

THE FUTURE IS...



Transitioning to A Circular Economy and Zero Waste Society through Integrated Chemical and Waste Management

 23 AUGUST 2023

 11:00 - 12:30 PM

 ROOM 202

...ZERO WASTE.



Agenda

Opening Remarks:

Mr. Snehal Soneji, Resident Representative in Comoros, UNDP

Avfall Sverige: Master presentation about Zero Waste Initiative and how it connects with a Circular Economy vision. The role of Municipalities and waste management associations. 12 minutes. Speaker: **Mr. Tony Clark**.

STAP: Circular economy and technical challenges. Inclusion of circular economy and zero waste within Integrated programmes in GEF8. 5 minutes. Speaker: **Dr. Miriam Diamond**.

Health Care without Harm: Sector example: How to introduce Circular Economy and waste minimization strategies in the Health Care Sector. 8 minutes. Speaker: **Ms. Susan Wilburn**.

Round table panel discussion with national and local governments (20 minutes):

Facilitator: Tony Clark

- ***Dr. Noralene Uy**, Assistant Secretary for Policy, Planning and Foreign-Assisted and Special Projects of the Department of Environment and Natural Resources (DENR), Government of the Philippines.*
- ***Ms. Judith Torres**, Environmental Affairs Officer, Cooperation and International Affairs Advisory Office - Ministry of Environment, Government of Uruguay.*

Questions and Answers

Closing remarks: Mr. Anil Sookdeo, GEF Secretariat, Senior Environmental Specialist, Coordinator for Chemicals and Waste (5 minutes)

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Thematic presentations

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Transitioning to A Circular Economy and Zero Waste Society through Integrated Chemical and Waste Management

Tony Clark

Managing Director at

Avfall Sverige – Swedish Waste Management

23 August 2023



AVFALL SVERIGE

Avfall Sverige – Swedish Waste Management

The Swedish association for
waste management
and recycling

Primarily municipal members
and associated private members

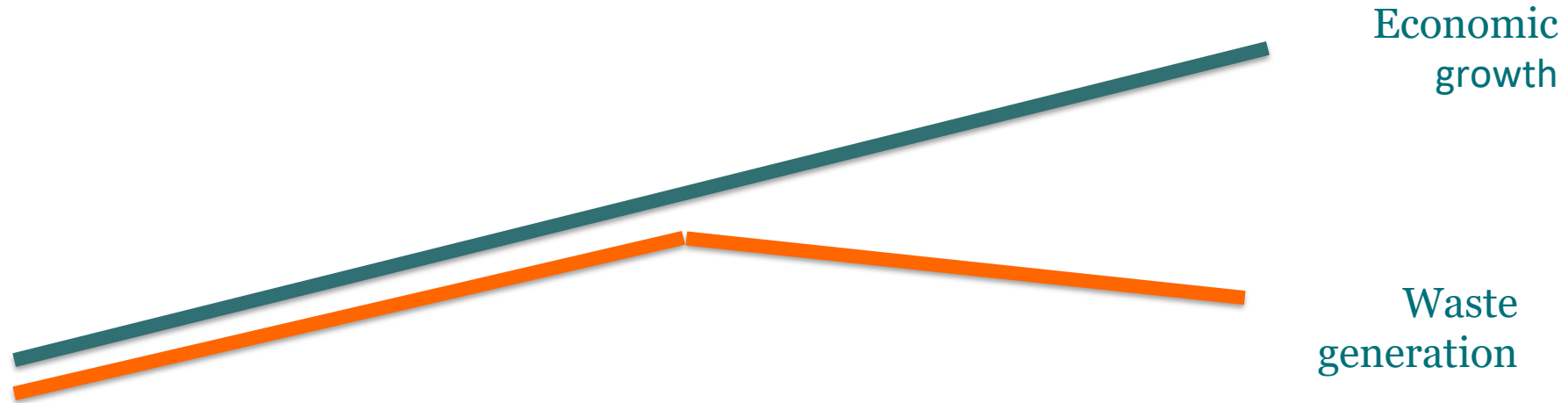


Avfall Sverige's Vision

”Zero waste”



