Green Growth Knowledge Partnership

Funded by the European Union

GACERE Global Alliance on Circular Economy and Resource Efficiency

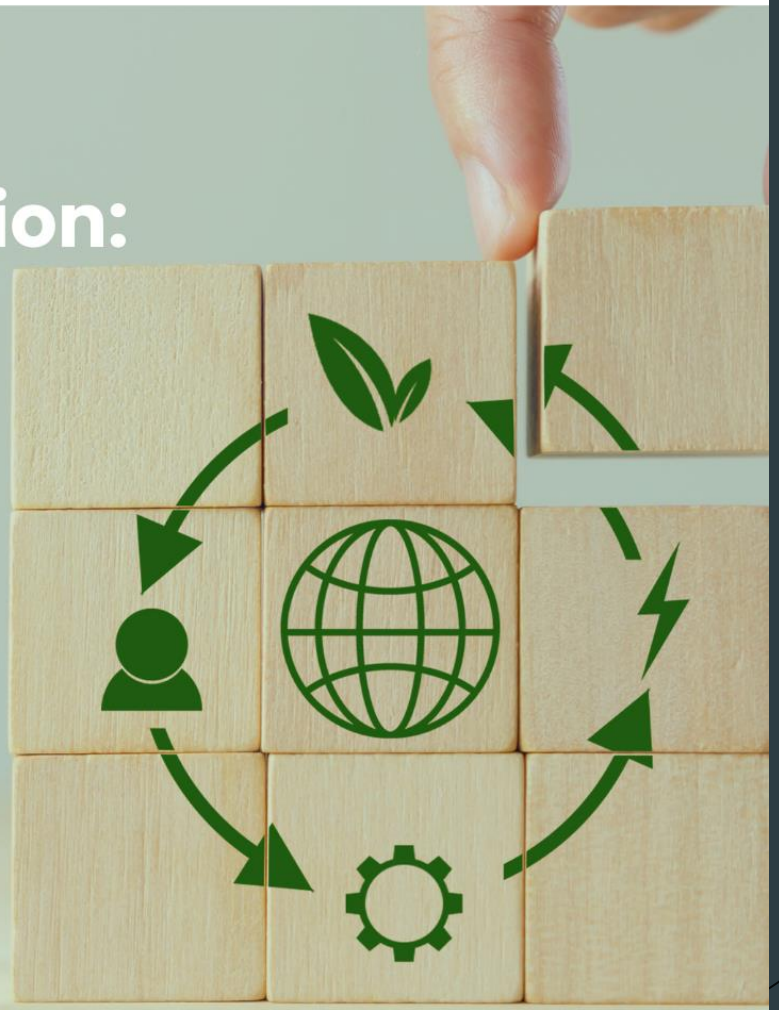
International Resource Panel

Life Cycle Initiative

One planet handle with care

UNEA 7 associated event

The Network is the Solution: A Strategic Dialogue on Data, Science, and Knowledge Networks for a Circular Economy



7 December 2025 | 2pm-4pm (EAT) to be followed by a Networking Reception at 4pm-5:30pm (EAT)

In-person: Tribe Hotel, Nairobi, Kenya
Online: Register here - bit.ly/NetworkIsTheSolution

Opening remarks

- **Elisa Tonda**, Chief, Resources and Markets Branch, Industry & Economy Division, UNEP

Co-facilitators

▶Adriana Zacarias-Farah

Global Sub-programme Coordinator

Finance and Economic Transformations

UNEP

▶Rula Qalyoubi

Global Sub-programme Coordinator

Science-Policy

UNEP

1. Scene-Setting Panel

Why We Must Bridge Science, Policy and Action to Achieve Circularity

Andrea Hinwood

Chief Scientist

UNEP

Charles Nyandiga

Regional Team Lead on Environment

UNDP

Morris Mulitu

Children and Youth Major Group

2. Spotlight Talks

Science and Data Informing Strategic Decisions and Policy-Making

Sally Radwan

Director of Digital Transformation, UNEP

Adam Stingmore

Chief Development Officer, Standards Australia

International Standard Organization (ISO)

Shahkira Parker

Senior Policy Advisor, Department of Forestry, Fisheries and the Environment, South Africa

Sally Radwan

- Director of Digital Transformation, UNEP

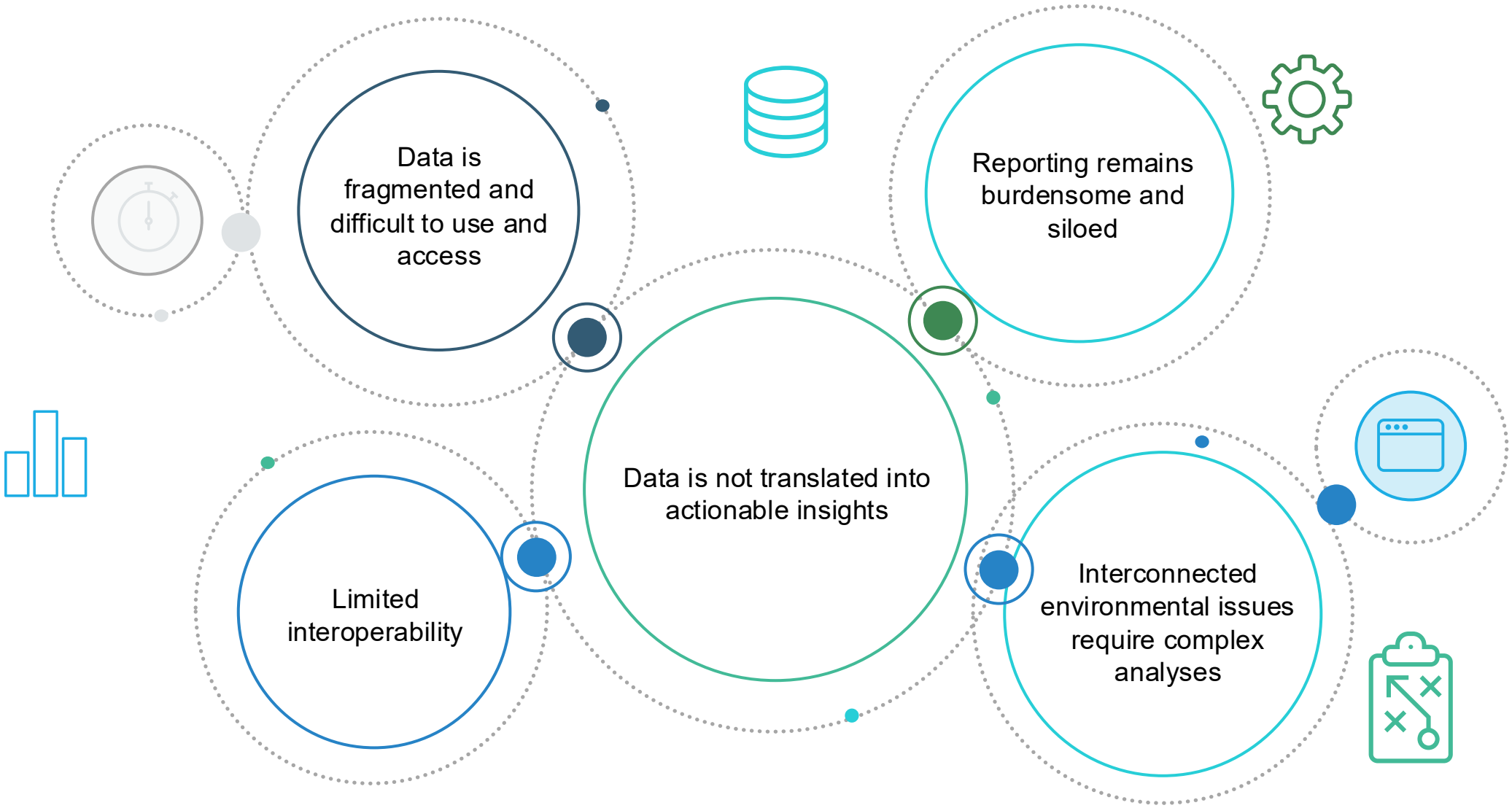
Science and Data Informing Strategic Decisions and Policy-Making:

Introduction to WESR & EnvironmentGPT

The Network is the Solution: A Strategic Dialogue on Data, Science, and Knowledge Networks for a Circular Economy

Sally Radwan
2025

The Challenge: Abundance of Data, Scarcity of Insight



The Solution: The World Environment Situation Room (WESR) provides a trusted digital infrastructure where datasets converge

