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**International environmental policy and governance issues**

# Progress in the implementation of resolution 4/1 on innovative pathways to achieve sustainable consumption and production

## Report of the Executive Director

## Introduction

1. In paragraph 12 of its resolution 4/1 on innovative pathways to achieve sustainable consumption and production, the United Nations Environment Assembly of the United Nations Environment Programme (UNEP) requested the Executive Director of UNEP to establish, within the scope of existing resources and building on work already undertaken, without duplication of effort, a time-limited task group comprising the International Resource Panel and the One Planet network to provide insight into the management of natural resources and raw materials in relation to the 2030 Agenda for Sustainable Development and explore the potential offered by the different pathways towards sustainable consumption and production and, taking into account national circumstances, to identify technical tools, best practice, policy options, sustainable technologies, innovative business models and finance flows in that regard. In addition, it requested that the task group complete its work in time to present the outcome to the Environment Assembly at its fifth session.

2. In paragraph 15 of resolution 4/1, the Environment Assembly requested the Executive Director to submit a report providing an overview of best practices, including their impact on the design of products and services, minimizing harmful environmental impacts, and coherent product policies to decouple economic growth from environmental degradation through sustainable consumption and production, and providing recommendations for consideration by the Environment Assembly at its fifth session.

3. The present report provides an update on progress made in the implementation of resolution 4/1 in terms of the requests in paragraphs 12 and 15.

* In accordance with the decisions taken at the meeting of the Bureau of the United Nations Environment Assembly held on 8 October 2020 and at the joint meeting of the Bureaux of the United Nations Environment Assembly and the Committee of Permanent Representatives held on 1 December 2020, the fifth session of the Assembly is expected to adjourn on 23 February 2021 and resume as an in-person meeting in February 2022.

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# I. Progress in the implementation of resolution 4/1

## A. Catalysing science-based policy action on sustainable consumption and production

4. In accordance with the request in paragraph 12 of resolution 4/1, a task group[1] was established in 2019 to provide insights into the management of natural resources in relation to the 2030 Agenda for Sustainable Development and pathways towards sustainable consumption and production (SCP). The task group on catalysing science-based-policy action on sustainable consumption and production comprises experts from the International Resource Panel and practitioners from all stakeholder groups of the One Planet network (government, business, civil society, international organizations). To support the work of the task group and the broader implementation of the resolution, $150,000 in extrabudgetary and Environment Fund resources was allocated under programme of work projects 613.1, relating to the implementation of the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, and 611.1, relating to the International Resource Panel.

5. After an initial assessment of the research undertaken by the International Resource Panel, the task group decided to focus its efforts on the identification of practical approaches to catalysing science-policy action on sustainable consumption and production with a sectoral focus and therefore adopted a value chain approach. The value chain approach aims to identify where the greatest opportunities for improvement occur and shape corresponding actions by building on existing knowledge and available data. It provides a framework applicable to a variety of sectors, products and geographical scales. Data and information are analysed and discussed in three steps: (a) understanding the value chain and identifying hotspots, using the International Resource Panel and other UNEP assessments as sources; (b) consolidating existing action and identifying opportunities to address the identified hotspots, using the One Planet network as a source; and (c) defining a common agenda and prioritizing action to address identified gaps through a participatory process. The task group demonstrated the benefits of using the value chain approach to define sustainable consumption and production action informed by science by applying it to three prioritized sectors: food, construction and textiles. A report on the work of the task group is being prepared.

## B. Global stocktaking with regard to existing product policies and design practices

6. The implementation of paragraph 15 of resolution 4/1 is supported by the project on "Mainstreaming coherent and effective sustainable consumption and production policies, including through circular economy models: best practices and recommendations", hosted under programme of work project 624.2. The implementation of paragraph 15 has also been supported by $59,400 allocated from Environment Fund resources and extrabudgetary funding of $426,687 provided by the European Commission.

7. Project implementation began in March 2020, focused on the identification and dissemination of policy instruments and business models in place at the local, national and regional levels that contribute to decoupling economic growth from environmental degradation and environmental impacts, as well as case studies that illustrate best practices and their impact on sustainable design of products and services to minimize harmful environmental impacts. Recommendations were also formulated, building on this overview.

8. Paragraph 15 of resolution 4/1 refers to "product policies" – policies aiming to drive both the demand and supply sides of the market towards more sustainability and circularity through a policy mix that minimizes the negative impacts of a product throughout its life cycle while maintaining acceptable performance and safety standards. Product policies therefore cover a range of subjects, from the tracking of natural resource extraction to the uptake of green technology, use of chemicals, promotion of industrial symbiosis, eco-labelling, sustainable public procurement, integrated waste management and promotion of public-private collaboration. Product policies encompass both voluntary and mandatory instruments.