Decouple



Waste hierarchy



© Avfall Sverige

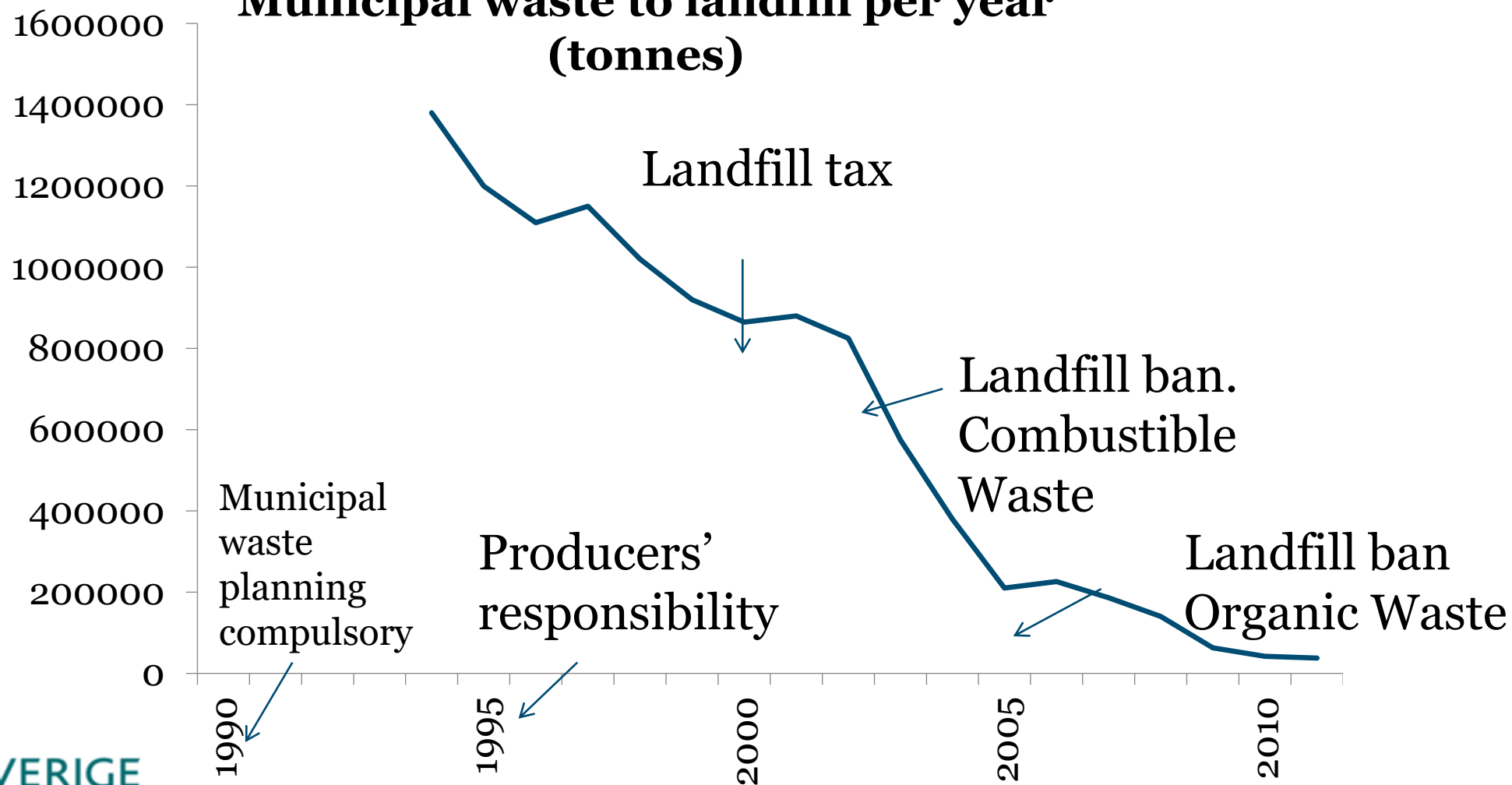
The greater waste picture

- Huge landfill and open burning
- Resources not being used
- Great climate impact
- Marine litter



The Swedish journey to zero waste landfill

**Municipal waste to landfill per year
(tonnes)**



The Evolution

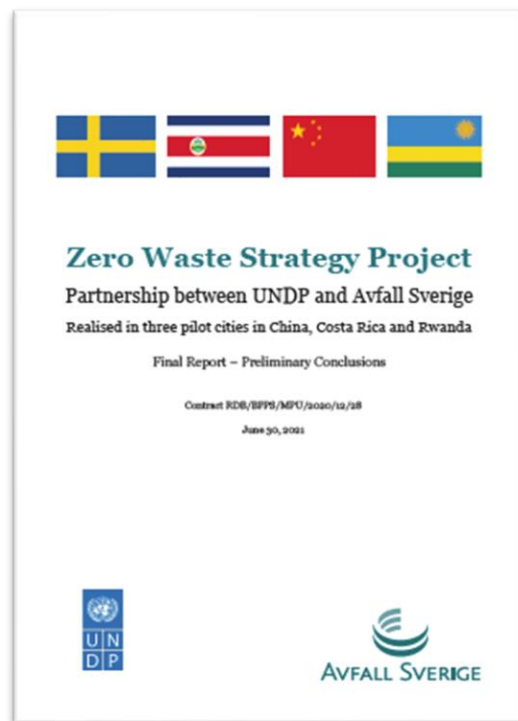
LINEAR ECONOMY

RECYCLING ECONOMY

CIRCULAR ECONOMY



Pilot study



MOU UNDP & Avfall Sverige



Clearinghouse for waste



E-learning



The importance of governance



The role of municipalities is pivotal

- A service of general interest
- Next to the citizens
- Political responsibility
- Spatial planning
- Partner to PPPs
- Basis for inter-municipal cooperation
- Integration to other services such as water, sewage and energy as well as clean air



10 steps to success: A roadmap

1. Planning and setting targets
2. Define responsibilities and funding mechanism
3. Organize inter-municipal structures
4. Build awareness and involvement
5. Close dumpsites and build regional sanitary landfills
6. Organize 100% waste collection
7. Separate organic waste collection/composting /(digestion in the future)
8. Separate collection of haz waste/e-waste
9. Separate collection of packaging and materials
10. Waste to energy in high density areas

UNDP's Zero Waste Offer

Introduce Zero Waste vision in 50 developing countries by 2025, enhance sustainable waste management governance in cities, and finance the development of Zero Waste policies and strategies in selected cities through a gender responsive and inclusive approach.

Actions:

1. Integrated planning and programming for Zero Waste City
2. Clearinghouse on waste management
3. Financing instruments
4. Sustainable production and consumption
5. Training, education, advocacy and formalization



Thank you for your attention!