Makes environmental information **discoverable, visual, and usable for all**

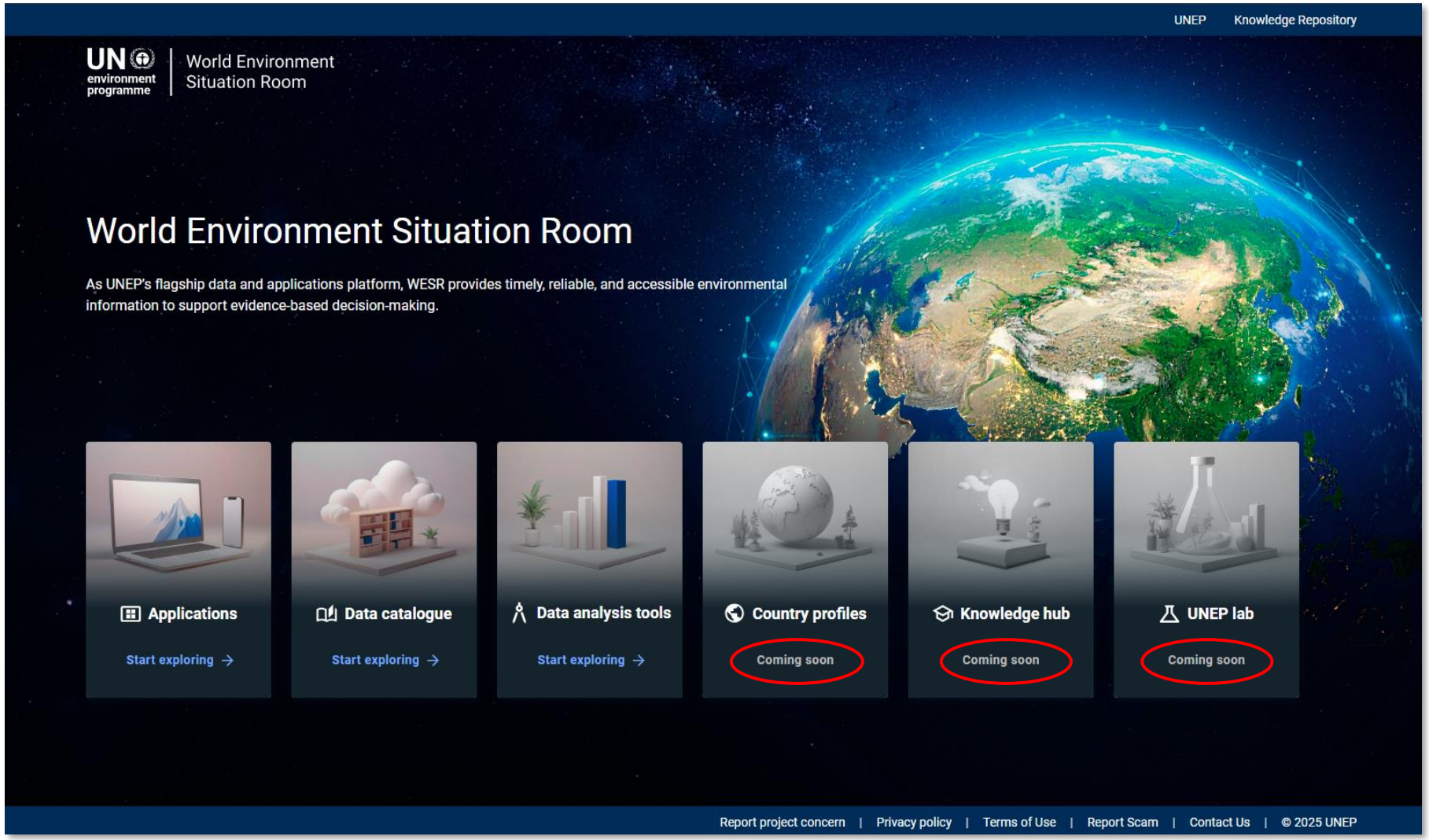
Federates trusted datasets, enabling **interoperability** across datasets and platforms

Enhances UNEP's mission of **keeping the environment under review**

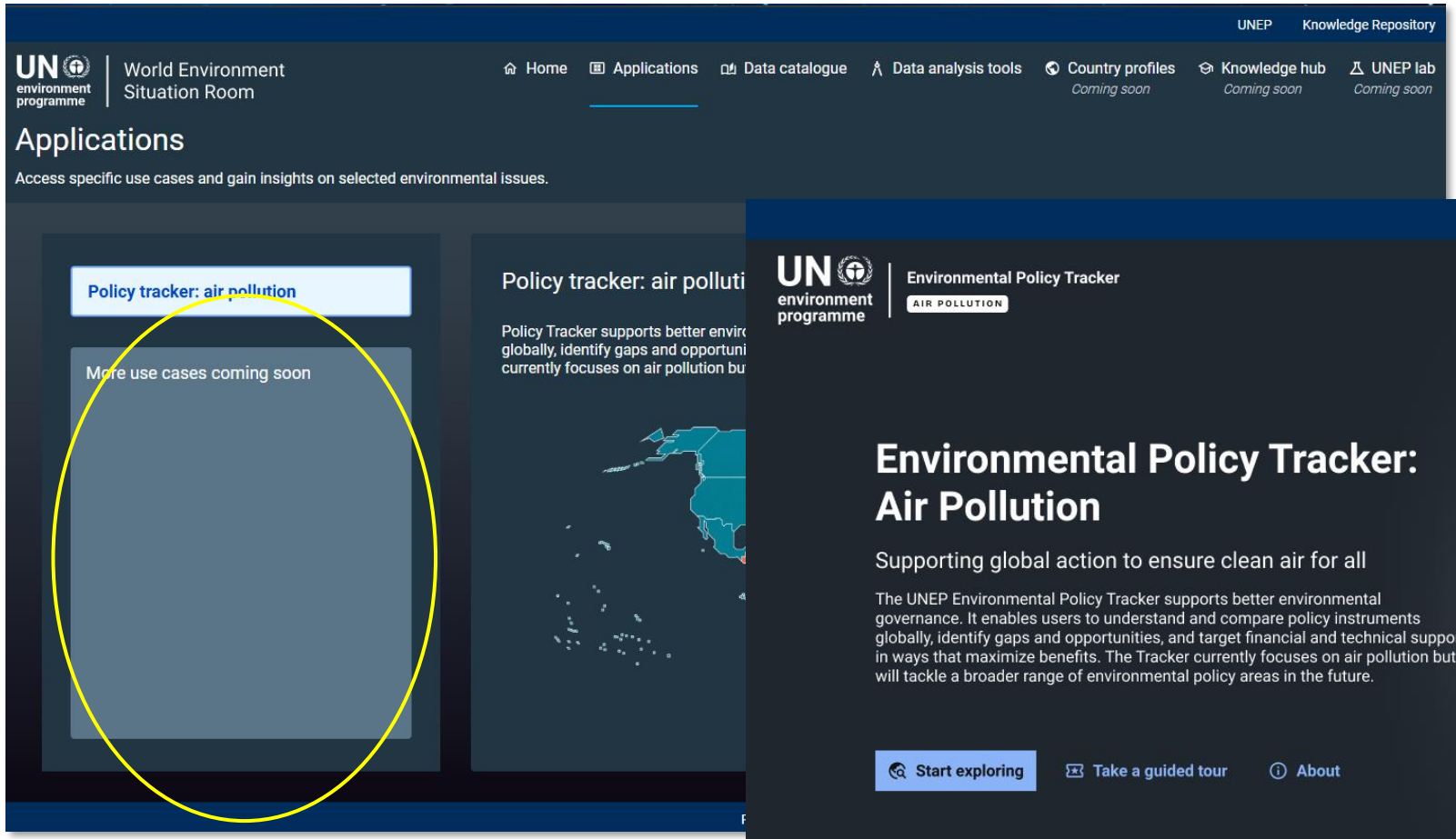
Supports the development of **tailored digital applications** for countries and partners

