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Implementation Programme

Healthcare Industry Sector Programme

"Developing Safer, Innovative, and Sustainable Healthcare Supply Chains"

Report of Climate Resilient and Environmentally Sustainable Supply Chains in the Health Sector Expert Consultation

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About this document:

World Health Organization (WHO) and Unitaid, *Climate-Resilient and Environmentally Sustainable Supply Chains in the Health Sector: Report of an Expert Consultation* (Geneva, October 2024) includes recommendations contributing to the development of the Healthcare Industry Sector Programme.

Report of Climate Resilient and Environmentally Sustainable Supply Chains in the Health Sector Expert Consultation

2-4 October 2024

Geneva, Switzerland



ATACH
Alliance for Transformative Action on Climate and Health
WHO hosted network

World Health Organization

Unitaid
SAVE LIVES FASTER

REPORT CONTENTS

1. Background 2

2. Summary of Proceedings 4

3. Recommendations: Key priorities and collective actions for Building Climate-Resilient and Environmentally Sustainable and Low Carbon Health Supply Chains 8

3.1 Identified Key principles for accelerating action towards climate-resilient, environmentally sustainable health supply chains 8

3.2 Framework of Shared Priorities 9

4. Conclusions and Way Forward 14

ANNEXES 15

Annex 1: Expert Consultation Concept Note 15

Annex 2: Consultation Agenda 19

Annex 3: List of Participating Organizations 28

Acronyms:

ATACH- Alliance for Transformative Action on Climate and Health

COP- Conference of the Parties

GFC- Global Framework on Chemicals – For a Planet Free of Harm from Chemicals and Waste

GHG -Greenhouse gas

1. BACKGROUND

The healthcare sector, responsible for protecting health and treating disease, significantly contributes to environmental challenges, including greenhouse gas emissions (approximately 5% of global emissions), hazardous chemical use, and plastic waste (accounting for 30% of healthcare waste). The global health supply chain accounts for over 70% of healthcare's emissions, exacerbating climate change, chemical contamination, resource depletion, and pollution. Plastics used in healthcare pose additional risks due to their fossil fuel origins and toxic chemical additives. (Annex1: Background and concept note has more details on the context for the consultation on Climate Resilient and Environmentally Sustainable Supply Chains in the Health Sector)

There has been a growing demand from member states to address these environmental and climate risks linked to health sector operations both within health systems and international agencies. WHO has established health guidance and standards for medical products, with efforts underway to integrate sustainability criteria. Global mandates, including the COP26 Health Programme commitments through the Alliance for Transformative Action on Climate and Health (ATACH) and the Global Framework on Chemicals for a planet free of harm from chemicals and waste (GFC), emphasize the need to work towards climate-resilient, low-carbon health systems and responsible chemical management globally.



Picture of the participants of the consultation (Photo Credit: Fady Homaidan, WHO)

To address the growing demand from the member states, WHO and Unitaid co-organized an expert consultation from 2 to 4 October 2024 to discuss about supply chains, both in terms of risks from and contribution to climate change and broader chemical and environmental factors and pollution. The meeting convened over 80 participants from 40 organizations, including representation from:

- Government representatives (Ministries of Health and Ministries of Environment)
- Health systems
- IGO
- UN agencies and Multilateral Development Banks
- Global health and humanitarian organizations
- Civil society
- Academic leaders and certifying bodies
- Private sector
- WHO Headquarters and Regional Offices

WHO's Environment, Climate Change, and Health department organized the consultation in collaboration with the WHO departments of Procurement and Supply Services, Health Product Policy and Standards, Regulation and Prequalification, and Innovation and Emerging Technologies. WHO Assistant Director General, Ailan Li, opened the consultation expressing the importance of urgent action and collaboration needed to address the complexity of the challenge of climate change and emphasized the need for collaborative action. Unitaid Executive Director, Philippe Duneton described Unitaid's actions to provide access to climate-smart products for all.

The outcome of the consultation will support the ongoing efforts at WHO, Unitaid, ATACH and the GFC programme on advancing climate-smart, sustainable healthcare supply chains.

The consultation achieved the following objectives:

1. Fostered a common understanding of the existing mechanisms, challenges and opportunities for the health sector to achieve climate resilient and environmentally sustainable health supply chains.

2. Identified strategies, tools and resources needed to support Member States to implement the health initiatives on climate resilient and low carbon, sustainable health systems' supply chain commitments, and the 'Global Framework on Chemicals for a planet free of harm from chemicals and waste' on chemicals of concern in health care settings.

3. Enabled the sharing of experiences and facilitated collaboration between and among international agencies, countries, health systems and other sectors for the implementation of climate resilient and environmentally sustainable health care and supply chains.

2. SUMMARY OF PROCEEDINGS

The consultation gathered global health organizations and key stakeholders to discuss strategies for achieving climate-resilient and environmentally sustainable health supply chains. Over 2.5 days, participants shared commitments, identified challenges, and explored opportunities for sustainable procurement, climate resilient, low carbon and environmentally sustainable supply chains and market transformation. The consultation provided opportunity to exchange experiences included case studies (see Annex 3), tools and resources for climate resilient and environmentally sustainable health care supply chains.