tony.clark@avfallsverige.se



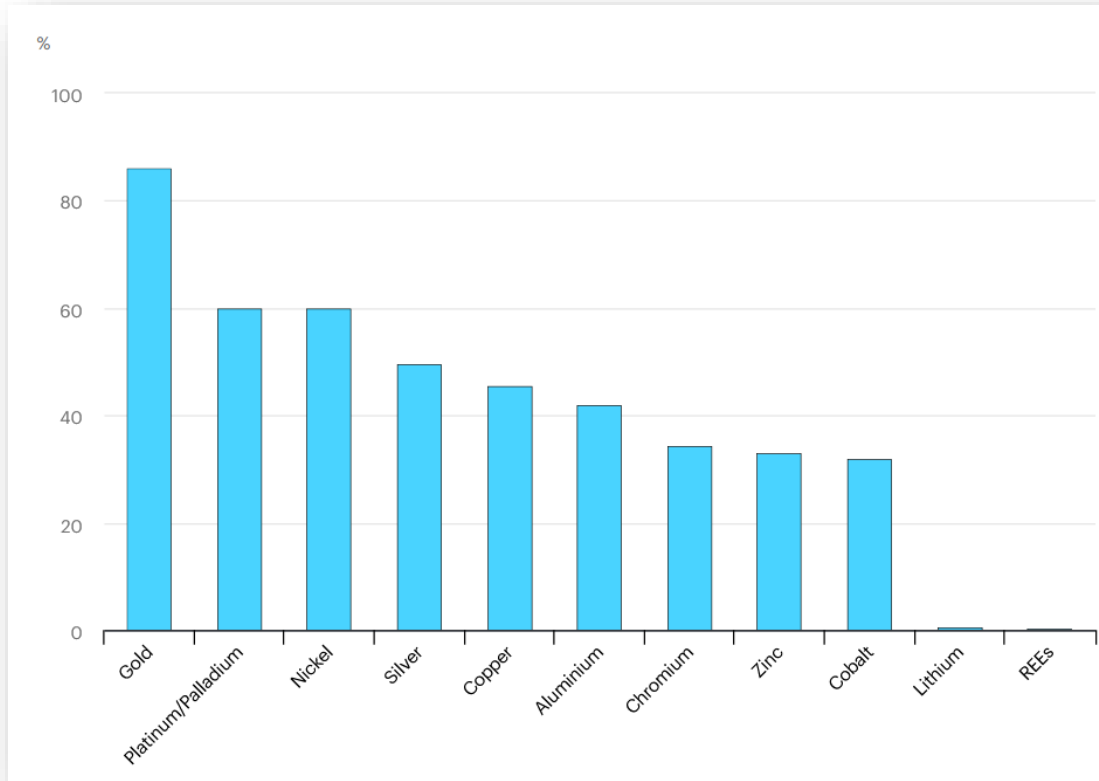
Transitioning to A Circular Economy and Zero Waste Society through Integrated Chemical and Waste Management

Miriam Diamond

Scientific and Technical Advisory Panel (STAP)

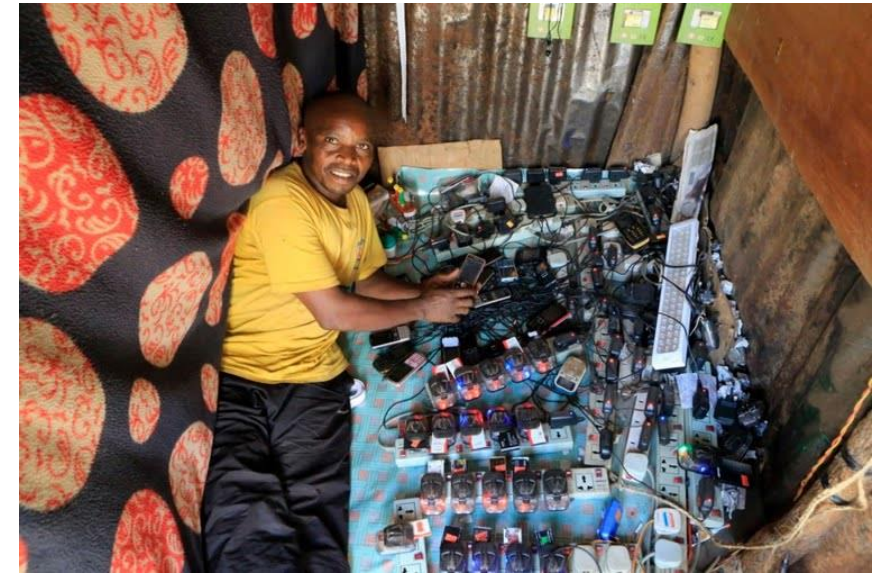
University of Toronto

Circular Economy: Gold in Mobile Phones



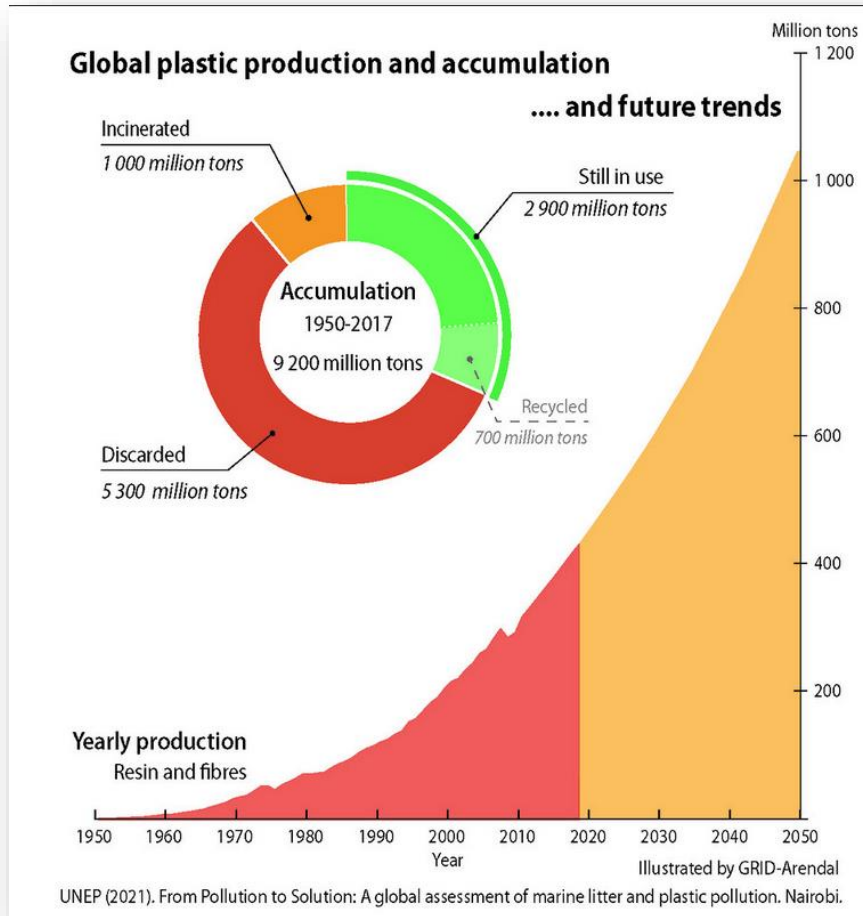
- 5 gm in 1 tonne of ore
- 280 gm in 1 tonne of old mobile phones
- 1.4 kg in 1 tonne of old printed circuit boards
- Newer phones have less gold & thus less profitable to recycle

<https://www.iea.org/data-and-statistics/charts/end-of-life-recycling-rates-for-selected-metals>