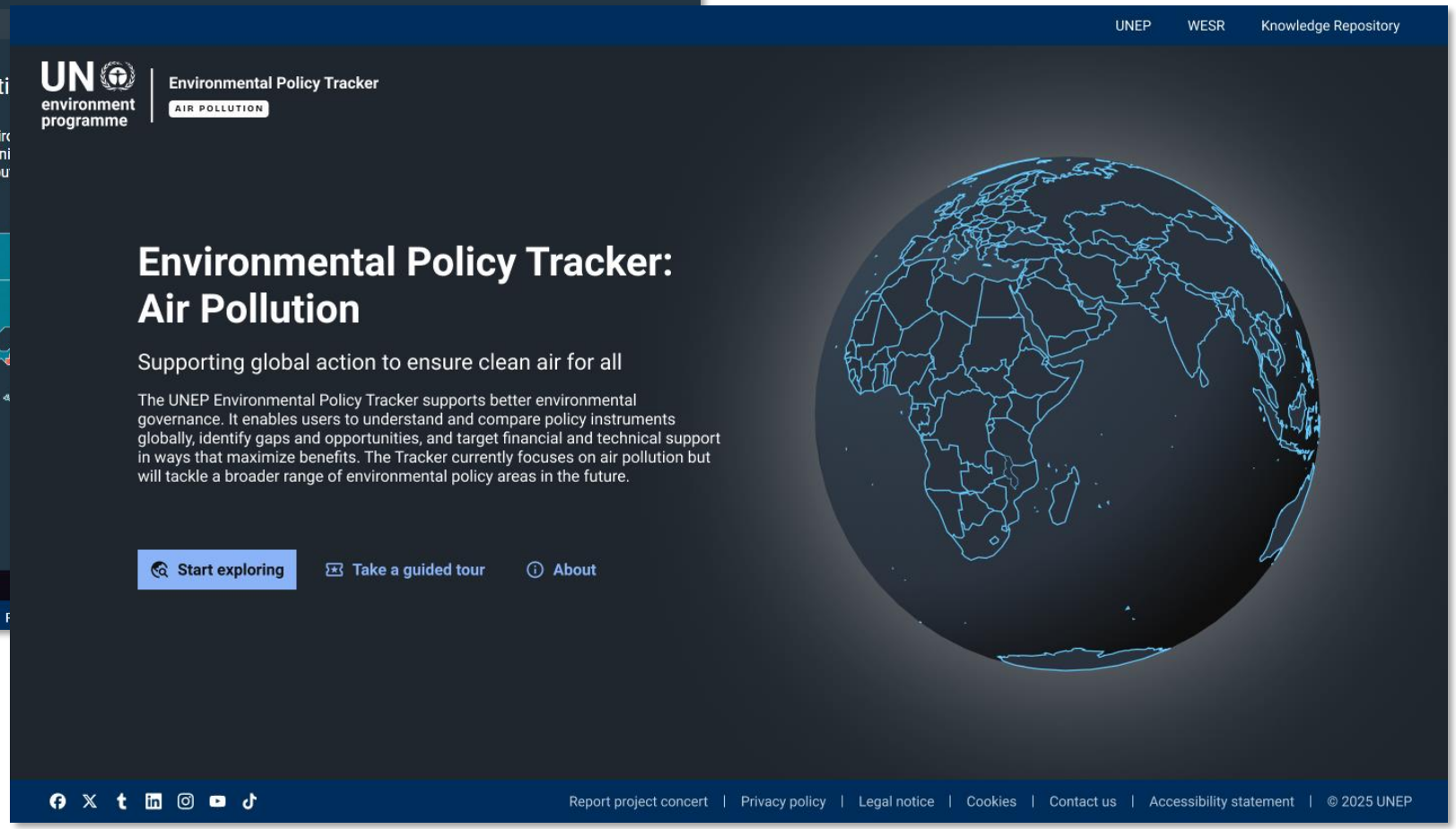
WESR @ UNEA-7

A Minimum Viable Product, including 3 of 6 planned features and 1 use case



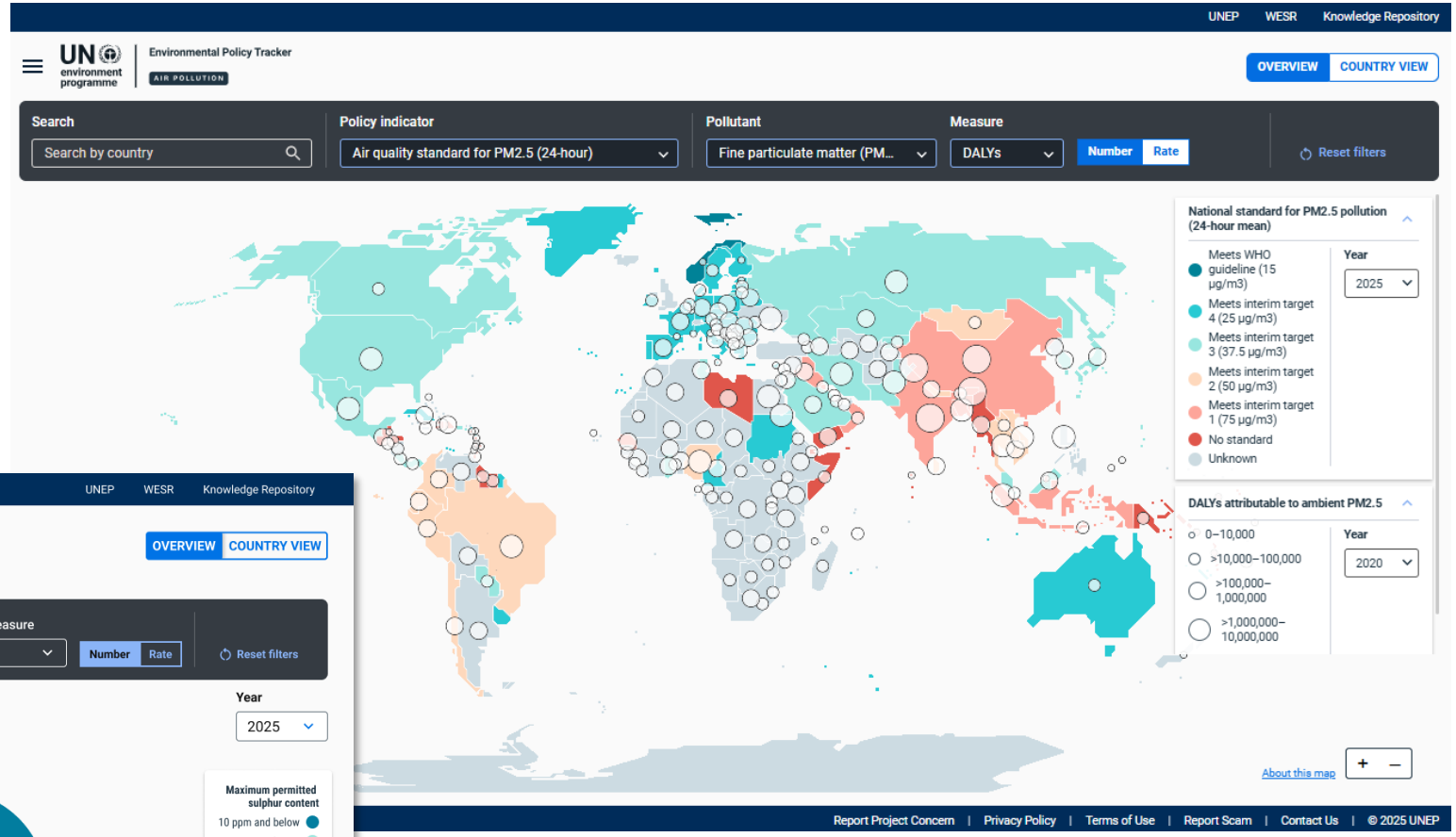
Applications: where all the “use cases” will live…

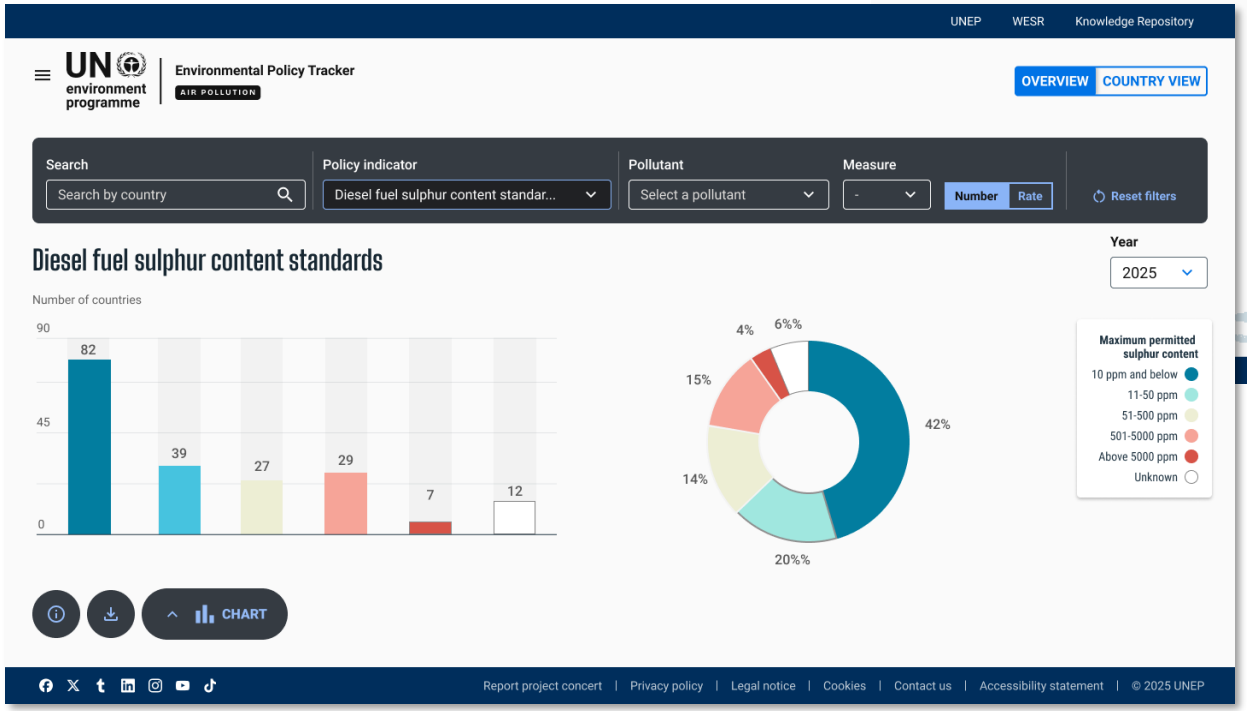




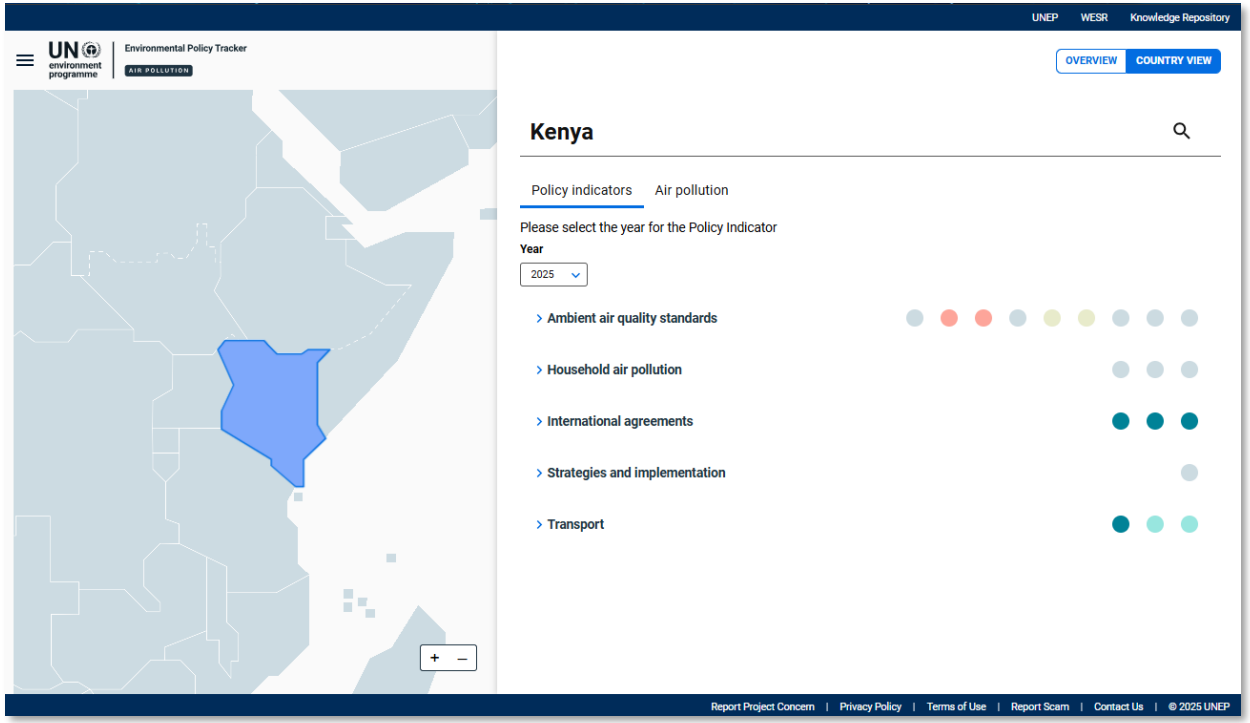
This is where a specific use case for Circular Economy can be created!

