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UNIDO activities related to energy and the environment

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Report by the Director General

The present document reports on the implementation of General Conference resolution GC.17/Res.4 and provides information on latest developments and an outlook for the next biennium. It supplements the information contained in progress reports presented to the Industrial Development Board in the last report ([IDB.47/18](#)) and in the Annual Report of UNIDO 2017 ([IDB.46/2](#)) and 2018 ([IDB.47/2](#)).

I. The emerging development agenda

1. UNIDO's activities related to energy and the environment support Member States in their sustainable industrial transformation and the uptake of new manufacturing, business and trade opportunities arising from the implementation of international conventions on climate and the environment. Entrusted with this mandate, the Departments of Energy and of Environment deliver services to Member States addressing new demands from the emerging development agenda.
2. New developments in the current biennium include: the convergence of advanced digital technologies and energy systems; advances in new materials and green chemistry; and the emergence of a broad range of innovation pathways for green and climate-friendly products, processes, and new business models, including circular approaches. These developments are increasingly being included in national action plans and priorities for inclusive and sustainable industrial development (ISID).

II. Integration and scale-up of service delivery

3. In line with GC.17/Res.4, and in response to the above, both departments have realigned their support towards programmatic approaches for enhanced service delivery and scaling up.



4. The collective efforts of both Departments have been focused on three broad areas of needs:

(a) Supporting governments and industries to provide sustainable and resilient infrastructure for industrial development; including sustainable design, eco-industrial parks, clean energy supply, and access to water;

(b) Supporting industries to achieve climate neutrality and a circular economy by adopting energy and resource efficient manufacturing practices, as well as by adopting innovation in design, manufacturing and product lifespan management, and by delivering related services;

(c) Supporting governments and industries in fulfilling national commitments under international climate and environmental conventions, by facilitating access to affordable green and climate finance, which contributes to a just transition towards sustainable industrialization.

III. Programmes and initiatives

5. In the current biennium, UNIDO implements more than \$ 200 million of technical cooperation activities in energy and the environment in more than 105 Member States.

6. In 2018–19, UNIDO drove several initiatives, contributing to the strengthening of knowledge and institutions. In particular, in partnership with the World Bank Group and the German Agency for International Cooperation, UNIDO completed the *A Practitioner's Handbook for Eco-Industrial Parks: Implementing the International EIP Framework*. The 2018 handbook complements the respective framework of 2017 and is currently being applied in several countries. Similarly, working with the International Organization for Standardization, UNIDO has been driving efforts to develop technical guidelines for small hydropower systems. Within the Partnership for Action on Green Economy, UNIDO spearheads dialogues with policymakers on circular economy principles and supports suitable measures.

7. In terms of supporting industries, UNIDO continued such successful interventions as building in-country capacities for energy management, for optimizing energy systems and for cleaner production in manufacturing enterprises. In 2018–19, UNIDO played a leading role in two regional, multi-agency programmes, expanding its work on industrial resource efficiency and cleaner production to include support for enabling policies and access to finance. Another programme in the Latin America and the Caribbean region reaches 13 countries, improving the market conditions for enterprises in electric and electronic waste recycling.

8. UNIDO expanded its programmatic efforts towards supporting innovation and entrepreneurship in clean energy and environmental sustainability. UNIDO's activities proved that locally developed and commercially viable climate and clean energy technologies and business models, also known as Cleantech, contribute to low-emission economic growth, enable youth and women empowerment, and green job creation. The UNIDO hosted Global Cleantech Innovation Program supported over 900 start-ups in eight developing countries to become fast-growing, scalable and investment-ready enterprises.