<http://widerimage.reuters.com/story/going-for-gold/>

Plastics

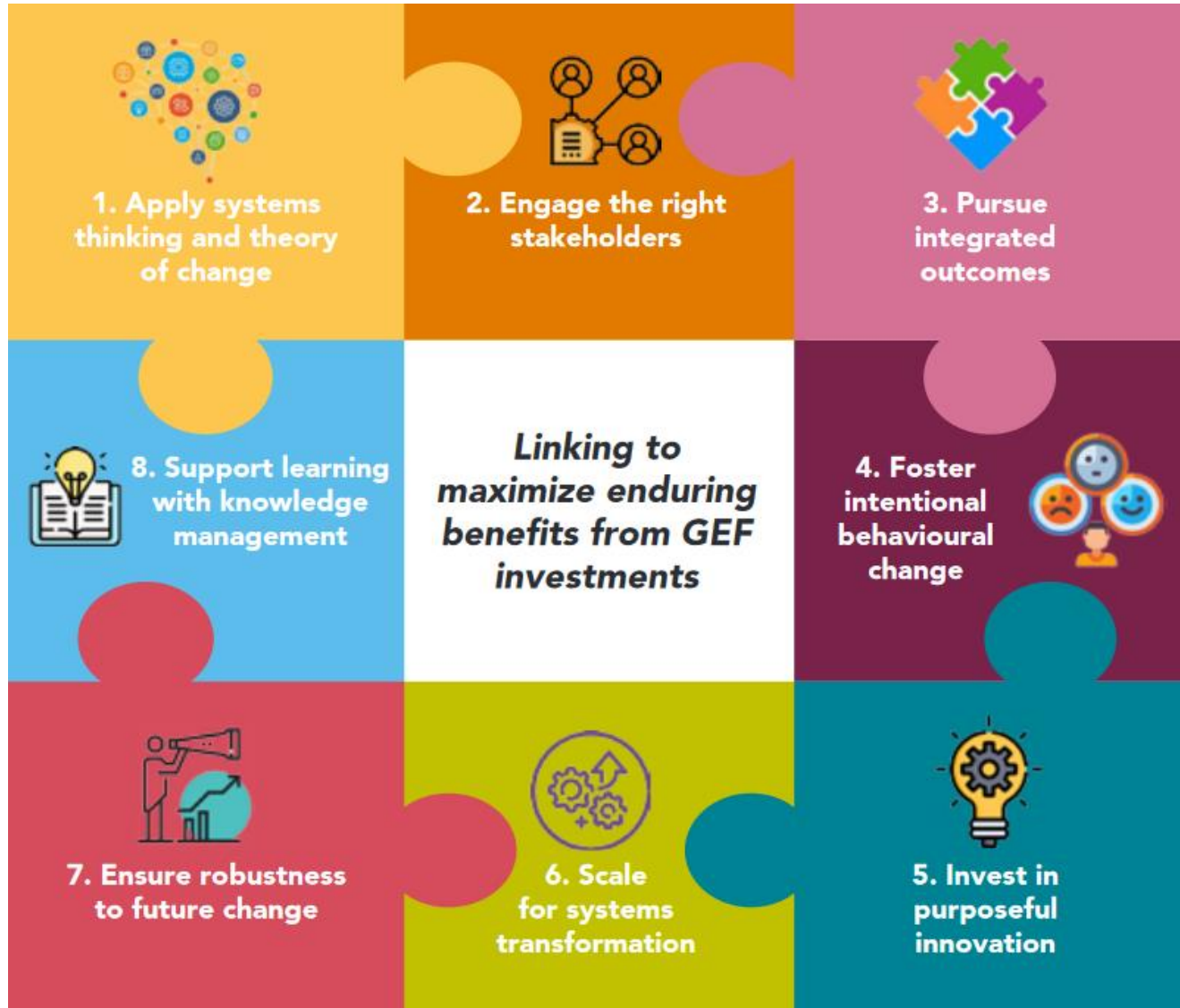


Plastic Water Sachets



- Solution to provide clean drinking water
- Light weight to reduce material use but more difficult to recycle

Moving towards solutions....



GEF Integrated Program

1. Circular Solutions to Plastic Pollution

- Focus on food & beverage sector → 40% annual plastic waste
- 15 national projects (e.g., Senegal, Burkina Faso, Lao, Cambodia, India, Peru)
- Key needs
 - how to trace plastic pollution, material & design innovations, labelling, effective education campaigns to raise awareness, knowledge exchange within a sector such as restaurants, hotels, caterers
- Interventions
 - Eliminate & reduce problematic and unnecessary plastic, esp very short life
 - Design for circularity, reduce problematic product design, shift to alternatives
 - Policies and innovative business models to promote material circulation, promote partnerships and coalitions, models for EPR and Deposit & Return Schemes

GEF Integrated Program

2. Eliminating hazardous chemicals from supply chains

- Focus on textiles and construction materials
- 9 national projects (e.g., Cambodia, Costa Rica, Ecuador, India, Mongolia)
- Key challenges and opportunities
 - Complex supply chains, opportunities for multiple benefits & co-benefits
- Interventions
 - Design innovative & regenerative products using circular business models
 - Material substitution
 - Low waste production processes
 - Create markets for innovative products and promote behaviour change
 - Regulatory coherence



Senegalese environmental activist Modou Fall, known as "Plastic Man", takes to the streets to alert people to single-use plastic pollution in Dakar. Photo: Annika Hammerschlag/Anadolu Agency via AFP

<https://www.unep.org/news-and-stories/story/rarely-told-story-widely-used-water-sachets>



Transitioning to A Circular Economy and Zero Waste Society through Integrated Chemical and Waste Management in the Health Sector

GEF Seventh Assembly, Vancouver, Canada

Susan Wilburn, BScN, MPH
Health Care Without Harm

23 August 2023

Health Care Without Harm

HCWH's Mission is to: *Transform health care* worldwide so that it reduces its environmental footprint, becomes a community anchor for *sustainability* and a leader in the global movement for *environmental health and justice*.