1. **Commitments to Sustainability** – In the opening panel WHO and Unitaid, presented their supply chain sustainability commitments. The ongoing efforts through ATACH, GFC, WHO procurement, standard settings and regulations team were highlighted. A pre-consultation survey showed that most participants had policies, goals, and strategies in place for sustainable procurement. Presentations by UN agencies such as UNOPS highlighted the sustainability procurement practices in the UN.
2. **Drivers for Action** – Participants identified key motivations for the development of climate resilient and environmentally sustainable supply chains including the health impacts of climate change and hazardous chemicals, and the Hippocratic oath taken by the medical establishment to "first do no harm". Pioneering initiatives demonstrating momentum include WHA resolutions, COP26 Climate and Health Programme, ATACH, the WHO Chemicals Roadmap, Unitaid report *From Milligrams to Megatons,* NHS England's Net Zero commitment by 2045, private sector sustainability efforts, and case studies from civil society such as from Health Care Without Harm and academic institutions including Yale University and the Lancet Commission on Sustainable Healthcare.
3. **Supply Chain Vulnerabilities** – The consultation fostered a shared understanding of supply chain weaknesses, especially during emergencies such as COVID 19 and climate related events, and the challenges in implementing sustainable procurement policies.
4. Consensus emerged on **Harmonization and Transparency**, emphasizing the need for standardization of data, monitoring, reporting, certification programs, procurement policies, and regulatory frameworks to transform supply chains.
5. The participants agreed on an **Integrated Approach to Climate and Chemicals** within the healthcare supply chains. Recognizing the diversity of health care supply chains, participants emphasized the need for region-specific opportunities and challenges and tailored approaches to the specific context of each region and include multi-stakeholder solutions that achieve desired results.
6. Discussions highlighted **Quality**, **Safety, and Efficacy Considerations** to maintain clinical standards while advancing sustainable supply chains, including trade-offs and debunking the myth that disposables are essential for infection control during the session on plastics in healthcare.

7. **Equitable Access** to sustainable supply chains and technologies in all geographies and populations requires dedicated resources and investment.
8. Participants explored the **Co-Benefits of Sustainability.** Addressing climate and chemical concerns in supply chains benefits environmental health, clinical care, local communities and can save resources.
9. Participants emphasized the importance of **Prioritization of Key Areas of Intervention** by the identification of hot spots and hazardous chemicals of concern and the importance of building evidence in the most critical areas with the highest toxicity and carbon emissions and risk to the supply chain, prioritizing essential products and services and high-impact opportunities and reducing waste.
10. The critical nature of **Market Shaping and Transformation** discussions focused on reshaping market dynamics to enhance accessibility, affordability, and sustainability of products and include procurement standardization and supplier engagement strategies. Various strategies were recommended, and case studies were shared to highlight progress on regulations, technology transfer and market shaping. Strategies included: Standardization of demands to suppliers in procurement and target product profiles to use harmonized monitoring and reporting between and among countries, UN agencies, and major buyers. Case studies illustrating market shaping in action were discussed.
11. The importance of **Innovation Across the Supply Chain** was discussed from product design to waste management, innovation was recognized as essential for integrating sustainability across the value chain including extended producer responsibility and product design for eco-friendly handling, refurbishment, reuse and disposal.
12. **Reducing Waste and Unnecessary Products** – The need to minimize unnecessary pharmaceuticals, Personal Protective Equipment (PPE), and medical device waste were emphasized, along with adopting sustainable waste treatment technologies. Many speakers highlighted the imperative of reducing unnecessary products and packaging and redesigning for waste minimization and environmentally sustainable waste treatment technologies.
13. **Plastics in Health Care** –A panel on plastics in the health sector was featured given the centrality of plastics in addressing both climate and chemical goals, and the volume and ubiquity of plastics in the sector. The crisis of plastic pollution and the critical human health impacts were discussed. The imperative to reduce unnecessary plastics was highlighted. Case studies were featured to highlight actions already undertaken. Speakers addressed the misconceptions around the use of single use products being preferable for infection prevention and control. The importance of action on reducing plastics in the supply chain including packaging was recommended. The session provided insights to the ongoing Plastics Treaty negotiations and the importance of including health in the centerstage of the negotiations. participants urged redesign of products, reductions in unnecessary plastics, improved packaging standards, and tackling misconceptions about single-use products.

14. **Capacity Building and Awareness-** Strengthening knowledge and skills among health and supply chain professionals, health system leaders, and policymakers was identified as a priority for successful implementation of climate resilient and environmentally sustainable supply chains.

15. **Available Tools and Resources** On the afternoon of Day 2, participants engaged in an interactive World Café session, exploring various tools, resources, and guidance for building climate-resilient and environmentally sustainable supply chains. Discussions included the ATACH Community of Practice, WHO's guidance on chemicals, water, and waste management, such as the WHO Chemicals Roadmap, WHO WASH FIT, WHO Guidance for climate resilient and environmentally sustainable healthcare facilities, the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), and the Pollutant Release and Transfer Register (PRTR).

    Multiple greenhouse gas (GHG) measurement tools and methods from countries and health systems—including those from the Netherlands, France, the Aga Khan Development Network, and Health Care Without Harm (HCWH)—were showcased. Other key resources included the Life Cycle Analysis tool by BSI and SMI, as well as the UNDP/HCWH Sustainable Procurement Index for Health.

16. The consultation had breakout sessions on climate and chemicals where **Case Studies** on GHG measurement and reduction such as anesthetic gases and metered dose inhalers for asthma, chemical phase-out lists and chemical substitution in health care settings, impact of climate change on medicine delivery were shared with the participants.

17. On day three of the consultation, **Co-creation Workshops** were organized with participants to build consensus and define collective priorities for low-carbon, less toxic and climate-resilient supply chains, with the goal of positioning these contributions as recommendations to ATACH and the Global Framework on Chemicals health implementation programme. At the conclusion of this session, a paper identifying key priorities for collective action was produced, subsequently circulated, and agreed upon by all, capturing the outcomes of the consensus-building process. The agreed actions form the basis of Section 3.

List of case studies presented

A range of case studies were presented within the various sessions to illustrate the practical implementation of climate resilient and environmentally sustainable supply chains. These case studies informed the priorities and next steps, and provided good practices for scale up and replication.