9. To conduct the global analysis of existing product policies and design practices, UNEP worked with partner organizations that supported the research at the regional level, namely Grupo GEA (Latin America and the Caribbean region), the Centre for European Policy Studies (CEPS) (Europe and Northern America regions), the Council for Scientific and Industrial Research (CSIR) (Africa and Western Asia regions) and the Joint Graduate School of Energy and Environment, King Mongkut's

[1] https://www.oneplanetnetwork.org/task-group-catalysing-science-based-policy-action-scp.

University of Technology Thonburi (Asia and the Pacific region). The SCP national focal points were engaged throughout the research phase.

10. The plan was to take advantage of scheduled events in 2020 to organize back-to-back consultation workshops and collect feedback to formulate recommendations; however, the travel restrictions arising from the coronavirus disease (COVID-19) pandemic led all consultations to be held online instead. This nevertheless had the advantage of allowing the engagement of a broader community of policymakers for collection of lessons learned and information on challenges and opportunities.

11. Introductory webinars provided an opportunity to introduce the resolution, following which nine online consultation sessions with a total of more than 300 participants were organized to further engage the SCP focal points at the regional level around three main issues: (a) the current impact of product policies and the enabling conditions for higher impact and further coherence; (b) the identification, implementation and scaling up of product/service design practices that minimize harmful environmental impacts; and (c) the role of UNEP, the United Nations system and the wider international community in addressing the identified gaps and challenges. A detailed outline of the methodology used, the consultation process and the input from Member States and other stakeholders is available on the One Planet network website.[2]

12. UNEP also engaged with the private sector, international organizations and other relevant stakeholders, including through national business and industry and trade associations, chambers of commerce, the Global Network for Resource Efficient and Cleaner Production (RECPnet)[3], the United Nations Industrial Development Organization, development banks, the United Nations Global Compact, the World Business Council for Sustainable Development and the Ellen MacArthur Foundation. These engagement efforts led to the collection of examples of design practices and information on the opportunities and challenges identified by the private sector.

## C. Highlights of existing product policies and product/service design practices

13. The following findings and conclusions are derived from the research conducted between March and October 2020 and the more than 900 activities reported in 2019 across the One Planet network under Sustainable Development Goal indicator 12.1.1.

(a) Reporting across the One Planet network identified evident progress in the development of policies, knowledge resources and technical tools supporting the shift to sustainable consumption and production, although their application to foster tangible changes in practices and measurable impacts remains limited. The majority of the relevant policies were adopted between 2012 and 2019, with 2016 and 2019 being the peak adoption years.

(b) Overarching policy frameworks, such as national sustainable development strategies, represent only 14 per cent of all policies reported under indicator 12.1.1. Most policy interventions are either sectoral or stand-alone plans for sustainable consumption and production, hindering the potential for overcoming sectoral silos and aligning existing policies and regulations. The development of integrated product policy frameworks using a life-cycle perspective remains rare. Product policies are often hosted under broader development policy umbrellas such as sustainable development, sustainable consumption and production or circular economy strategies or actions plans, as such umbrellas can offer the right environment for implementing coordinated policy packages and supporting the systemic change needed to transform economies and societies.

(c) Monitoring of the implementation of concrete product policy instruments and assessment of their impact remain challenging across regions. Data trends on Sustainable Development Goal indicator 12.1.1 show that countries have difficulty quantifying the impact of their current sustainable consumption and production policies; only 26 per cent of all reported policies had quantifiable targets or measured impacts.

(d) While some 70 per cent of policies reported under indicator 12.1.1 are considered relevant to other Sustainable Development Goals (such as Goal 9, on infrastructure, industry and innovation, and Goal 8, on economic growth, full employment and decent work), only 10 per cent are led by a ministry of economic development, finance, planning or trade and industry or by a high-level

[2] https://www.oneplanetnetwork.org/Mainstreaming-SCP-policies-best-practices-recommendations.

[3] RECPnet (https://www.recpnet.org) is a network of more than 70 organizations active in more than 60 countries contributing to the effective and efficient development, application, adaptation, scaling up and mainstreaming of resource-efficient and cleaner production concepts, methods, policies, practices and technologies in developing and transition economies.

political body. This signals the siloed approach of an agenda driven mostly by national environmental authorities. One factor characterizing the front runners in the adoption of coherent product policy packages is interministerial cooperation. A shift towards sustainable production and consumption patterns requires closer collaboration.

(e) Regulatory mechanisms, such as chemical substance bans required under multilateral environmental agreements, can both trigger innovation and provide clear orientation across the entire government.