HCWH's 3 Overarching Goals

1. **Protect Public Health from Climate Change:** Reduce health care's carbon footprint, foster climate resilient health systems, mobilize the health sector to address climate change as a public health issue, and advocate for solutions that accelerate a transition to clean, renewable energy.
2. **Transform the Supply Chain:** Establish and globalize procurement criteria and leverage health care's purchasing power to drive policies and markets for ethically produced, healthy, sustainable products and services.
3. **Build Leadership for Environmental Health:** Inspire, mobilize and support health care's leadership to promote environmental sustainability, human rights, and the right to health **in** order to achieve large-scale transformational change.

GGHH has 1,775 members in 83 countries representing the interests of 70,808 hospitals and health centers

US and Canada

13 members representing the interests of 2,484 hospitals and health centers.

Europe

166 members representing the interests of 8,031 hospitals and health centers.

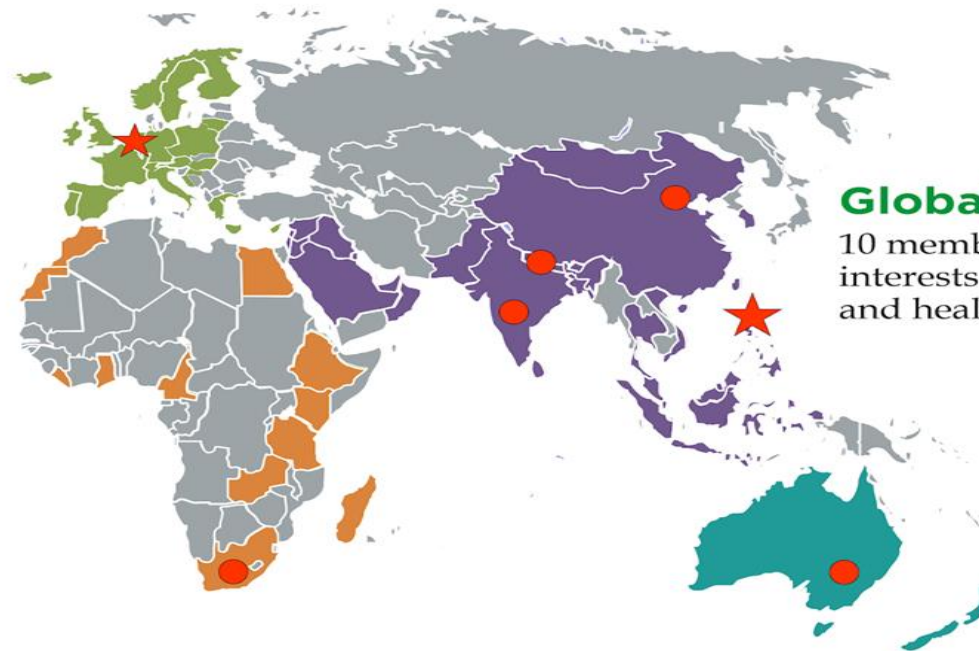
Asia

271 members representing the interests of 20,885 hospitals and health centers.



Latin America

1,062 members representing the interests of 28,408 hospitals and health centers.



Africa

119 members representing the interests of 5,756 hospitals and health centers.

Pacific

147 members representing the interests of 3,339 hospitals and health centers.

Global

10 members representing the interests of 2,304 hospitals and health centers.

What is circularity in health care?

Circularity is

- Benign by design – helps to create a toxic-free future
- Moving up the hierarchy of controls towards elimination of hazards and zero waste
 - Design and procurement for reuse
 - Elimination of single –use plastics
 - Phase out incineration

Circular approaches should:

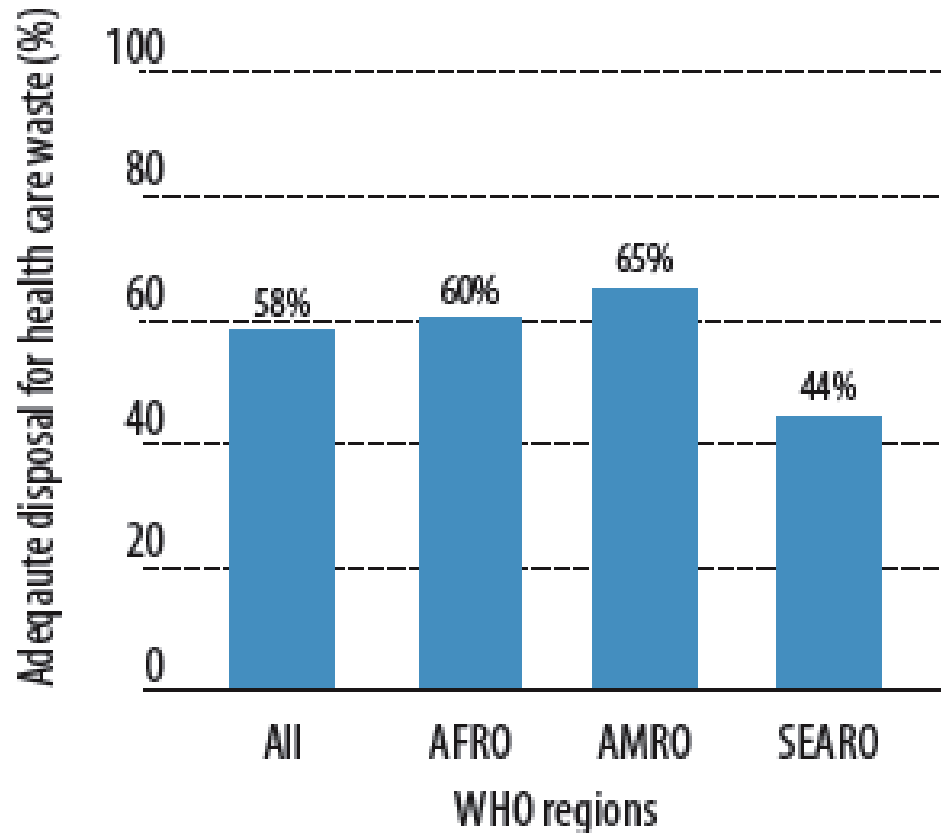
- **Improve social equity and participation in governance**
- **Focus on primary prevention including worker protection**
- **Support transparency of chemicals in products**
- **Adhere to the Precautionary approach**
- **Require Polluters to pay**

Circularity is not

- Waste to energy
- Legacy toxics through recycling

On the road to circularity – waste management

Globally, safe health care waste management is lacking



WHO/UNICEF. 2015. *Water, Sanitation and hygiene in Health Care Facilities: status in low and middle income countries and way forward*. World Health Organization, Geneva.