9. UNIDO implements transformative approaches to support 90 countries in their implementation of the chemical conventions, namely the Montreal Protocol, and the Minamata and the Stockholm conventions. The associated interventions take place in the majority of industries in a given sector and consist of demonstrations; technology transfer; direct support to industries; capacity-building for governments; and integration of industry commitments in their nationally determined contributions under the United Nations Framework Convention on Climate Change. UNIDO also supports informal and small-scale enterprises, such as the artisanal and small-scale gold mining (ASGM) programme to reduce mercury use. In the Global Mercury Partnership, UNIDO is co-leading the ASGM and chlor-alkali focal areas.

10. Access to climate and green finance remains a barrier to scale up the uptake of clean energy and green technologies. The Private Financing Advisory Network (PFAN), hosted by UNIDO, plays a vital role connecting key actors, including entrepreneurs and private and public investors. PFAN advises low-carbon, climate-resilient businesses in 38 developing countries, and matches projects to appropriate private financing, mobilizing close to \$1.4 billion of private sector investments.

IV. Global forums, partnerships and networks

11. UNIDO has been harnessing its convening function and partner networks to position ISID in climate and environment conventions and multilateral processes and dialogues. This helped garner international support for sustainable industrialization in developing countries, including SIDS and LDCs, and to advance knowledge and thought leadership on emergent topics relevant to sustainable industrialization.

12. UNIDO and its partners hosted a number of technical expert group meetings and events during the reporting period covering advanced topics such as electrification of mobility; hydrogen economy; and accelerating clean energy through industry 4.0. In line with GC.17/Res.4, paragraph (i), UNIDO also organized seven informal briefings on circular economy for Member States, including expert meetings on greening design and on recycling industries.

13. With Yale University, UNIDO launched the Global Green Chemistry Initiative to facilitate the adoption of Green Chemistry in six countries. Additionally, UNIDO is currently working with the Secretariat of the Clean Energy Ministerial on the Deep Decarbonization of Industry initiative, which aims to boost the climate ambition of industry and will be launched in the year 2020.

14. UNIDO continues to drive and co-host several global action networks, such as the Green Growth Knowledge Platform, the Climate Technology Centre and Network, and the Global Network of Regional Sustainable Energy Centers. The Vienna Energy Forum and the Green Industry Conference continue to be central events through which UNIDO links energy and the environment to ISID.

15. In addition, UNIDO supports special international initiatives. For example, the Organization prepared a working paper for the Group of 20, on the use of circular economy principles to reduce the challenges of marine plastic litter.

V. Outlook

16. Together with technological change and innovation, the energy and environment agendas will continue to shape the opportunities and pathways for ISID. Climate mitigation measures in energy supply and industrial value chains will not be sufficient to address climate concerns on their own. Attention to material flows will also be needed in the future to respond to this problem. Substantial efforts are necessary to address adaptation and resilience of industry and infrastructure to climate change. Other environmental impacts related to industry will also continue to require efforts. However, all these challenges will also offer substantial market opportunities for alternative technology providers, early movers and those who introduce disruptive approaches.

17. Climate change mitigation focuses increasingly on impacts of resource use and material flows. Resource use is projected to grow well above population growth, implying higher dependencies and reduced resilience of industries. UNIDO has developed and will continue to deploy a wide range of services to support Member States in adapting to these challenges.

18. To respond effectively, efforts will need to move from demonstrations of solutions to effecting transformational change and high-impact programming. The work of UNIDO under the chemical conventions, in which financing is provided to

effect change across entire sectors, is indicative. A similar approach, in which access to finance is systematically provided, is needed for small and medium-sized enterprises in developing countries. The concept of green industry is being expanded to respond to the challenge of not only greening enterprises but also value chains, from resource extraction to end-of-life management. Currently, challenges facing the two Departments are largely related to the non-availability of funding to close gaps in programming and implementation, allowing a shift of scope from projects to programmes.

VI. Action required by the Conference

19. The Conference may wish to take note of the information provided in the present document and to consider contributing non-earmarked and programmable funds, similar to the allocation of unutilized balances for renewable energy for productive activities, as was mandated in GC.13/Dec.15.