(f) At the global level, end-of-life treatment of products, solid waste reduction and recycling are the thematic areas that receive the most policy attention. Very few policies cover upstream solutions such as product design and consumer patterns.

(g) In most cases, countries leverage a combination of instruments, including incentives, information tools, voluntary schemes (e.g., voluntary cleaner production policies), standards and legal restrictions (e.g., regulations restricting the use of single-use plastic products).

(h) In countries where policy formulation is decentralized to the subnational level, the uptake of sustainable practices frequently relies on voluntary steps taken outside the legislative framework by industries, mostly large companies, that have enough influence to drive markets and consumer choices. In this context, engaging all relevant stakeholders in a transformation of consumption and production patterns beyond the voluntary commitments of early adopters of sustainable practices remains a challenge.

(i) Innovative design practices by businesses focus predominantly on improving resource efficiency and waste reduction and recovery. In line with current incentives, businesses acknowledge the potential economic savings of resource-efficient processes and technologies and prioritize mitigating environmental impacts at the production stage. Systematic uptake of upstream design solutions, such as eco-design or circular sourcing, is far from common at the global level.

(j) Only a few initiatives concentrate on designing out harmful substances to facilitate product disassembly for re-use, upgrading, extending products' lifetime or recycling. Front runners have also started to reduce the mix of materials (e.g., plastics and fibres) and introduce innovations in materials at the design stage. Designing for modularity in order to facilitate repair, upgrading and disassembly is another emerging trend, particularly in the electronics industry.

(k) A major impediment to the adoption of more sustainable design practices remains the fact that products and services incorporating sustainability concerns into their design are often more expensive. Currently they cannot compete with conventional alternatives, as most consumers continue to prioritize price when making purchase decisions. Businesses offering repaired or refurbished products also struggle to compete with newly manufactured products on price, with labour costs rendering their potential margins too slim.

(l) The lack of transparency in globalized supply chains regarding the origin and content of materials in products is also a barrier, not only for informed consumer choice but also for manufacturer sourcing of recyclable components or components containing recycled content. Consumers (governments, industry and individuals) also lack information on and understanding of the environmental footprint of the products and materials available on the market.

(m) While some businesses have managed to tap into available funding from sources such as crowdfunding campaigns or innovation programmes sponsored by government entities, most private-sector entities – in particular small and medium-sized enterprises (SMEs) and start-ups – lack access to the capital required for the initial investment needed to implement, replicate and scale up design innovations.

(n) Businesses and supporting networks (including RECPnet) have raised the issue of the lack of technical capacity in eco-design and access to the latest technologies, for SMEs in particular. This knowledge gap contributes to businesses' limited interest in implementing innovative product design in a proactive and voluntary manner.

(o) There are examples of ways in which businesses have successfully partnered with governments, academia and international organizations; however, the benefits of cooperation among stakeholders (e.g., the public sector, enterprises, technical experts and financial institutions) are often overlooked.

# II. Lessons learned

## A. Enabling conditions

14. High-level political leadership is essential to ensure that product policy frameworks become a priority on national political agendas and sufficient resources are allocated accordingly. An inclusive consultation process is also required during the formulation, implementation and monitoring of product policy frameworks in order to foster interministerial cooperation, synergies among policies, public-private partnerships (including with financial and research institutions) and broader acceptability.

15. The uptake of product policy packages also requires a robust governance process, including a clear transition plan, measurable progress indicators and agile decision processes. A balance between regulatory, voluntary and information-based policy instruments can support a profound, sustainable transformation. The framework should be reviewed regularly to adjust policy responses to the progress made, and to changes in international regulations and technology. Recognizing the importance and role of the informal sector in advancing product policy efforts is also critical.

16. A systematic process that bridges the science on natural resources and the action on sustainable consumption and production is also essential for effectively providing insight into the management of natural resources and materials in relation to the 2030 Agenda. The value chain approach offers the required interface, as is demonstrated by its practical application in various sectors.

17. Most current policy efforts focus on providing downstream regulation. Greater coherence between waste policies, cleaner production policies and life-cycle-based approaches allows a transition towards a development model that not only strives to minimize waste but also incorporates upstream and midstream solutions to increase impact. Considering the global nature of supply chains, product policies need to promote a value chain or sectoral approach. Policies related to material efficiency and chemicals and waste can have a positive impact on product design and reduce pollution at all stages of the value chain if they are developed and implemented in a coordinated manner.

18. Adopting a value chain approach in product/service design is critical for avoiding siloed interventions. Creating a pre-competitive space where industry, academia and consumers engage can help overcome technological barriers and create innovative cross-sectoral synergies.

19. Uptake of methodologies for the life-cycle assessment of products and access to open life-cycle data, including regional and country-specific data, are pivotal for policymakers and businesses, including SMEs, to create enabling product policy frameworks and guide the design of products and services that minimize harmful environmental impacts.