“Over half of the world’s population are now at risk from occupational, environmental or public health threats from improperly treated medical waste.”
Harhay et al., 2009 *Tropical Medicine and International Health* 14(11): 1414-1417



South Africa | Sustainable health care waste management that inspires change

📍 George Hospital | Michael Vonk, CEO

Michael Vonk and his team drove the implementation of on-site medical waste treatment equipment to reduce the environmental impact of waste processing:

- After treatment, health care risk waste is no longer classified as hazardous.
- Waste is locally disposed of, instead of having to transport it to far-away processing plants.
- Regional hospitals are now also implementing this technology.

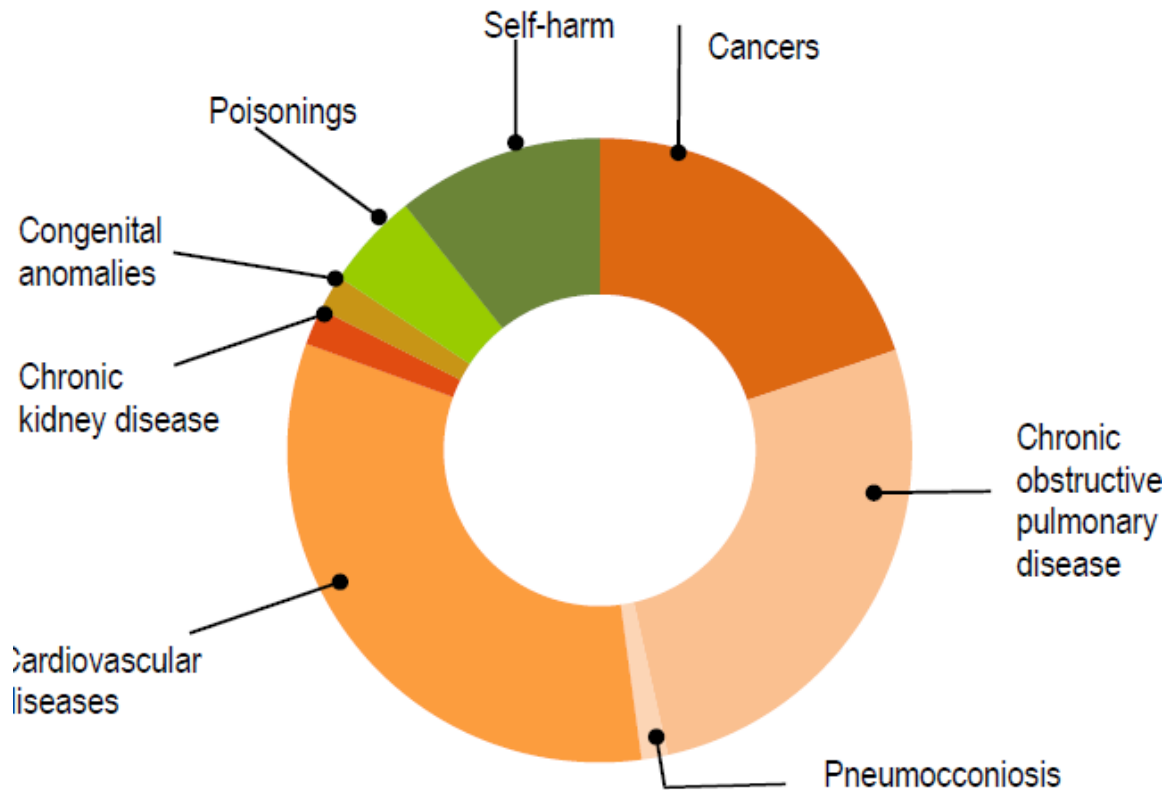
Benefits:

- **75% reduction of the initial waste volume.**
- **45% reduction of monthly operational costs.**
- **99% reduction of transport emissions and carbon footprint.**



Why health sector?

Health impacts of chemicals



Disease burden information for chemicals is very limited.

- In 2019, at least 2 m deaths were attributable to a small number of chemicals where there are data.
 - The burden of disease attributable to chemicals is increasing.
- The health sector intensively uses chemicals
 - Understand health risks; identify health impacts
 - Prevent and treat exposures
 - Evaluate and select safer chemical; chemicals in products
 - Regulate safety including in the health workplace

Moving upstream: supply chain transformation

Sustainable Health in Procurement Project

Fundación Valle del Lili, Cali Colombia

Replacement of PVC Anaesthesia masks with silicone masks



Goal to implement resusables for single – use products resulted in co-benefit to health to eliminate the toxic plastic

- Replacing disposable single use PVC facial masks with reusable non-PVC masks
- Multiuse silicone masks can be sterilized and reused up to 100 times
- Total Cost of Ownership analysis demonstrated savings
- In end- of- use silicone masks are recycled into pellets



Saving *lives*
Sustainably
GLOBAL FORUM 2020

Sustainable Procurement Index Health

“...the **Sustainable Procurement Index for Health** is a globally established, recognized and adaptable measurement tool for *policy makers, manufacturers, suppliers, procurers*, and healthcare facilities end users.