- **Case study**: Biomedical device sustainability criteria for purchasing medical imaging devices, Medical Equipment Proactive Alliance of Sustainable Healthcare
- **Case study**: Good Manufacturing Practices, Sustainable Markets Initiative
- **Case study**: Implementing sustainable procurement, UNOPS
- **Case study**: Setting priorities for sustainable procurement, Médecins Sans Frontières
- **Case Study:** Reducing greenhouse gases from anaesthesia: nitrous oxide, São Paulo Association for the Development of Medicine, Brazil
- **Case Study**: European healthcare's Phase-Out List for chemicals of concern (EPOL), Norwegian Hospital Procurement Trust, Norway
- **Case Study**: Substituting PVC/DEHP in medical devices, University Hospital Marrakech, Morocco
- **Case study**: Plastics in health products, lessons learned from plastic audits, HCWH Southeast Asia
- **Case Study**: Reusable respiratory masks, Fundación Valle del Lili, Colombia
- **Case study**: Metered dose inhalers, health technology assessment, NHS, England
- **Case study**: Bednets and supplier engagement, The Global Fund,
- **Case Study**: Market transformation case study, furnishings, Health Care Without Harm, USA
- **Case study**: Procurement for waste reduction, the management of health care waste and addressing climate risk, groundWork, South Africa
- **Case study:** Eliminating Highly Hazardous Pesticides IPM in health care example, groundWork, South Africa
- **Case study:** List of restricted chemicals in health products, Vizient, USA
- **Case study:** Substituting for less toxic disinfecting chemicals case study, HCWH-Europe

3. RECOMMENDATIONS: KEY PRIORITIES AND COLLECTIVE ACTIONS FOR BUILDING CLIMATE-RESILIENT AND ENVIRONMENTALLY SUSTAINABLE AND LOW CARBON HEALTH SUPPLY CHAINS

This section highlights shared priorities and action areas jointly identified during the consultation to address climate and environmental risks while reducing the climate impacts of global health care supply chains, aligning them with global net zero targets.

3.1 IDENTIFIED KEY PRINCIPLES FOR ACCELERATING ACTION TOWARDS CLIMATE-RESILIENT, ENVIRONMENTALLY SUSTAINABLE HEALTH SUPPLY CHAINS

Focus on priorities and 'hotspots[1]'-Identify and prioritize the most significant climate and environmental impacts and risks within supply chains. By targeting these priorities, we can implement strategic interventions that yield the highest benefits in reducing carbon emissions and enhancing resilience.

Act now and adapt: Embrace a proactive approach by initiating actions while maintaining a high level of ambition. Pilot programs and small-scale interventions can provide valuable insights and early impact, fostering a culture of incremental improvement and adaptation as we learn from both successes and setbacks.

Collective accountability: Foster a shared responsibility among procurement and supply chain stakeholders through ATACH; establish accountability and transparency mechanisms; promote cross-sector and multi-agency collaboration for sustainable procurement; and align standards and reporting within the health care sector**.**

Holistic approach: Adopt a comprehensive perspective that integrates climate mitigation and adaptation, focusing on reducing emissions across the lifecycle, and addressing the health and environmental impacts of plastics, chemicals and waste. This approach should also consider climate and environmental risks to health care supply chains and aim to identify synergies and make informed trade-off decisions.

[1] Environmental and climate hotspots in the supply chain refer to specific stages, processes, locations, or components within a supply chain that are disproportionately responsible for environmental degradation or are highly vulnerable to climate-related risks. These hotspots can negatively impact the overall sustainability and resilience of the supply chain, contributing to emissions, resource depletion, pollution, or operational disruptions due to climate events.

Context-specific strategies: Recognize that health care supply chains vary significantly across products and geographies, each with unique challenges and opportunities. Tailor strategies to fit the specific context and maturity of each supply chain.

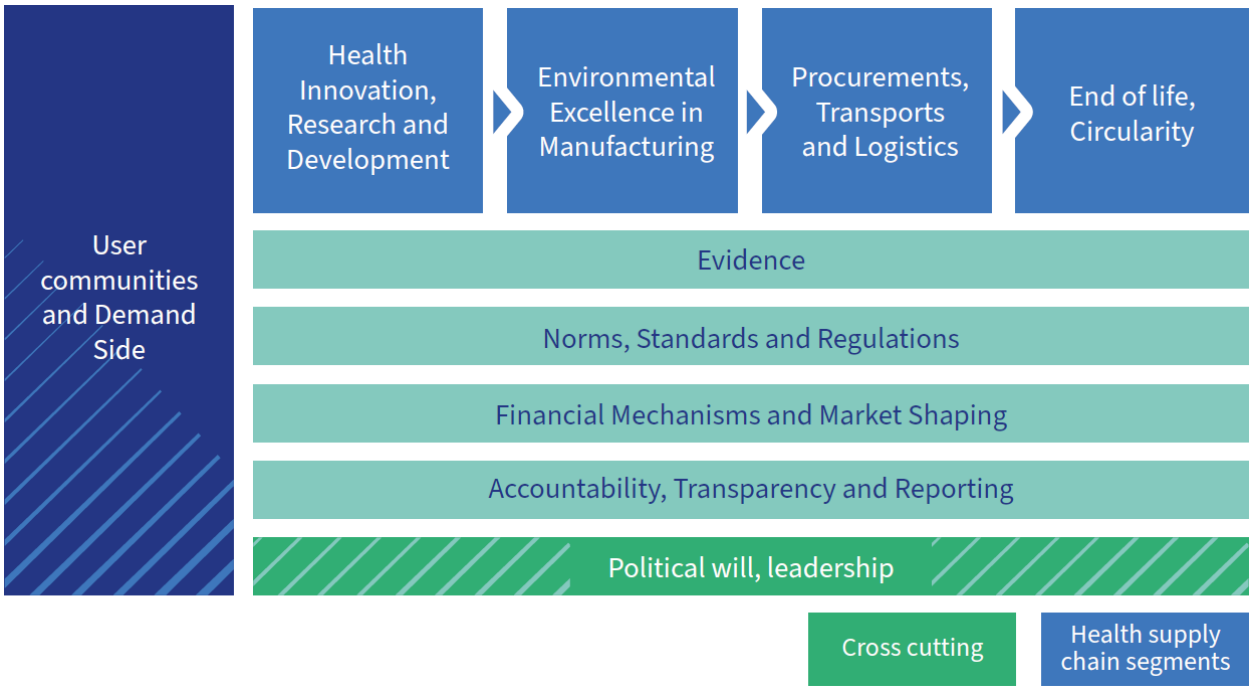
Prioritize equity and health outcomes: Ensure that all communities, especially marginalized populations, have access to climate resilient, low-carbon and environmentally sustainable health care products and services. Addressing disparities in health access contributes to overall resilience and sustainability.