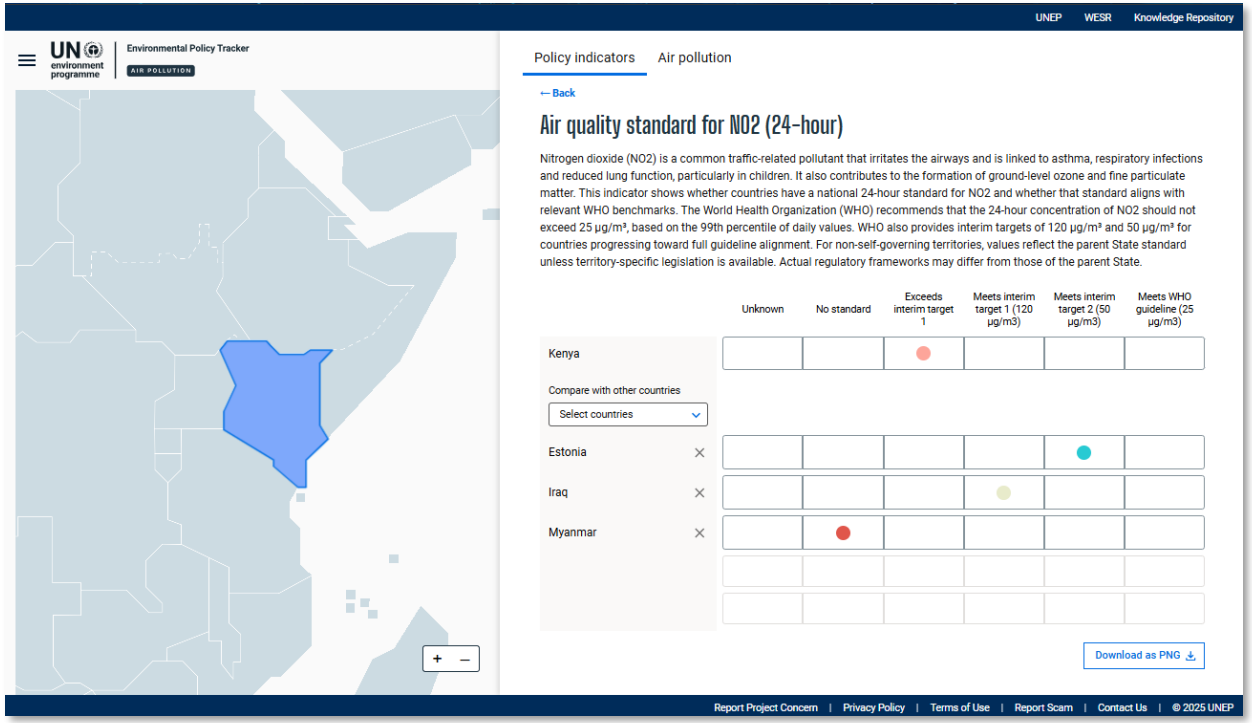
Environmental Policy Tracker





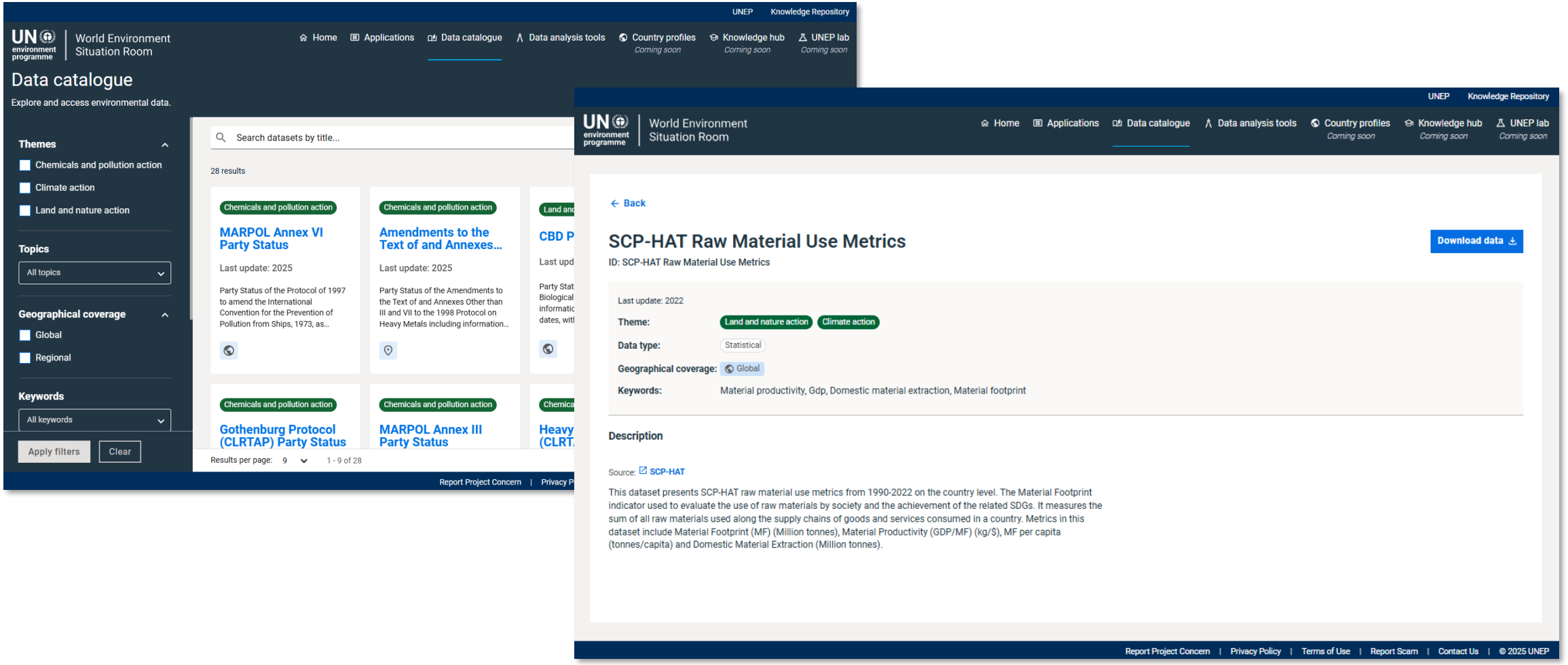
Policy Tracker - Country Pages





Data catalogue

Federated data from different sources – circular economy data currently available from the Sustainable Consumption and Production Hotspots Analysis Tool (SCP-HAT)



Data Analysis Tools: aka, the “DIY” section

Combine different datasets to create your own analysis “on the fly”

Another application example: EnvironmentGPT

Environment GPT is UNEP's first public beta environmental AI chatbot to translate science and data into strategic decisions and policies

Trusted, Up-to-Date Knowledge Base: Draws from 200+ UNEP and partner reports, including GEO-7

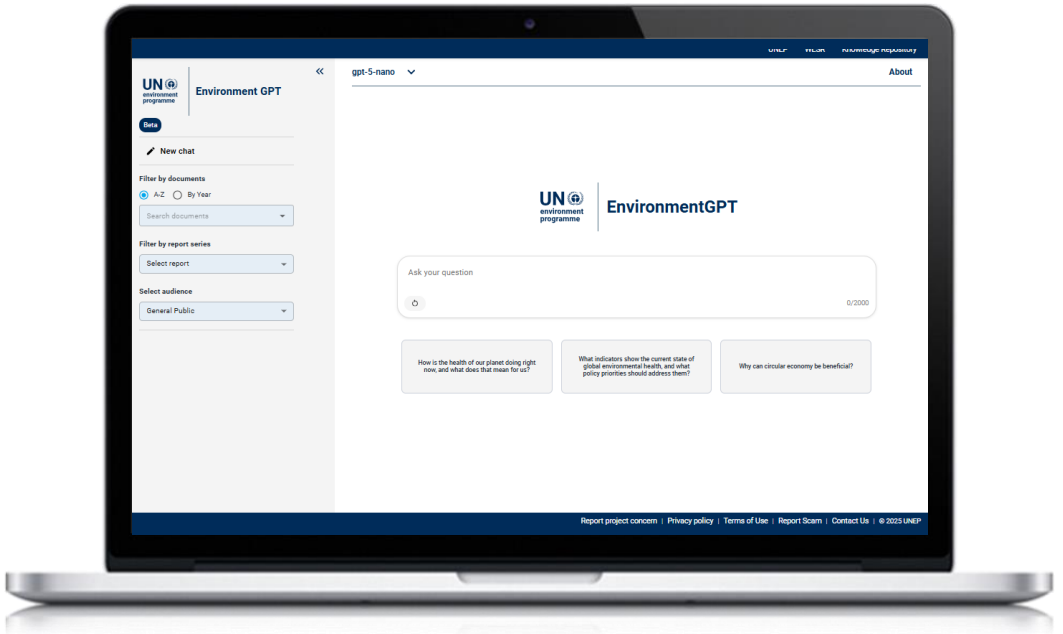
Advanced Filtering Options: Retrieve answers from a specific publication of publication series (e.g., all Adaptation Gap Repots)

Audience-Specific Answer Modes: general public, policymakers, scientists.