- provide an incentive for entities to improve their environmental and social sustainability record.
- to monitor
 - **(I) Greenhouse gas emissions,**
 - **(II) resource depletion** (water, energy and material consumption),
 - **(III) chemical/toxic impact** on human health and the environment, and
 - **(IV) human, labour rights and gender equality.”**



United Nations Development Programme

Consultancy for the Development of a Sustainability
Procurement Index for Health



ARUP

Ergon

CLEAN
PRODUCTION
ACTION

Sustainable Procurement Index Health: 4 modules



Greenhouse gas (GHG) emissions

- Same modules and criteria across General / Pharma SPIH tools



Resource depletion

- Same modules across General / Pharma SPIH tools
- Except one recycling criteria has not been included in the manufacturing module of the Pharmaceutical SPIH



Chemicals and toxicity

- Different modules and criteria across General / Pharma SPIH tools



Gender, human and labour rights (GHLR)

- Same across General / Pharma SPIH tools
- Except additional Level 3 Product module

Toxic Impact: Organisation

Level	Restricted Substances List (RSL) / Manufacturing RSL (MRSL)	Corporate Chemicals Policy	Chemical Footprint Project (CFP) Survey or equivalent	Goal(s)	Transparency of chemicals in products
Level 1	RSL: Substances restricted in European Union (EU)	Avoid chemicals of high concern	Participate in CFP Survey or equivalent		
Level 2	RSL: Implemented EU RSL in all products	Prefer safer alternatives	Publicly disclose CFP Score	Reduce chemicals of high concern beyond EU regulations	
Level 3	RSL or MRSL includes one chemical class : PFAS, phthalates, +/- or bisphenols			Publicly disclose annual progress to goal(s)	Publicly disclose 95% by weight of chemical substances intentionally added to the product

Toxicity: Product

Level	Product Restricted Substances List (RSL)	Product Certification
Level 1	• POPs: Stockholm Convention • Mercury: Minamata Convention • 10 Chemicals of Major Public Health Concern: WHO • Ozone Depleting Substances: Montreal Protocol • Pesticides & Industrial Chemicals listed in Annex III of Rotterdam Convention	
Level 2	• Carpets: Health Care Without Harm (HCWH) RSL • Cleaning chemicals: HCWH RSL • Flooring: HCWH RSL • Furniture & furnishings: HCWH RSL • Gloves: HCWH RSL • Hand hygiene products: HCWH RSL • Medical products: HCWH RSL • Sterilants & disinfectants: HCWH RSL • Other products: Practice Greenhealth Standardized Environmental Criteria	• Blue Angel • Cradle to Cradle Certified™ (silver or higher) • EU Ecolabel • Furniture & furnishings: ANSI/BIFMA Furniture Sustainability Standard; Greenhealth Approved; or GreenScreen Certified • Medical products: EU GPP Criteria for Electrical and Electronic Equipment used in the Health Care Sector • Nordic Swan • Swedish National Agency for Public Procurement Sustainability Criteria

SHiPP Accomplishments

Argentina: Capacity building of the National Laboratory System to identify and eliminate the use of toxic laboratory chemicals.

Brazil: Sao Paulo State policy

China: Sustainable procurement evaluation guidance designed for nationwide use as a voluntary standard for Chinese healthcare institutions.

Chile: Sustainable procurement policy for a municipal health department.

Colombia: Sub-national provincial ordinance establishes a cross-sectoral strategy for sustainable procurement including health.

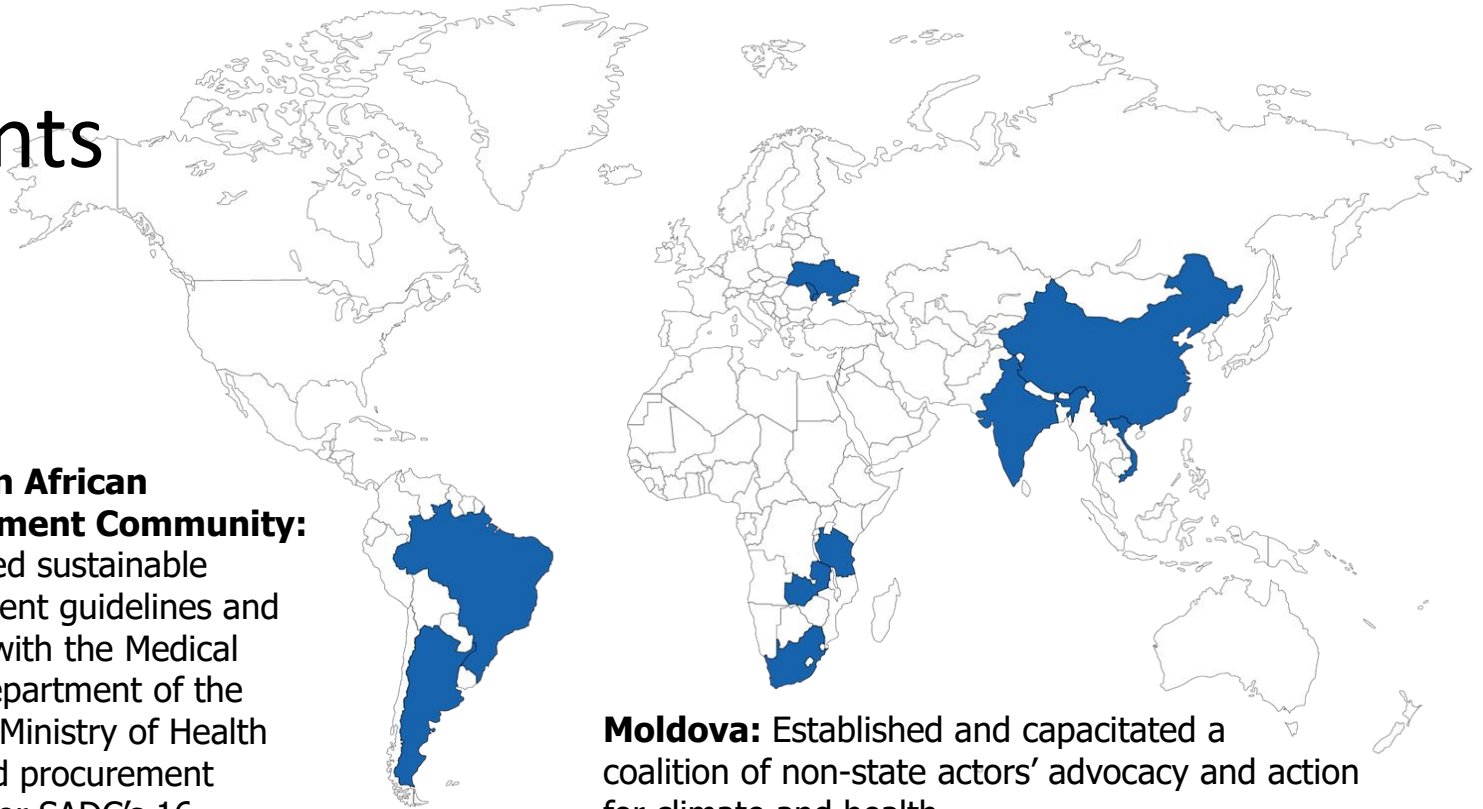
India: Sustainable Procurement embedded in a national hospital accreditation standard. Sustainable Procurement Strategy developed for the National Center for Disease Control.

