundwater pollution by nitrates; freshwater pollution due to eutrophication and acidification; human health impacts resulting from the formation of aerosols and ground-level (tropospheric) ozone; reduced crop, forest and grassland productivity due to nitrogen deposition and over-fertilization, as well as ground-level ozone exposure; global climate change and the depletion of stratospheric ozone, which protects life on Earth from harmful ultraviolet (UV) rays. Excess nitrogen reveals direct interlinkages between SDGs 2, 14 and 15 with SDGs 1, 3, 8, 12 and 13.

39. Helping to feed a growing world population, **aquaculture production** has increased since the 1950s from 650 thousand tonnes to almost 67 million tonnes. In the same period, the total marine catch has increased from 20 million to about 80 million tonnes. Today, aquaculture provides half of all fish for human consumption and the sector is expected to grow. While significant progress has been made over the past decades towards making marine aquaculture more sustainable, environmental concerns remain – reflecting this sector's rapid growth. Broadly speaking, fish farms can release nutrients, undigested feed and veterinary drugs, and other biocides to the environment. They can also create conditions that increase risks of diseases and parasites and of harmful algal blooms. In some countries certain forms of shrimp farming have destroyed large areas of coastal habitats, such as mangrove forests. Farmed fish and shellfish can escape to surrounding waters, which may have negative impacts on ecosystems through genetic regression or introduction of invasive species. Use of fish-based feeds in aquaculture can put additional pressures on poorly managed wild fish stocks and on the marine environment. Despite these implications for the environment, there is increasing potential for responsibly managed marine aquaculture to provide food from the oceans, particularly in view of

increasing pressures on freshwater and terrestrial ecosystems, including those related to climate change. Aquaculture production reveals direct interlinkages between SDGs 2 and SDGs 1, 3, 8, 12, 13, 14 and 15.

40. In resolution 70/195 the United Nations General Assembly recognise that **dust and sand storms** pose a great challenge to the sustainable development of affected countries and regions and acknowledged the role of the United Nations development system in promoting international cooperation to combat sand and dust storms; invited all relevant bodies, agencies, funds and programmes —including UNEP— to address the problem through various measures. Furthermore, the Assembly requested the Secretary-General to circulate to the General Assembly at its seventy-first session the report entitled "Global assessment of sand and dust storms", which is being prepared by UNEP in collaboration with other relevant United Nations entities, including the World Meteorological Organization and the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa. This report elucidates the potential social impacts of dust and sand storms, revealing interlinkages among SDGs 2, 3, 11, 13 and 15. **UNEA-2 Resolution L.23 on sand and dust storms** calls on UNEP to engage with all UN entities to support a UN system-wide approach to combatting sand and dust storms globally.

41. Today people's inborn curiosity is increasingly being harnessed by science. Volunteers are collecting and/or analysing data, as well as contributing to scientific studies in different ways. This is called **citizen science**. Citizen science is an emerging issue that has the potential to support the inclusiveness of the science-policy interface and the partnerships under the 2030 Agenda by helping researchers obtain a wide perspective and deep data. It helps answer complex questions about, for example, air pollution, biodiversity conservation, urbanization patterns, and changes in agricultural production and fisheries worldwide. Taking part in citizen science support local and vulnerable communities by raising awareness, increasing local engagement, integrating traditional knowledge and contributing to more informed policy decisions to support the achievement of the SDGs, in particular SDGs 2, 4, 8, 14 and 15.

42. Other resolutions adopted by the Second Session of UNEA of particular relevance to the theme of leaving no one beind include:

43. UNEA-2 resolution L.9 on **Sustainable Consumption and Production** requests the ED to ensure UNEP continues and strengthens its work to facilitate coordinated efforts in **all regions** to ensure SCP and implementation of the SCP-related goals and targets of the 2030 Agenda.

44. Resolution L.14 on s**ustainable management of natural capital for sustainable development and poverty eradication** take measures to promote sustainable management of natural capital including protection of ecosystem services and their functions as part of the contribution to implementing the 2030 Agenda and the SDGs.

45. Resolution L.18 on **mainstreaming biodiversity for wellbeing** calls on Member States and Parties to the Convention on Biological Diversity (CBD) to align plans, programmes and commitments adopted in the framework of those international instruments with the principles and approaches set out in the 2030 Agenda to promote the conservation and sustainable use of biodiversity in various sectors, including agriculture, forestry, fisheries and tourism, among others, which are interconnected, *inter alia*, with food security, economic growth, human health, the improvement of living conditions and the enjoyment of a healthy environment.