Multiple LLM Model Choices: five models available with different strengths and sustainability profiles

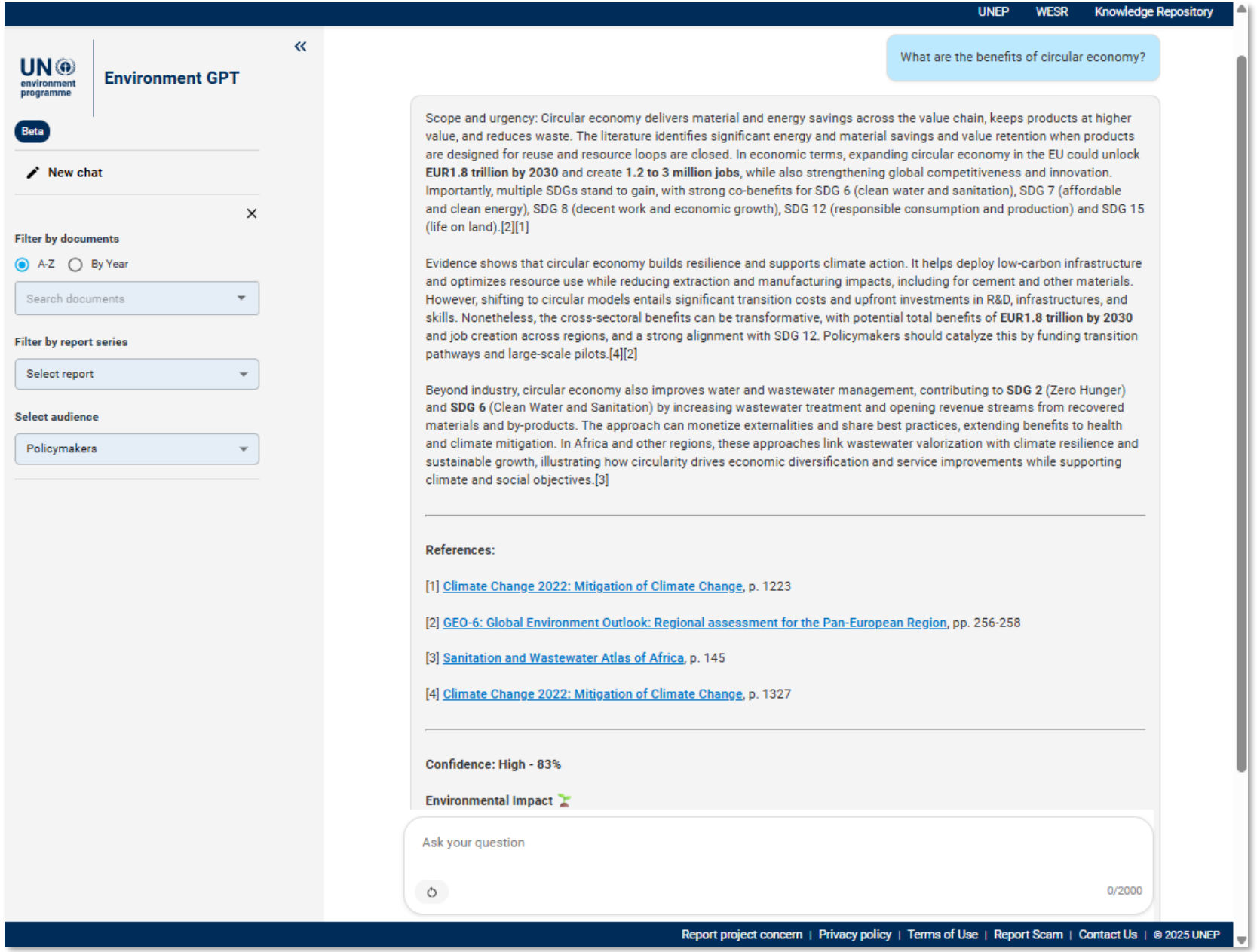
Confidence Score for Evidence Strength: signals when the system has strong or limited underlying evidence

Transparent, Verifiable Outputs: every answer includes references and direct links



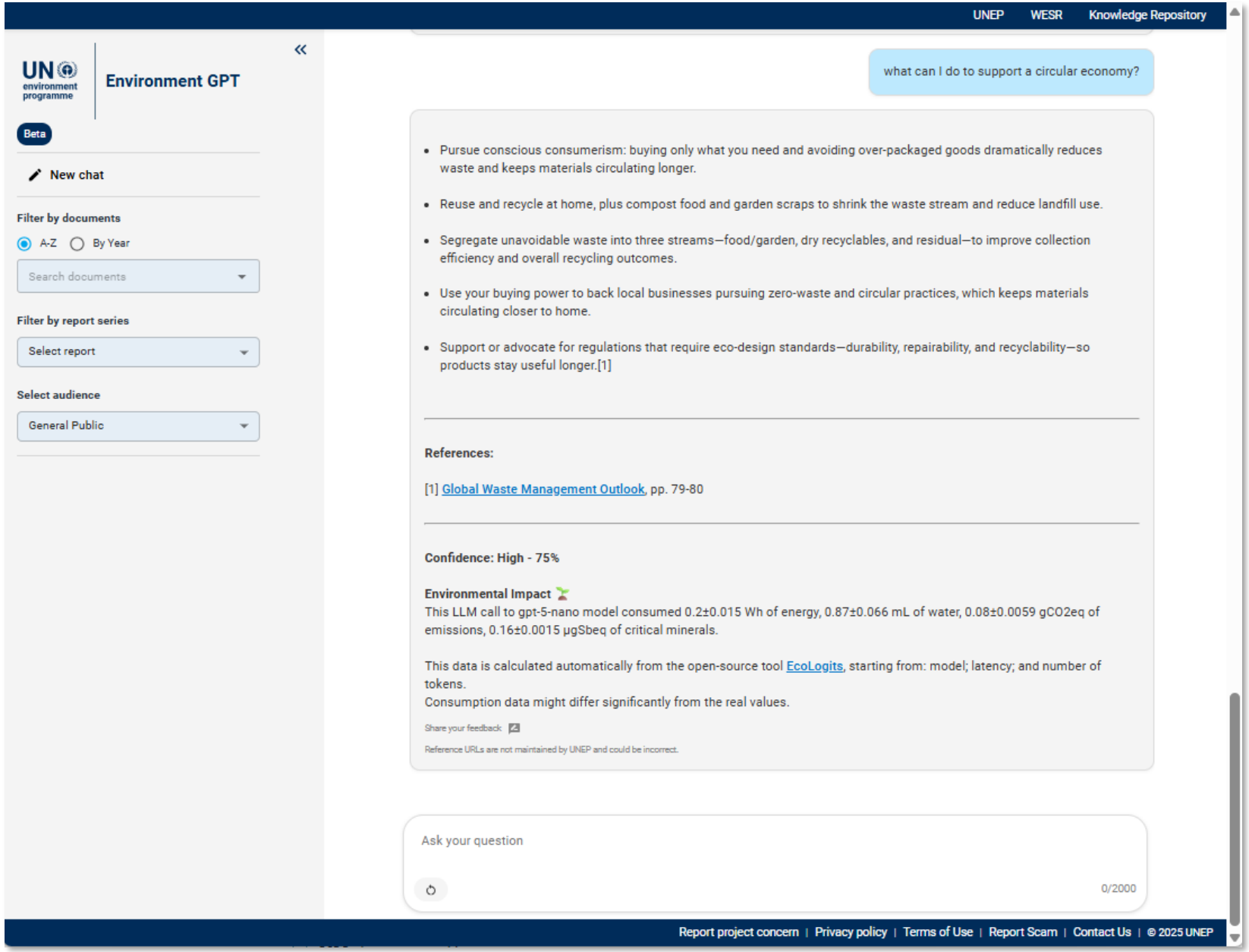
Application example: EnvironmentGPT

Audience: Policymakers

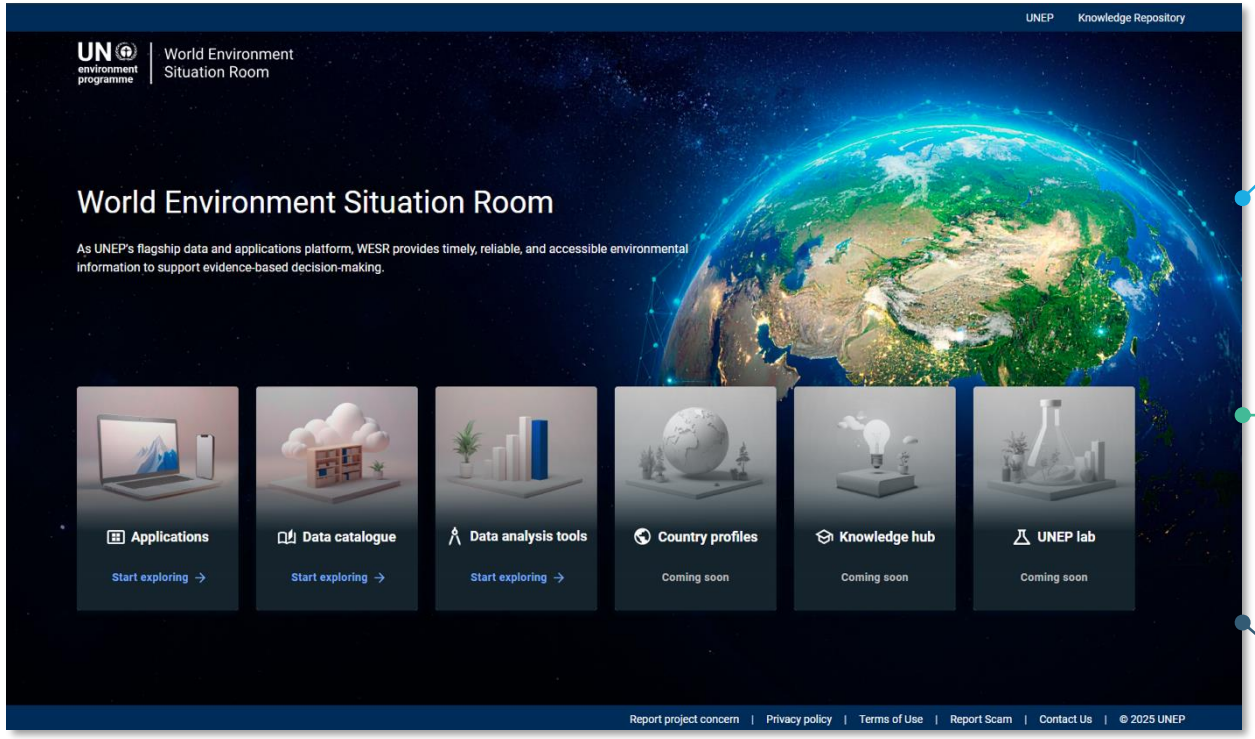


Application example: EnvironmentGPT

Audience: General Public



WESR Pilot launch at UNEA-7



You can interact with WESR at the Physical WESR space during UNEA

The Physical WESR is in the main lobby at the United Nations Office at Nairobi, next to the security desk