People at the center: Place the needs and perspectives of people– especially health workers, patients, and communities – at the forefront in supply chain strategies, ensuring that these systems are designed to serve and respond to those they impact most.

3.2 FRAMEWORK OF SHARED PRIORITIES

This framework of priorities reflects the collective insights of more than 80 representatives from 40 organizations that participated in the Expert Consultation. It emphasizes the key themes and takeaways identified by these partners as vital for advancing climate-resilient, low-carbon, environmentally sustainable health supply chains, as advocated by the Alliance for Transformative Action on Climate Change (ATACH) and the Global Framework on Chemicals. The framework is designed to inspire collaboration, convey urgency, and drive action, providing guidance from a united group of stakeholders committed to build a more sustainable future for global health systems.

Priority areas for low carbon, climate resilient, environmentally sustainable health supply chains



1. Health innovation, research and development

• **Collaborative research:** Accelerate collaborative research and strengthen partnerships between public, private, and academic sectors to drive innovative materials, green chemistry and energy solutions that mitigate climate impacts and enhance resilience.

• **Product and material development investments:** Prioritize R&D investments focused on low-carbon, less toxic, reusable and environmentally sustainable practices ensuring waste minimization and circularity in health product development, care models, and service delivery.

• **User-centered approaches:** Integrate user-centered eco-design and actively involve end-users (health care professionals and patients) throughout the innovation process, from concept to market and end of use/life.

2. Environmental excellence in manufacturing

• **Green manufacturing excellence:** Adopt and disseminate green manufacturing practices that reduce waste and resource consumption while supporting lower environmental footprints.

• **Transparency, accountability and standards:** Enhance manufacturers' accountability by standardized reporting requirements to show commitment and verify progress toward achieving net-zero goals, phasing out chemicals of concern, and maintaining high environmental standards.

• **Lifecycle assessment:** Promote standardized lifecycle assessments to measure and improve the health and environmental impact of health products and services, as well as climate risks and vulnerabilities.

Regional manufacturing: Promote regional and local manufacturing that prioritizes environmentally sustainable, low-carbon, and climate-resilient practices and standards. Assist local manufacturers through capacity-building initiatives to help them meet the highest environmental standards and contribute to more diversified and climate-resilient supply chains.

3. Procurement, transport and logistics

• **Promote sustainable procurement:** Advocate for procurement policies and incentives that prioritize low-carbon, climate-resilient and environmentally sustainable products and supply chains in public purchasing. Set out company-level and product-level requirements for emissions disclosure, target setting and emissions reduction plans. Give priority to product alternatives that provide similar benefits but have a lower environmental impact and greater resilience.

• **Strengthen buyers' collaboration:** Enhance collaboration among national, regional, and international stakeholders to align procurement standards and pool procurement strategies that promote low-carbon and climate-resilient products and service delivery. Leverage the power and influence of United Nations procurement agencies and initiatives including leveraging WHO's mandate for setting standards for

pharmaceuticals and medical devices, which are widely used by other UN agencies and health systems globally.

• **Encourage sustainable transportation:** Promote the use of sustainable transportation options and optimized routes for low-carbon, climate resilient supply chain logistics from production to point of consumption and end of use.

4. User communities and demand-side

• **Promote access and health equity:** Ensure that communities have access to climate-resilient, lower-carbon health products and services, prioritizing marginalized populations while maintaining affordability and ensuring quality of care.

• **Awareness and training:** Increase knowledge and capacity of communities, patients, health workers and procurement officers on climate and environmental impacts, risks and safer, sustainable alternatives and reuse of the products they use through awareness raising and training activities.

• **Engage stakeholders proactively:** Involve stakeholders in demand creation and foster collaboration between health care providers, patients, and policymakers to stimulate demand for low-carbon solutions.

• **Context-sensitive trade-offs:** Acknowledge that health care professionals often operate under significant pressure, requiring sustainability initiatives to be adaptable and tailored for their specific contexts.

5. End of life: waste management and circularity

• **Waste avoidance, reusability and repairability:** Foster procurement and supply chain management principles that emphasize fulfilling essential needs without excess, reducing waste generation across the product lifecycle, and enhancing repairability/reusability, thereby cultivating a culture of waste avoidance and sustainability.

• **Eco-design and circularity:** Incorporate circular economy principles –supporting reuse, remanufacturing and recycling – from product design through procurement to end-of- or extension-of-life, ensuring products are designed, procured, and delivered for durability/reusability and reduced waste, identifying and putting in place the infrastructure and training needed to scale circular solutions across health care.

• **Safe, environmentally sustainable low-carbon disposal:** Promote consistent approaches for the environmentally responsible disposal of health products.

6. Transformative evidence

• **Identify priorities:** In the short term, focus on building evidence in the most critical areas with the highest toxicity and carbon emissions and risk to the supply chain, prioritizing essential products and services and high-impact opportunities.

• **Evidence as a public good:** Disseminate relevant datasets, evidence, and best practices as public goods for major product and service categories, offering critical information on product and supply chain footprints and vulnerabilities.

• **Focus on impact and solution-oriented studies:** Prioritize research and studies that assess the climate and environmental impacts and risks related to health products and service delivery, along with pathways to achieve environmentally sustainable, less toxic, lower carbon emissions and enhanced resilience.

• **Develop metrics for assessing the effectiveness of green initiatives within health supply chains:** Measure the impact of initiatives in reducing emissions, chemicals of concern and other pollutants within the supply chains.

• **Investigate cost implications:** Consider the cost of inaction and explore potential cost efficiencies or financial implications associated with the greening of products and supply chains.