46. Resolution L.28 on **Combating desertification, land degradation and sustainable management of rangelands** recognises that healthy grassland and rangeland ecosystems are vital for contributing to economic growth, resilient livelihoods and the sustainable development of pastoralism, and the achievement of the 2030 Agenda, and that the benefits of taking action against land degradation by implementing sustainable land management activities are much higher than the costs of preventing land degradation.

47. Resolution L.29 on **Application of Principle 10 of the Rio Declaration on Environment and Development in the Latin America and Caribbean Region** emphasises that broad public participation and access to information and judicial and administrative proceedings are essential for sustainable development. The document references the UNEP GC's February 2010 voluntary Guidelines for the Development of National Legislation on Access to Information, Public Participation and Access to Justice in Environmental Matters (Bali Guidelines), and commitments contained in the Rio+20 outcome document and the 2030 Agenda. UNEA encourages countries to continue their efforts in support of implementing Principle 10 of the Rio Declaration, and strengthening environmental rule of law at the international, regional and national levels.

48. Many developments have taken place over the last decades to further the understanding of the **human rights-environment nexus**, bring relevant institutions together, and promote the practical application of a right-based approach to the environment. However, while the right to a healthy environment has been widely recognised in national legislation and constitutions, as well as in regional instruments, no global agreement sets out an explicit right to a healthy environment; it can be viewed as an emerging right that needs to be recognised and promoted. In addition, there is increasing recognition of the links between human rights and the environment in the context of climate change, which poses a serious risk to the fundamental rights to life, health, food and an adequate standard of living of individuals and communities across the world. Measures taken to mitigate and adapt to climate change also have potential human rights impacts and those interlinkages should be further explored and understood.

49. UNEA-2 Resolution L.16 on **protection of the environment in areas affected by armed conflict** recognises the need to mitigate and minimise the specific negative effects of environmental degradation, as well as to ensure the protection of the environment, in situations of armed conflicts and post-conflict situations on people in vulnerable situations. It also recognises the specific negative effects of environmental degradation on women and the need to apply a gender perspective with respect to the environment and armed conflicts.

(e) Areas where political guidance by the high-level political forum is required

50. Organized every year around a particular theme and its related set of SDGs, the HLPF will be expected to provide guidance, trigger discussion, put into light and improve understanding on the diverse interlinkages that exist - under each theme - between the different goals as well as between the three dimensions of Sustainable Development.

51. Beyond any thematic area, the guidance of the high-level political forum could be valuable in the identification of policy options to support countries in the coherent observation of international obligations in the social, environmental and economic fields, in a way that is conducive for the achievement of the 2030 for Sustainable Development. According to UNEA resolution L6 ``Delivering on the 2030 Agenda for Sustainable Development``, the HLPF should be the place where the work of scientific panels that provide integrated assessments to support policy making - such as the International Resource Panel and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services - are presented and discussed increasing their visibility and impact. The HLPF should also provide a space for sharing and providing policy-relevant information, including the Global Environment Outlook assessments as well as information on trends in global sustainability to support informed decision-making with regard to strengthening implementation.

52. The HLPF provides an outstanding opportunity for Member States and other stakeholders to exchange lessons learnt and to share, disseminate and encourage the adoption of good practices with regard to the implementation of the 2030 Agenda for Sustainable Development. The forum is a unique place to raise awareness about emerging issues that will need to be tackled through global action. HLPF is also expected to provide space for discussing and - when possible - addressing remaining implementation challenges. According to UNEA resolution L6 ``Delivering on the 2030 Agenda for Sustainable Development`` the HLPF is expected to

provide stakeholders with recommendations on the implementation of the 2030 Agenda which should guide the delivery of the SDGs

53. Policy and institutional integration has a great potential to contribute to the SDGs, including in realizing the principle of *ensuring that no one is left behind.* The hope is that HLPF will trigger discussion on how to best foster integration for the successful implementation of the 2030 Agenda. Discussions could focus on what needs to be done for effectively applying the integrated approach in the implementation of the SDGs. This could include, among others, developing a shared national vision at country level and a common corporate strategy for non-state actors, breaking down silos for delivery, building understanding, capacity and skills for changing the ``business as usual`` model as well as developing creative strategic partnerships across stakeholders.

54. HLPF meetings could also become important platforms to share experiences regarding monitoring and reporting systems. HLPF should provide space for countries and other stakeholders to share efforts and progresses made towards the improvement of statistical systems and databases at all levels in order to track SDGs more effectively. Countries and non-state actors should also be able to discuss remaining challenges including institutional constraints linked to the reporting burden as well as data collection, management and processing. HLPF could provide guidance on the development of a global approach to support countries reporting requirements especially developing countries that are most in need of resources and technical support. Finally, HLPF discussions could be crucial to avoid duplication and promote coordination and cooperation by providing an overview of existing databases, monitoring systems and reporting initiatives at all levels.