Join one of the demos – daily at 12:00 at the Physical WESR space

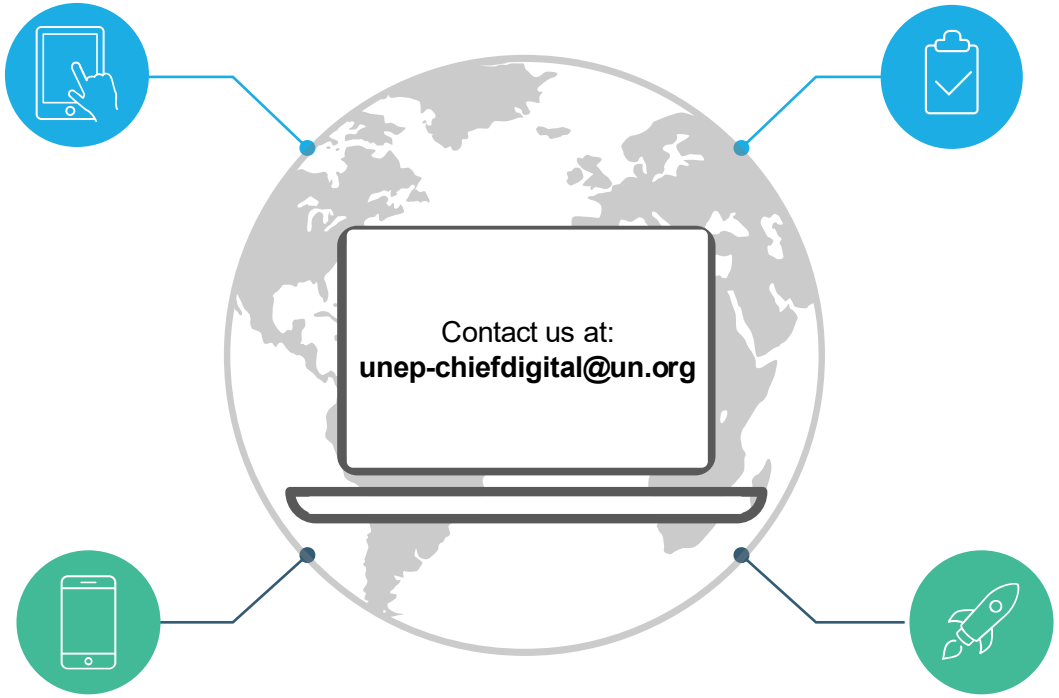
Show partners and Member States what UNEP's digital future looks like!

Reach out to organize a personalized demo

Beyond UNEA…

Use case co-creation: Circular Economy data solutions

Data federation: Ensure relevant datasets can be found on WESR



AI tools: Reach out to define and build user-centered AI use cases

Capacity building: Join our trainings and knowledge-sharing initiatives to strengthen digital, data and AI readiness

UN environment programme

Thank you

Contact us at unep-chiefdigital@un.org

www.unep.org

Sally Radwan
2025

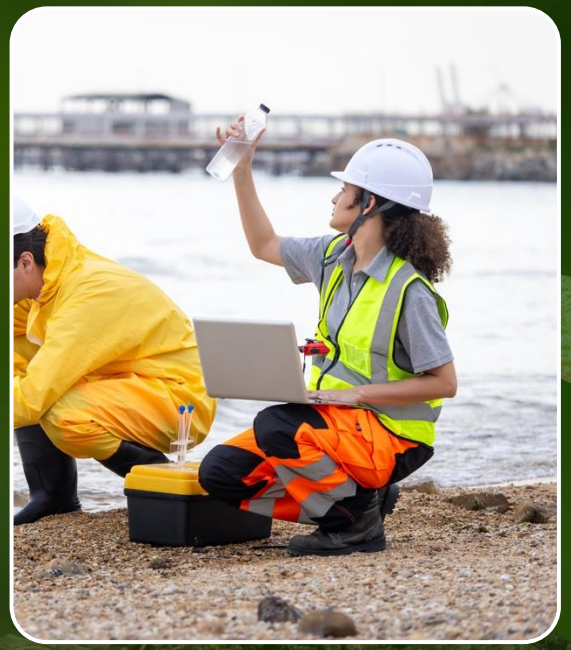
Adam Stingmore

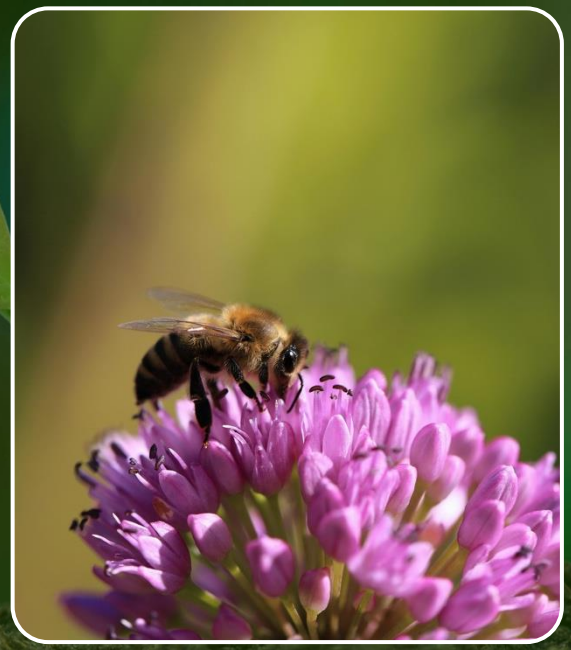
- Chief Development Officer, Standards Australia, International Standard Organization (ISO)

The role of standards in environmental data

Adam Stingemore, Chief Development Officer
Standards Australia

Environmental data is information collected about **the natural world and the impact of human activities** on the environment.

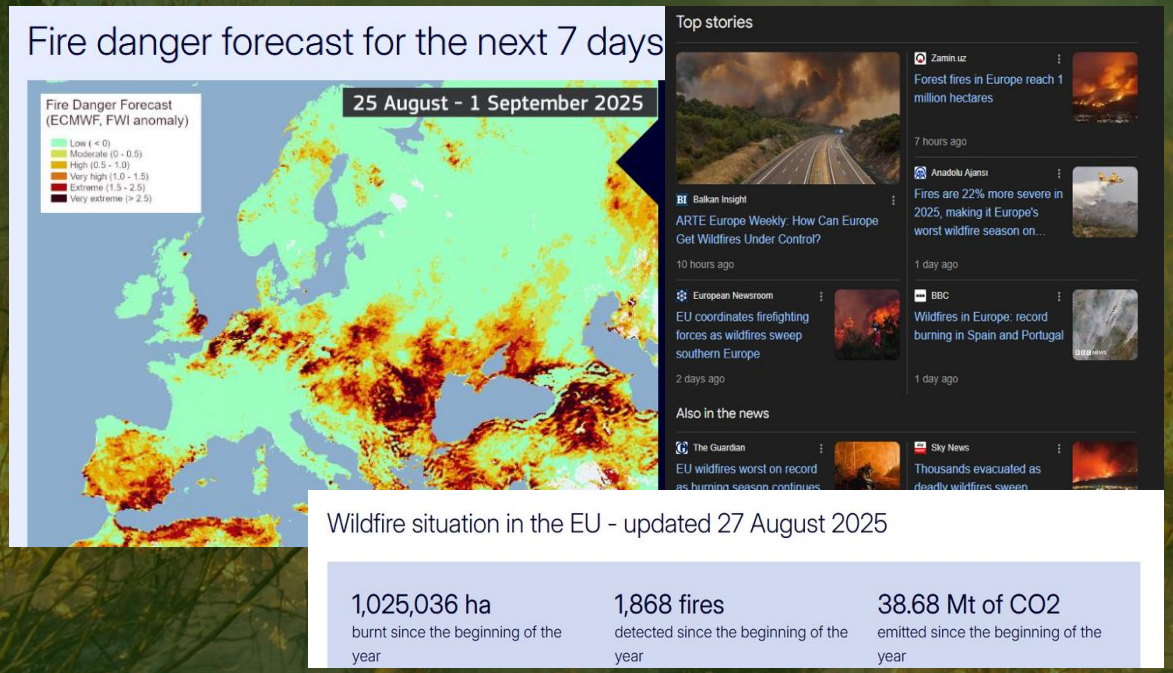




Why is Environmental Data important?

Wildfires in Europe

The *European Forest Fire Information System* collects environmental data due to extreme weather conditions.



Air Quality and Public Awareness

US Embassy began publishing air quality data online to inform US citizens about pollution level.