20. Transforming societies by raising “sustainability awareness” and emphasizing the critical role of consumption decisions is fundamental to profoundly changing consumption and production patterns. Empowering citizens through enhanced consumer information about environmental footprints allows them to take informed decisions. As consumer awareness of the issue of sustainability increases, businesses have more leeway to offer sustainable alternatives and build a relationship of trust with consumers, which in turn facilitates access to finance (e.g., through crowdfunding). Direct and trustful relationships with customers can also facilitate the uptake of innovative business models such as product-service systems and sharing platforms.

## B. Opportunities

21. The COVID-19 pandemic has demonstrated the interconnectedness of countries and the fragility of global value chains. Many global leaders have announced stimulus packages. Countries have a unique opportunity to incentivize the shift towards more sustainable consumption and production through coherent product policies that foster innovative product/service design and encourage sustainable consumption behaviours.

22. Replicating good practices of product policies that build on the national adoption of multilateral environmental agreements, such as the Minamata Convention on Mercury, which led to national legislation on mercury in products, can further support and amplify coordination and alignment at the national level.

23. Leveraging public and private purchasing power through buying more sustainable goods and services can help create a market and drive down the cost of sustainable alternatives.[4] Clear, reliable information on products, materials and companies themselves and enhanced transparency in supply chains can strengthen the competitiveness of sustainable products and services by empowering consumers to make informed choices.

24. As upfront investment costs are often dissuasive for businesses, notably for SMEs, economic and fiscal incentives are instrumental in encouraging businesses to adopt innovative design practices. Bias lingers against investments in resource productivity, such as taxes on labour that are typically higher than taxes on resources and energy, favouring resource consumption over increased employment, as labour and resources are often alternative inputs for economic growth.

25. Internal engagement within private-sector actors, combined with strong leadership by management and capacity-building of staff towards development of new design solutions and assessment of the impact of such solutions, has proven instrumental in creating a motivating environment and overcoming internal resistance to change. Purpose-led rather than solely profit-led innovation can ultimately help achieve positive economic outcomes.

26. Digital technologies offer promising opportunities to improve resource efficiency in products. For example, 3D printing enables production on demand and replacement of product components and spare parts, and tagging solutions enhance traceability of products, materials and resources, improving transparency throughout the supply chain. Research on the potential impact of digital solutions is required to avoid trade-offs and to ensure that the digital sector reduces its footprint and becomes more material- and energy-efficient.

### C. Areas requiring further attention and research

27. The development of product policies such as eco-design, reusability and recyclability standards can be impeded when products are part of global value chains and are subject to different regulations and standards. This indicates the need to include a focus on the trade dimension of product policies.

28. Financial institutions play a critical role in stimulating economic growth by investing in sustainable consumption and production. Banks, insurers, investors and public and private financial institutions can support restorative and regenerative business models in a sustainable manner over the long term by reorienting investments towards more sustainable technologies and businesses.[5] This requires developing internal capacity and applying circularity and resource efficiency principles when evaluating products, projects and companies, in order to invest in sustainable solutions and finance the transition to sustainable consumption and production. SMEs also need specific attention to be paid to access to finance.

## III. Recommendations and suggested actions

29. The Environment Assembly may wish to encourage UNEP and Member States to create an exchange space that allows identification and filling in of the knowledge and governance gaps hindering the uptake of coherent product policies and sustainable design practices at the global level; to share and disseminate lessons learned and successful policies and practices; and to enhance dialogue and cooperation at the global and regional levels. Securing the engagement of all relevant stakeholders in this initiative would enhance the coordination of efforts and ensure greater impact.

30. The Assembly may also wish to encourage UNEP to provide technical support to policymakers for the formulation of coherent product policies and to develop a robust methodology for assessing the potential benefits of product policies for the environment and other sustainability dimensions.

[4] The UNEP report entitled “Building Circularity into our Economies through Sustainable Procurement” describes how sustainable procurement practices can accelerate the shift towards more sustainable patterns of consumption and production (https://www.unenvironment.org/resources/report/building-circularity-our-economies-through-sustainable-procurement).

[5] As described in the recent report by the UNEP Finance Initiative entitled “Financing Circularity: Demystifying Finance for Circular Economies” (https://www.unepfi.org/publications/general-publications/financing-circularity/).

31. The Assembly may wish to take note of the outcomes of the work of the task group on catalysing science-based policy action on sustainable consumption and production and encourage the International Resource Panel and the One Planet network to use the value chain approach systematically to guide their work, with the objective of strengthening the interface between science on natural resources and action on sustainable consumption and production in relation to the 2030 Agenda.