7. Norms, standards and regulations

• **Integrate sustainability criteria:** Develop climate-resilient, low-carbon, and environmental sustainability criteria and ensure their consistent integration into norms, standards, regulatory frameworks, procurement standards, and (pre- and post-market) product approvals. These criteria should prevent greenwashing, double standards and include verification mechanisms, such as independent assessments of manufacturers and suppliers.

• **Align global standards and methods:** Harmonize global standards including through collaboration among regulators internationally and methods supporting implementation and reporting of environmental sustainability practices in health products.

• **Advocate for "green regulatory highways":** Promote the rapid adoption of regulatory policies that facilitate inclusion of environmentally sustainable, low-carbon and climate-resilient practices and products across the health sector. Unitaid and WHO will further strengthen their joint efforts to advance norms, standards, and regulations for broader environmental sustainability as a key outcome of the consultation.

8. Financial mechanisms and market shaping

• **Support market shaping:** Implement market shaping approach that prioritizes climate and health goals with broader environmental sustainability objectives including preventing harm from chemicals and wastes.

• **Push-pull incentives:** Develop push-pull incentive, stimulus packages and financial schemes that support adoption and acceleration of greener practices and avoid incentives for carbon-intensive products and practices throughout health supply chains.

• **High-impact decarbonization and sustainability interventions:** Form coalitions and develop ecosystem-level strategies for impactful market interventions that focus on decarbonizing and detoxifying large product markets and use procurement levers collaboratively to decarbonize and detoxify supply chains.

• **Unlocking new sources of financing:** Explore and direct innovative funding mechanisms that can support sustainable supply chains.

9. Accountability, transparency and reporting

• **Sustainability reporting:** Require organizations to transparently disclose their environmental sustainability commitments and progress towards detoxification, decarbonization, net-zero goals and climate adaptation, while developing and reporting on appropriate indicators and criteria for this purpose, through existing initiatives such as the UN supplier code of conduct, ATACH and the Global Framework on Chemicals.

• **Promote transparency:** Facilitate the sharing of relevant product and supply chain data, with a focus on their environmental impacts and risks and materiality within the health sector such as through the ATACH Community of Practice.

• **Accountability standards:** Implement mechanisms to ensure stakeholders are held accountable for achieving sustainability goals, ensuring alignment and avoiding duplication with existing reporting frameworks.

10. Political will and leadership

• **Political and financial commitments.** Lead by example. Advocate for strong political and financial commitments to prioritize detoxified, decarbonized and climate-resilient health care supply chains at international, regional, and national levels in line with global health and climate priorities.

• **Country ownership:** Ensure full integration of environmentally sustainable, low-carbon and climate resilient supply chain initiatives into national climate plans (e.g., Nationally Determined Contributions and National Adaptation Plans) through ATACH, and the work of all relevant partners, and implementation of the Global Framework on Chemicals and Waste.

• **Coordinated approach:** Establish coordinated roadmaps and shared leadership models via the ATACH platform to align priorities, enhance initiative coordination, and facilitate structured dialogues at the intersection of climate and health supply chains. Strengthen linkages and include implementation activities in the Global Framework on Chemicals.

4. CONCLUSIONS AND WAY FORWARD

The consultation concluded with a strong commitment to collaborative action, aimed at fostering long-term sustainability in healthcare supply chains to strengthen global, regional and national efforts to advance climate resilient, low carbon, environmentally sustainable healthcare supply chains. The key collective action identified by all participants on Building Climate-Resilient and Environmentally Sustainable and Low Carbon Health Supply Chains are described in the section 3 above.

WHO departments including Procurement, Regulations and Standards, and Prequalification that participated in the consultation supported integrating environmental best practices into their ongoing and future initiatives and support member states with sustainable procurement and supply chains in the health sector. This includes supporting the recent Call for Action for a Greener Pharmaceutical Regulatory Highway, including environmental sustainability criteria to product profiles and within technology transfer and guidance on sustainable procurement in the health sector.

As part of its Climate & Health strategy, Unitaid looks forward to collaborating with partners to advance low-carbon, climate-resilient supply chains.

The key priorities will be shared with ATACH and the Global Framework on Chemicals on building sustainable health supply chains.

Future actions include strengthening the health sector's contribution to the Implementation Programme for the Global Framework on Chemicals. Informing GFC on the meeting recommendations and developing a proposal for health-sector implementation activities under the GFC focusing on the health sector as a key user of chemicals along economic and value chains.

A technical meeting is planned to share the recommendations with the ATACH community and suggest alignment of the meeting recommendations with ATACH task teams and technical meetings. ATACH and the GFC will provide the platform for continued collaboration with stakeholders on Building Climate-Resilient and Environmentally Sustainable and Low Carbon Health Supply Chains.

ANNEXES

ANNEX 1: EXPERT CONSULTATION CONCEPT NOTE

Scope and Purpose

To discuss ways of fostering and implementing key political agreements that promote a climate-resilient and environmentally sustainable health service including WHA Resolution 77.14 on Climate Change and Health , WHA Resolution 76.16 on the impacts of chemicals, waste and pollution on human health, the health outcomes of COP26, COP27, and COP28, the COP28 UAE Declaration on Climate and Health, and the health aspects of the Global Framework on Chemicals for a planet free of harm from chemicals and waste.

The expert consultation will take account of relevant priorities of the Alliance for Transformative Action on Climate and Health (ATACH) and discuss the development of focused activities for healthcare as a key economic sector of the Global Framework on Chemicals and relevant provisions of the international legally binding instrument on plastic pollution. The expert consultation will respond to country needs and promote better understanding of the opportunities and barriers to make progress in these important integrated agendas. Participants will share experiences and expertise for building climate resilient, low carbon and environmentally sustainable supply chains within health systems.

Background

Although the health sector's mandate is to protect and promote health and treat disease, it is estimated to be responsible for 4.6 percent of net global greenhouse gas emissions and is one of the largest users of hazardous chemicals. While the total volume of plastic used by the healthcare sector is not known, plastic is estimated to comprise 30% of all healthcare wastes with volumes of 1.7 million tonnes, and 133,000 tonnes in the US and UK alone. More than 70 percent of healthcare's greenhouse gas emissions come from the global health care supply chain. At nearly 10% of the global economy, a large volume of products and materials come into hospitals.