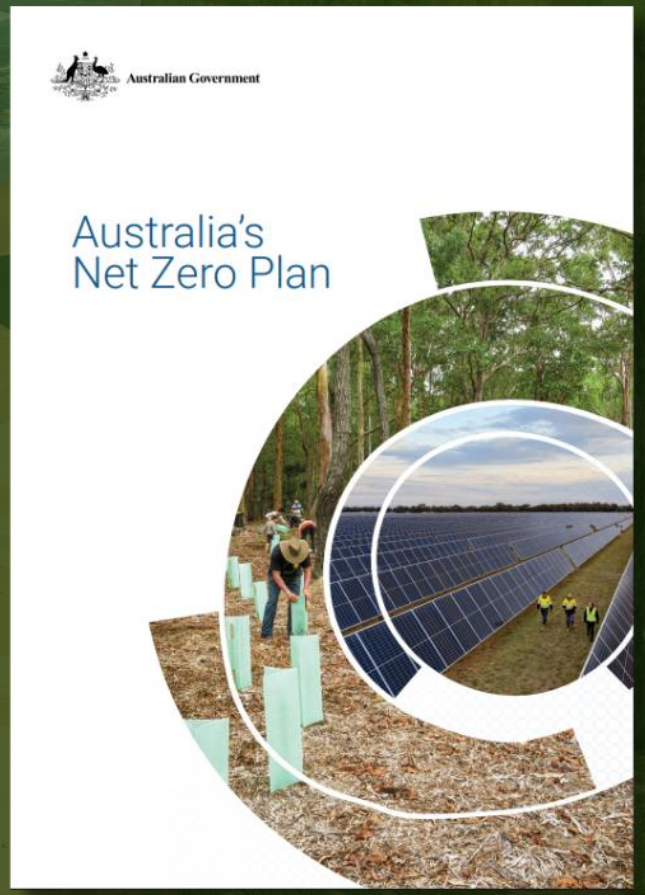
Why is Environmental Data important?

Australia's Net Zero Plan

- Cut emissions by 62 – 70 % below 2005 level by 2035 on the way to net zero by 2050

- Government has set Australia's ambition and committed over $70 billion for decarbonising Australia's economy over the coming decades

- Without prioritising strong data collection, analysis, and projections we can't track, adjust or succeed in reaching net zero



Advancing the UN's Global Environmental Data Strategy

The United Nations' **global environmental data strategy (GEDS)** supports the use of environmental data to tackle the triple planetary crisis - climate change, pollution, and biodiversity loss.

UN environment programme

To **support consultations on the strategy**, ISO asked Standards Australia to conduct this research to help governments, academia and organisations gain a better understanding of international environmental data standards.

ISO

STANDARDS Australia

What did we do?

The research involved mapping ISO's portfolio of environmental data standards based on 7 categories (20 subcategories) and identifying where they sit in the data lifecycle.

48

Technical committees

1122

ISO standards

(187 under development)

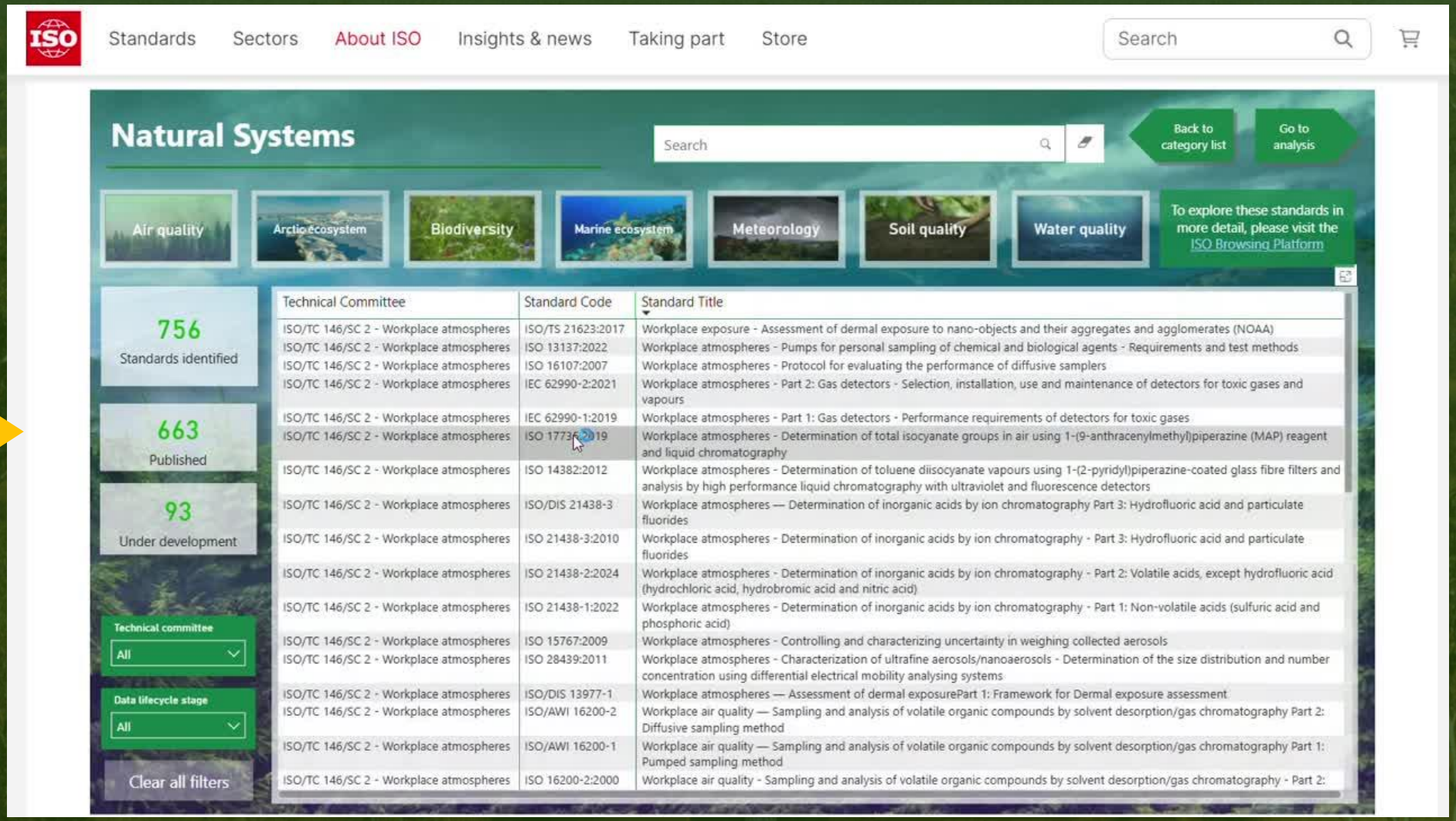
817

Referenced standards

from 51 SDOs

The standards referenced by each ISO publication were also mapped to provide a more holistic view of the global standards landscape.

Bringing the research to life - interactive dashboard



Bringing the research to life

Research Report

Methodology Note

How can standards bodies better work with policy-makers…?

1. We can make it easier for you to find and use our standards

2. You can consider the good use of our standards within your contexts

3. We can continue to build out the tools that allow allow us all to better connect

Contact: Adam.Stingemore@standards.org.au

Shahkira Parker

- Senior Policy Advisor: International Governance Management, Department of Forestry, Fisheries and the Environment, South Africa

LIFE CYCLE ASSESSMENT (LCA) AND EXTENDED PRODUCER RESPONSIBILITY (EPR) IMPLEMENTATION

South African Experiences of Using LCA in EPR Implementation

7 December 2025

forestry, fisheries & the environment
Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

2030 NDP

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Watch us: EnvironmentZA
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Follow us: @EnvironmentZA
Call centre: 086 111 2468 | Website: www.dffe.gov.za

Background And Introduction

- According to the National Environmental Management Waste Act, 2009 (NEMWA). ***"Life cycle assessment; means a process where the potential environmental effects or impacts of a product or service throughout the life of that product or service is being evaluated."***

- Section 18 of the NEMWA provides for the extended producer responsibility (EPR) Regulations for EPR implementation.

- The implementation of EPR is also a way of transitioning to a circular economy and the implementation of the National Waste Management Strategy 2020 initiatives.

Background And Introduction

- Extended Producer Responsibility (EPR) is an environmental policy Based on the ‘polluter- pays’ principle approach based on obliging producers to assume full responsibility (including EoL) for their products.
- EPR regulations cover some of SA’s ‘problematics products’ - packaging, electronics and lighting, batteries, lubricant oil and pesticides - mandatory EPR as per Section 18 of the Waste Act
- EPR Regulations were gazetted in 2020, with the final Regulations published in 2021. Among other things, *the Regs require producers, brand owners and importers of identified products to undertake Life Cycle Assessment (LCA) studies; focussing on material minimisation; product design to facilitate reuse, recycling or recovery; and reduction of the environmental toxicity of their waste streams.*

South African LCA considerations

- Limited LCA expertise and capability locally and a lack of guidance on how LCAs should be conducted in order to meet various requirements (EPR, EU markets…)
- 2 Main standards (ISO 14040 and 14044) and a range of additional possible applicable standards for different purposes, can make it difficult to navigate the LCA landscape
- LCA is a standardized methodology, regulated by the ISO Standards which, however, provide only a general framework:
  - Leave room for interpretation on numerous methodological issues
  - Variations in the implementation of LCA
  - Lack of consistency and validity in the resulting environmental claims
- The aim of the Guideline project is to provide guidance on how to conduct LCA studies in accordance with both the EPR Regulations and export market requirements, providing a standardised set of recommendations regarding the various methodological choices that need to be made when conducting an LCA study

South African Experience of Using LCA in The Context of the EPR Law

- EPR Regulation 5: Measures to be Implemented by Producers;
- "(k) conduct a **life cycle assessment**, in relation to the identified product, in accordance with the applicable standards **within 5 years** of implementation of their extended producer responsibility scheme;"
- "(l) through the life cycle assessment as a minimum focus on the following:

(i) Minimisation of **material used** in the identified product;

(ii) Design of the product to **facilitate reuse; recycling or recovery**, without compromising the functionality of the product; and

(iii)Reduction of environmental toxicity of the resulting post - consumer waste stream;"

- LCA Guideline is currently being tested with Producer Responsibility Organisations and Research institutions
- Outreach / educational activities on the LCA tools and evaluation

South African Lessons On LCA

- To make reporting on LCA a requirement and to provide systems for reporting on LCAs.
- To provide for flexibility on the Life-cycle assessments not to be duplicated but conducted once over a period of 5 y ears.
- Do not reinvent the wheel and producers may have more capacity than the PROs.
- The process is a participatory from the development of the regulations.
- Compliance to LCA requirements is mandatory as it is compliance to Law.
- Partner with Research Organisations such as the CSIR in South Africa.