55. Being the main intergovernmental body for follow-up and review of the 2030 Agenda at the global level, the HLPF is an important process in which the human rights-sustainable development and especially the human rights-environment linkages could be highlighted and promoted. In this regard, the HLPF could encourage the reviews to adopt rights-based approaches to data, statistics and monitoring that focuses on the progressive reduction of inequalities. The elevation and embedding of environmental human rights will be critical given the key role that a healthy environment plays in the achievement of basic human rights.

(f) Policy recommendations on ways to accelerate progress for those at risk of *being left behind*

56. Current global environmental trends risk reversing decades of progress in development, health and human rights and through the combined effects of climate change, biodiversity loss and the degradation of the earth's natural systems. In order to meet this challenge, actions need to address critical environment linkages with social and economic goals, including on human rights, health and wellbeing. The following policy recommendations, which were considered by UNEA in 2016, aim at supporting the transition to an inclusive low carbon economy, in which *no one is left behind* and is linked to ecosystem resilience, healthy environment, human rights, good health and wellbeing:

- Deliver more effectively and equitably on the 2030 Agenda for Sustainable Development by using the **environment-health nexus** as a crosscutting solution through international, regional, national and local cooperation. Address the environment health-nexus on efficiency grounds, but also for distributive justice and to address the ethical and legal obligations of States.
- Follow an approach to reducing inequalities and eliminating discrimination grounded in human rights standards by recognizing and using the **human rights-environment nexus**. This requires revisiting traditional approaches to the work on inequalities to better identify who is being left behind and why, and to effectively monitor progress and moving beyond 'business as usual' towards an approach that includes:

- Systematically analysing and monitoring disaggregated data, and placing a particular focus on all prohibited grounds of discrimination and groups specifically protected under international human rights treaties.
- Developing new tools for equality and equity monitoring to capture discrimination, exclusion and stigma, while paying attention to multiple and intersecting forms of discrimination.
- Developing Monitoring methodologies to assess the progressive reduction of different kinds of inequalities over time: Collecting disaggregated data will provide useful information on the gaps between social groups, but will not in and of itself ensure that the most disadvantaged are not 'left behind' or 'left until last'.
- Collaborating With UN System entities to develop a common strategy to address the structural and root causes of inequality and discrimination in policies, programming and advocacy: Contributing To common tools and methodologies for monitoring and tracking progress in reducing inequalities will be critically important for evidence---based policy development, but the UN's Human rights approach also requires analysing and addressing the structural and root causes that underlie the patterns of inequality and discrimination.

– Strengthen **multi-level environmental governance** through:
  - The development and implementation of integrated policies, international and national legislation and actions incorporating specific measures targeting the most vulnerable, including women and children, and through them future generations.
  - The involvement of the public and private sector, researchers, relevant stakeholders and citizens in creative strategic partnerships which can foster innovation and disseminate good practices.
  - The increase integration and coherence of the environmental dimension of the different international agreements including the Sendai Framework for DRR, the Addis Ababa Agenda for Action on financing for sustainable development, the Paris Agreement on climate change and the United Nations Conference on Housing and Sustainable Urban Development (Habitat III).
  - The enhancement of the communication, collaboration and cooperation between UN agencies and of interagency processes dealing with environmental issues and their linkages to conflicts, humanitarian crisis, forced displacement disasters, human-rights and socio-economic development.

Links to useful resources:

- *Delivering on the environmental dimension of the 2030 Agenda for Sustainable Development (UNEP/EA.2/INF/4)*
- *Healthy environment, healthy people (Thematic report – advance copy)*
- *GEO 5 (Part 1: State and trends of the environment)*
- *UNEP inputs to the 2016 ECOSOC Integration Segment*
- *2014 UNEP Yearbook on emerging issues*
- *Report of the Executive Director on Resolution 1/3: illegal trade in wildlife (UNEP/EA.2/2)*
- *Report of the Executive Director Relationship between the United Nations Environment Programme and the multilateral environmental agreementsUNEP/EA.2/7/Add.3*
- *Building Resilience in SIDs: The EVI (http://www.vulnerabilityindex.net/*
- *Applying an integrated approach for a successful implementation of the 2030 Agenda*

[i] Alan M (2015). Available from https://giwps.georgetown.edu/sites/giwps/files/Women%20and%20Climate%20Change.pdf.

[ii] United Nations Children's Fund, *Unless we act now. The Impacts of climate change on children* (2015).