Many chemical products can be harmful to patients, staff, and those in the community at some point in their life cycle. Some products contain or release carcinogens, reproductive toxicants, or other hazardous materials, exposing patients, staff, and the community to harm that can be readily prevented. The production, packaging, transportation, use, and disposal of medical products is a major contributor not only to climate change, but also to chemical contamination, resource depletion, biodiversity loss, antimicrobial resistance, and air and water pollution. In addition, worker exploitation has been documented in some product manufacturing. Plastics are found in both clinical and non-clinical

healthcare settings. Disposal of healthcare waste is a frequent challenge in low- and middle-income countries.

WHO has existing, well-established health guidance, technical and standard-setting mechanisms, expert advisory groups, networks and working groups in relation to health products (including medicines and medical devices), assessment of health risks, management of health waste, and initiatives to reduce carbon and toxicity and increase sustainability in the health supply chain. Over eighty (80) Member states have joined the Alliance for Transformative Action on Climate Change and Health (ATACH) to implement the COP26 health initiatives of building a climate-resilient and low carbon health system including sustainable supply chains.

There has been a growing demand from member states to recognize the nexus of climate change, pollution and health. The COP28 climate and health declaration signed by over 140 Member States commits to promoting climate resilient and low carbon health systems including steps to curb emissions and reduce waste in the health sector, set procurement standards, including supply chains.

- WHO's operational framework for building climate resilient and low carbon health systems is a useful tool to implement the ATACH goals. The framework's supports increasing the climate resilience of health systems in an unstable and changing climate, while optimizing the use of resources and reducing GHG emissions. Leading to increased preparedness for current and future climate change risks and impacts, potential cost savings. To further help reduce the health risks associated with climate variability and change, while minimizing its own environmental impact and GHG emissions.

- World Health Assembly Resolution 76.17 calls upon Member States to support WHO in scaling-up work on plastics and health to enable better information of the potential human health impacts associated with plastic, including plastic pollution, with the aim of strengthening the public health aspects, including under the work of the Intergovernmental Negotiating Committee (INC) to develop an international legally binding instrument on plastic pollution.

- The newly adopted Global Framework on Chemicals, which supersedes SAICM places a strong emphasis on addressing chemical production and use along value chains. Under Strategic Objective D of the Framework, major economic and industry sectors are called upon to develop and implement, by 2030, sustainable chemical and waste management strategies that identify priority chemicals of concern, as well as standards and measures that reduce their impact and, where feasible, their input along the value chains

Objectives

1. Foster a common understanding of the existing mechanisms, challenges and opportunities, for the health sector to achieve climate resilient and environmentally sustainable health services and supply chains;

2. Identify strategies, tools and resources needed to support Member States to implement the health initiatives on climate resilient and low carbon, sustainable health systems' supply chain commitments, to promote plastics and healthcare considerations in negotiations for an internationally binding instrument for plastics pollution and the Global Framework on Chemicals for a Planet Free of Harm from Chemicals and Waste on chemicals of concern in health care settings;

3. Share experiences and facilitate collaboration between and among international agencies, countries, health systems and other sectors for the implementation of climate resilient and environmentally sustainable health care and supply chains.

Outcomes

1. Identify and prioritize key actions to achieve climate resilient, low carbon and environmentally sustainable health care and supply chains for implementation by health systems, international organizations and the private sector.

2. Identify opportunities for working together and enabling action on operationalizing sustainability considerations in the procurement and supply chain processes.

3. Identify gaps, challenges and research needs for advancing a cohesive action to address climate resilient, low carbon and sustainable health care and supply chains, including low carbon, toxic and plastic pathways.

4. Document and disseminate case studies, lessons learnt and good practices from country and partner experiences in reducing greenhouse gas emissions and chemicals of concern, including plastics from the health supply chain.

5. Contribute to the development of a roadmap and key steps for the possible content of an implementation programme for the health sector as a key economic sector in the Global Framework on Chemicals for a Planet Free of Harm from Chemicals and Waste.

6. Support health decision-makers to develop action plans and indicators for climate resilient and environmentally sustainable health care supply chains in support of Universal Health Coverage.

Participants

The participants will include subject matter experts on climate change and health, environmental sustainability, chemicals and plastics in health care products, waste management and procurement and supply chains and regulators and standard setting agencies. Representatives of international organizations, Member States, and other key stakeholders, including health service providers, health sector suppliers, academia, and workers' organizations.

Format

The meeting will include keynote speeches, thematic presentations, discussion of case studies and moderated discussion forums, breakout sessions, The working language will be English. There will be an opportunity for remote participation in selected sessions.

ANNEX 2: CONSULTATION AGENDA

Climate resilient and environmentally sustainable supply chains in the health sector

Expert Consultation

Centre International de Conférences de Genève (CICG), Rue de Varembé 9-11,

Geneva, Switzerland

2-4 October 2024

Day 1: Wednesday, 2 October

Morning session, 9.00 - 12.30

9.00 - 9.30 Welcome

Moderator: Angela Kastner, Director, Procurement and Supply Services

Speakers

- Ailan Li, Assistant Director General, Division of Universal Health Care /Healthier Populations, WHO
- Philippe Duneton, Executive Director, Unitaid
- Deusdedit Mubangizi, Director, Health Policy Products and Standards, WHO
- Rogerio Gaspar, Director, Regulation and Pre-Qualification, WHO
- Angela Kastner, Director, Procurement and Supply Services, WHO

9.30 – 10.30 Opening session

The health and environmental impacts of the global supply chain

Moderator: Angela Kastner, Director, Procurement and Supply Services

Speakers

- Lesley Onyon, Unit Head Chemicals, WHO
- Diarmid Campbell – Lendrum, Unit Head Climate and Health, WHO
- Vincent Bretin, Director Results, Climate and Health, Unitaid