Southern African Development Community:

Established sustainable procurement guidelines and contract with the Medical Stores Department of the Tanzania Ministry of Health for pooled procurement services for SADC's 16 countries.

South Africa: Implemented an integrated pest management strategy to eliminate the procurement of highly hazardous pesticides in hospitals.

Tanzania: National policies on energy, waste and equipment use in health facilities incorporate life-cycle and total cost of ownership into planning.



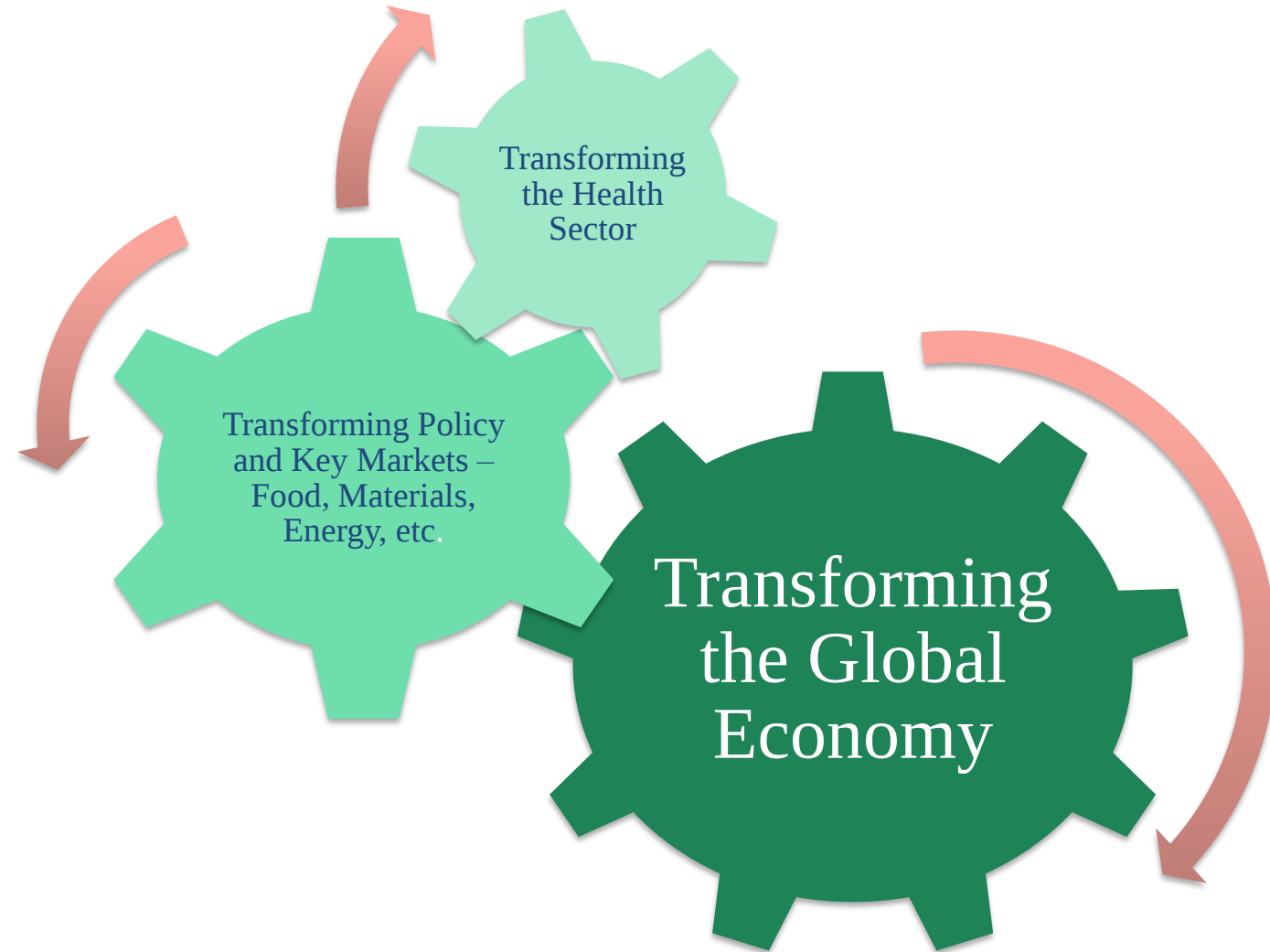
Moldova: Established and capacitated a coalition of non-state actors' advocacy and action for climate and health.

Ukraine: Adoption and application of international procurement practices in national processes.

Vietnam: Ministry of Health Directive on reducing plastic waste in the health sector.

Zambia: Ministry of Health procurement working Group converted into the Sustainable Health in Procurement Strategic National Advisory Platform, prioritizing sustainability in the procurement process.

Change in Healthcare Catalyzes Broader Change



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Round table panel discussion with governments (20 minutes):

Facilitator: Tony Clark

- ***Dr. Noralene Uy**, Assistant Secretary for Policy, Planning and Foreign-Assisted and Special Projects of the Department of Environment and Natural Resources (DENR), Government of the **Philippines**.*
- ***Ms. Judith Torres**, Environmental Affairs Officer, Cooperation and International Affairs Advisory Office - Ministry of Environment, Government of **Uruguay**.*

Questions and Answers

Agenda

- 1) What are the main challenges and opportunities to promote circular economy and decouple waste generation from economic growth? Does the government have tools to sensitize the private sector actors to change their business model?
- 2) Did your country/city develop a strategy of zero waste? What is the plan and do you have specific targets? How do you mobilize investments and partnership to achieve this vision? Why is the leadership at local government's level critical?

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