10.30- 11.00 Coffee break and group photo

11.00 – 12.30 Session 1: Panel discussions - Existing global initiatives and programmes

Panel 1: Leveraging WHO's mandate to integrate sustainability into the supply chain

Moderator: Marina Smelyanskaya, Team Lead, HIV and Health Group, ECA region, UNDP

Speakers

- WHO Procurement, Angela Kastner
- WHO Standard setting and technical specifications, Deusdedit Mubangizi
- WHO Regulatory initiatives, Rogerio Gaspar
- Louis da Gama, Community representative, Unitaid Executive Board

Q & A

Panel 2: Global initiatives to integrate sustainability into the health supply chain

Moderator: Diarmid Campbell-Lendrum, Unit Head Climate Change and Health

Speakers

- Lancet Commission on Sustainable Healthcare, Jodi Sherman
- UN Global Framework on Chemicals, Kay Wiliams
- Asian Development Bank, Dinesh Arora
- National Health Service, England, Katherine Calder
- Sustainable Markets Initiative, Aude Arkam
- Global Green and Healthy Hospitals, Health Care Without Harm, Diana Picon Manyari

Q & A

12.30- 13.30 Lunch

Day 1: Afternoon session: 13.30 – 17.30

13.30-15.30 Session 2: Sustainability in the health value chain: Procurement and supply chain management

Moderator: Angela Kastner, Director, Procurement and Supply Services

Sustainability in the health value chain: Supply chain management

Speakers

- Introduction to sustainable supply chain procurement, Angela Kastner, Procurement and Supply Services, WHO
- Health value chain: Technical specifications and standards, Adriana Velazquez, Health Policy Products and Standards, WHO
- Life Cycle Analysis standard setting, Courtney Soulsby, British Standards Institute
- **Case study**: Biomedical devices sustainability criteria for purchasing medical imaging devices (Medical Equipment Proactive Alliance of Sustainable Healthcare), Mellissa Nguyen, Vizient
- **Case study**: Good Manufacturing Practices, Aude Arkam, Sustainable Markets Initiative
- **Case study**: Life Cycle Analysis France country experience, Charles Flahaut, French Government

Q & A

Sustainability in the health value chain: Procurement

Speakers

- Sustainable procurement in UN: Opportunities and challenges, Anne-Claire Howard, Director, Procurement UNOPS
- **Case study**: Implementing sustainable procurement, Marcus Mckay, UNOPS

- Sustainable Health in Procurement Project successes & Sustainable Procurement Index Health, Ian Milimo, UNDP
- **Case study**: Sustainable public procurement, Pankaj Kumar, Head, Procurement and Stores, National Centre for Disease Control, India
- **Case study**: Setting priorities for sustainable procurement, Corentine Berthet, Médecins Sans Frontières
- Supplier Engagement: Issues, challenges and supplier perspectives toward the UN, Roberto Samayoa, Pan American Health Organization

Q & A

15.30 – 16.00 Coffee break

16.00-17.15 Parallel Sessions: Measuring and reducing climate and chemical footprints in health systems

Parallel session 1: Climate change and health

Moderator: Elena Villalobos, Climate change and health unit, WHO

Speakers

- Mapping carbon emissions at facility level for sustainable procurement, Miriam Kugele, Aga Khan University, Pakistan
- Reducing greenhouse gases from anaesthesia: nitrous oxide, Jonas Schwartzman, São Paulo Association for the Development of Medicine, Brazil
- Environmental footprint of the healthcare sector in the Netherlands, Susanne Waaijers-van der Loop, The Dutch Institute for Public Health and Environment, Netherlands

Parallel session 2: Chemicals and waste

Moderators: Susan Wilburn, Chemicals unit, WHO, and Tracey Easthope, HCWH

Speakers

- Global Framework on Framework Implementation Programme, Achim Halpaap, Senior Advisor, IOMC
- Chemicals of concern in the health sector, occupational and environmental health impacts, Susan Wilburn, WHO
- **Case Study**: European healthcare's Phase-Out List for chemicals of concern (EPOL), Maiken Pollestad Sele, Norwegian Hospital Procurement Trust, Norway
- **Case Study**: Substituting PVC/DEHP in medical devices, Switchmed, Ahmed Idhammad, University Hospital Marrakech, Morocco

17.15 - 17.30: Day 1 Closing: Rogerio Gaspar, Director, Regulation and Pre-Qualification, WHO

18.00-19.00: Reception

Day 2: Thursday, 3 October

Morning session: 9.00 - 12.30

Opening: Maria Neira, Director, Environment Climate Change and Health

9.00 10.30 Session 3: Plastics and health care – the intersection of climate and chemicals

Moderator: Damaris Carnal, Swiss Federal Office for Public Health

Speakers

- Health impacts of plastics, Sarah Dunlop, Minderoo Monaco Commission
- Plastic materials, labeling, traceability, packaging, recyclability, reusability, Jane Muncke, Food Packaging Forum
- **Case study**: Plastics in health products, lessons learned from plastic audits, Michelle Reyes, HCWH Southeast Asia
- Plastics reduction in packaging in pharma, International Federation of Pharmaceutical Manufacturers and Associations, Ya-Juin Chou
- Reusables vs single-use device and infection prevention and control, Jodi Sherman, Yale University, USA
- **Case Study**: Reusable respiratory masks, Dr. Ludwig Albornoz, Academic Director of the Department of Pathology and Clinical Laboratory of Fundación Valle del Lili, Colombia
- Plastics Treaty –Switzerland Ministry of Environment

10.30 – 11.00 Coffee Break

11.00 – 13.00 Session 4: Market shaping and innovation to advance climate resilient and environmentally sustainable supply chains

Panel 1: Policy and Standard Setting

Moderator: Clare Creo, Senior Advisor Polio Eradication Programme, WHO

Speakers

- Integrating sustainability into Target Product Profiles, Assessment of innovative technologies for low resource settings including regulations, HTA and HTM, local production and sustainability issues, Adriana Velazquez, WHO
- Health Technology Access Pool (HTAP), Cheleka Mpande, WHO
- Global Framework on Chemicals: Implementation programme on integrating chemicals and waste management in economic and industry sectors and value chains, Achim Halpaap, Expert Chemicals

- International environmental sustainability standards for hospitals, International Hospital Federation and Joint Commission International, Geneva Sustainability Institute, Sonia Roschnik
- **Case study**: Pre-commercial procurement (PCP case study), HCWH, Europe, Ali Fakih

Discussion

Panel 2 Market shaping

Moderator: Julien Pouille, Unitaid

Speakers

- Market shaping for environmentally sustainable supply chains, Ray Cummings, PATH
- **Case study**: Metered dose inhalers, health technology assessment, Katherine Calder, NHS, England
- **Case study**: Bednets and supplier engagement, Global Fund
- **Case Study**: Market transformation case study, furnishings, Tracey Easthope, USA
- Challenges and opportunities for the integration of sustainability into procurement towards market transformation, Jean-Pierre Amorij, UNICEF

Discussion

13.00- 14.00 Lunch

Day 2: Afternoon session: 14.00 – 18.00

14.00 - 15.00 Session 5: Climate resilient and sustainable supply chains

Moderator: Roberto Samayoa, PAHO

Speakers

- What climate resilience means for supply chains, Roberto Samayoa, PAHO

- Climate resilience through regional manufacturing initiatives, Robert Matiru, Unitaid
- Climate change and its impact on supply chain, Lisa Hedman, WHO Procurement
- COVID19 and waste management, Ute Pieper, WHO
- **Case study**: Procurement for waste reduction, the management of health care waste and addressing climate risk. Azeeza Rangunwala, groundwork, South Africa

15.30 - 17.30 Session 6: World Café- presentation of tools and resources for sustainable supply chains

15.30 - 16.30 Part 1: 6 stations:

- ATACH Community of Practice, Olena Zotova, WHO
- Sustainable Procurement Index Health, Ian Milimo, UNDP/HCWH
- WHO Chemicals Roadmap, Virunya BHAT, WHO
- Environmental footprint of healthcare sector in the Netherlands, Susanne Waaijers-van der Loop, RIVM
- Carbon footprinting for health facilities, Miriam Kugele, Aga Khan University
- National Pollutant Release and Transfer Registers (PRTRs), Oliver Wootten, UNITAR

16.30 - 17.30 Part 2: 6 **stations:**

- National Health Service, Roadmap, Katherine Calder, NHS, England
- Tools for carbon footprinting for the health systems, Diana Picon Manyari, HCWH
- Life cycle analysis, Courtney Soulsby BSI and SMI
- Globally harmonized system for classification and labeling of chemicals, Jorge Ocana, UNITAR,
- Health care waste treatment technology selection guide, Ute Pieper, WHO
- Guiding elements of a chemicals & waste strategy, Achim Halpaap, Senior Advisor, IOMC

17.30 – 18.00: Day 2, Closing: Maria Neira, Director, Environment Climate Change and Health

Day 3: Friday, 4 October

Morning session: 8.30 - 12.30

Working Groups

Developing implementation plans for climate resilient and environmentally sustainable supply chains within the health sector

Working group 1: Implementation programme for the health sector value chain for Global Framework on Chemicals for a planet free of harm from chemicals and waste

Lead: WHO

- Developing the health sector implementation programme for the Global Framework on Chemicals for a planet free of harm from chemicals and waste

Working Group 2: Interagency collaboration on sustainable practices within health supply chains

Lead: WHO, UNDP and UNITAID

- Developing an inventory of existing policies and practices within the international community that support environmentally sustainable health supply chains.
- Enhancing cross collaboration between buyers of health products on sustainable procurement standards and criteria (based on Alliance for Transformative Action on Climate and Health (ATACH) priorities)
- Brainstorming the key building blocks of the roadmap for low carbon/resilient supply chains Roadmap development/Action planning

12.00 – 1.00 pm: Closing- WHO and UNITAID

ANNEX 3: LIST OF PARTICIPATING ORGANIZATIONS

- Aga Khan Development Network (AKDN)
- Aga Khan University (AKU)
- Asian Development Bank (ADB)
- British Standards Institution (BSI)
- Center for Health Environment Research and Development (CHERAD)
- CHU (Le Centre Hospitalo-Universitaire), Marrakech, Morocco
- Climate Action Accelerator
- Drugs for Neglected Diseases initiative (DNDi)
- Directorate Environmental Health, Ministry of Health of Indonesia
- FIND, diagnosis for all
- Food Packaging Forum Foundation
- Fundación Valle del Lili, Colombia
- General Directorate of Enterprises (DGE), French Public Administration. France
- Geneva Sustainability Institute
- Greener NHS, National Health Systems England
- Health Care Without Harm (HCWH)
- Health and Environment Justice Support (HEJ Support)
- Health Environment Management Agency (VIHEMA), Ministry of Health, Vietnam
- International Federation of Pharmaceutical Manufacturers and Associations *(*IFPMA)
- Lancet Commission on Sustainable Healthcare
- Maharat Nakhon Ratchasima Hospital, Thailand
- Médecins Sans Frontières (MSF)
- Medicines for Malaria Venture (MMV)
- Minderoo Foundation
- Ministry of Environment, Jordan
- National Centre for Disease Control, India
- Norwegian Hospital Procurement Trust
- Organization for Economic Co-operation and Development (OECD)
- Program for Appropriate Technology in Health (PATH)
- São Paulo Society for the Development of Medicine
- Sustainable Markets Initiative (SMI)
- Swiss Public Health Agency
- The Dutch Institute for Public Health and Environment
- The Global Fund to Fight AIDS, TB and Malaria
- UNDP
- UNEP
- UNICEF
- Unitaid
- UNITAR
- UNOPS
- USAID
- Vizient, Inc
- WHO &PAHO
- Yale University

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