Recommendations

- Furthering international cooperation (e.g. through the Global LCA Platform) could make your efforts more effective and impactful.

- International partnerships with organisations such as UNEP can go a long way in assisting a transition to circular economy that includes the LCA.

- Domestic partnerships with research organisations and institutions of higher learning on research, development and innovation.

Thank You!

3. Dialogue

The Value of Practice: Learning from Experience, Applied Solutions and Innovations

Margaret Kamau

Climate Change and Green Growth Expert, AfDB, ACEA

Daniel Grajales

Global Policy Manager, International Chamber of Commerce

Titus Karanja

Chief Executive Officer, Fintech Frontiers Ltd

AFRICAN CIRCULAR ECONOMY ALLIANCE

A Government-led coalition of African countries working to drive Africa's transformation to a circular economy that boosts economic growth, jobs and positive environmental outcomes, **and to unlock new CE opportunities through:**

POLICY DEVELOPMENT

Scaling CE businesses & INITIATIVES

LEADERSHIP & ADVOCACY

THE 5 big bets

Thematic focus areas based on highly performing sectors

ACEA working groups

- FOOD SYSTEMS
- PACKAGING
- ELECTRONICS
- FASHION & TEXTILES
- BUILT ENVIRONMENT

PRIORITY AREAS OF THE WORKING GROUPS

FOOD SYSTEMS

- Advocacy and knowledge sharing of best practices
- Co-host side events at the regional events
- Co-create knowledge pieces

PACKAGING

- Support the harmonization of rPET standards
- Knowledge sharing sessions on best practices - Global ERP efforts and plastic standards
- Technical support to countries for the creation of roadmaps for plastics

ELECTRONICS

- Knowledge sharing sessions on best practices
- Support the harmonization of ERP systems in countries

FASHION & TEXTILEs

- Workshops/sessions for policymakers and SMEs to co-create policy recommendations for a sustainable textile and fashion industry
- Knowledge sharing sessions on best practices

BUILT ENVIRONMENT

- Knowledge sharing sessions on best practices
- Co-create knowledge pieces

The Africa Circular Economy Facility (ACEF)

ACEF
AFRICA CIRCULAR ECONOMY FACILITY

The only Trust Fund dedicated to promoting CE as an inclusive & Green growth strategy in Africa

- Capacity building & policy development → Governments & non-state actors
- Circular business development → Private Sector MSMEs (through business incubation/acceleration)
- Advocacy & Knowledge sharing → The African Circular Economy Alliance (ACEA)

4. Spotlight Talks

Leveraging Strategic Partnerships and Digital Solutions to Build Collective Intelligence and Amplify Impacts

Fabienne Pierre

Head, Green Growth Knowledge Partnership

UNEP

Peter Dery

Director of Environment, Ministry for Environment, Science and Technology, Ghana

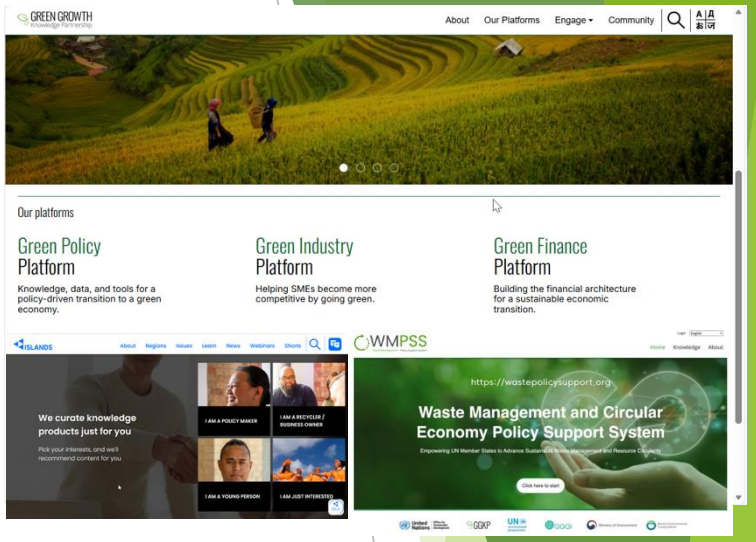
Jean-Marie BOPE BOPE LAPWONG

Head Officer and National Coordinator of CCPM, Ministry of Environnent and Sustainable Development, Democratic Republic of Congo

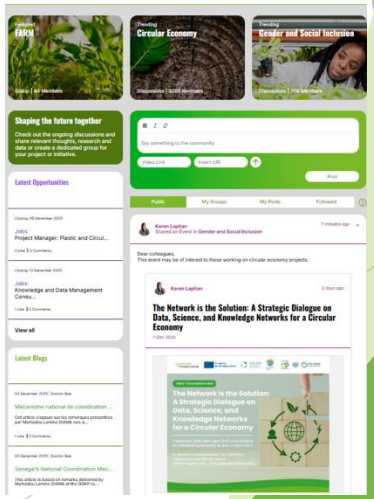
Fabienne Pierre

- Head, GGKP, UNEP

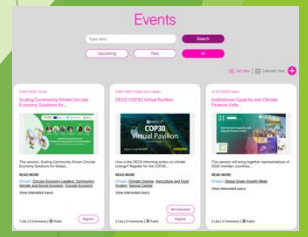
GREEN GROWTH
Knowledge Partnership



200,000+ knowledge resources



Green Forum



Peter Dery

- Director of Environment, Ministry for Environment, Science and Technology, Ghana

Waste Management and Circular Economy Policy Support System (WMPSS)

A comprehensive system for gathering data, coordinating stakeholders, and providing analytics on waste management practices in Ghana, enabling informed decision-making and resource allocation for a sustainable future.

Why WMPSS Matters

Setting Baselines

Track progress against measurable waste management goals and targets

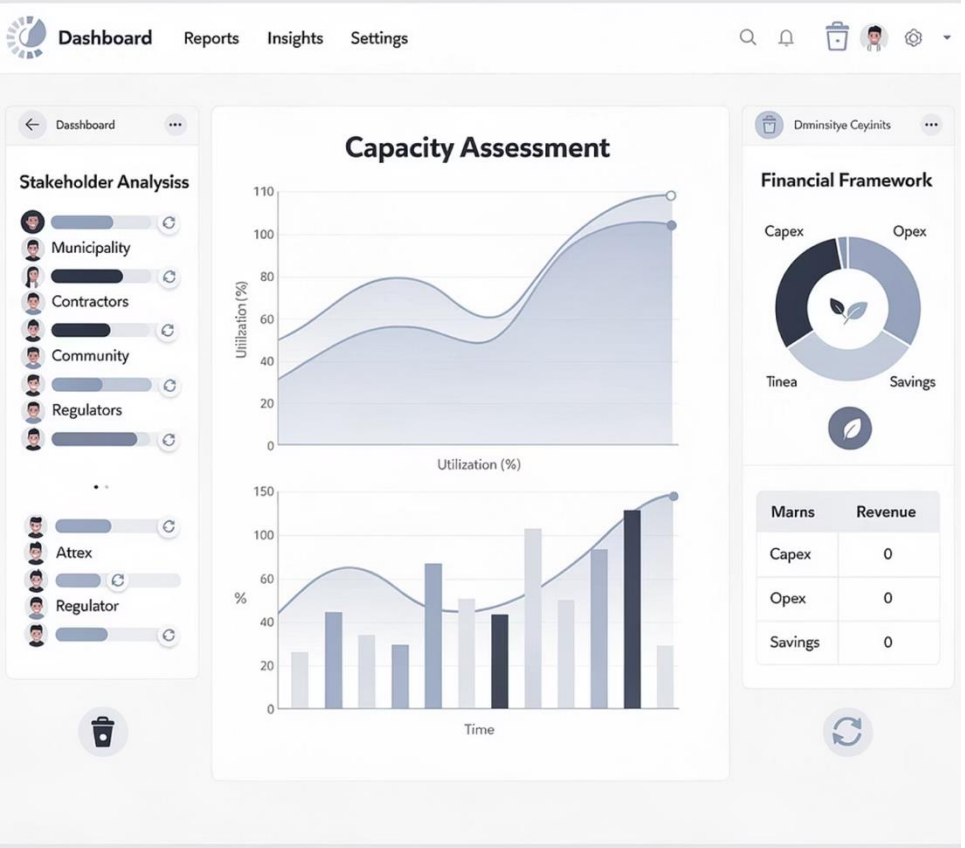
Resource Allocation

Form a basis for fair distribution of resources across waste management initiatives

Informed Decisions

Enable data-driven policy making even in environments with limited waste data

- Ghana named West Africa Regional Hub for the WMPSS
- The introduction of WMPSS to Ghana has been made possible through the relationship with the United Nations Office for Sustainable Development (UNOSD) and the Government of the Republic of Korea.
- The first Western Africa Regional workshop was organized August 26-28, 2025 to introduce participants to the system and its applications in policy formulation and resource allocation.



How WMPSS Works

Survey Section

Six components that assess critical enabling environments for policy making by gathering comprehensive data across the waste management value chain.

- Evaluates current capacity and infrastructure
- Identifies stakeholders and governance structures
- Assesses financial and monitoring frameworks

Reporting Section

Derives input data from surveys to perform analysis and produce actionable results with visual representations.

- Highlights strengths in current systems
- Identifies gaps and areas for improvement
- Determines resource needs and priorities

Six Survey Components

01

Capacity

Assesses adequacy of resources including required professionals for each aspect along the waste management value chain and available infrastructure

02

Public Governance

Evaluates the National Plan, Institutional Framework, and Legal and Regulatory Framework for managing waste in the country

03

Stakeholder Engagement

Identifies key stakeholders from private and public sectors, assesses coordination in planning, and evaluates awareness creation and policy dissemination

04

Finance

Examines waste management provisions in national budgets, local authority funding independence, and stakeholder incentivization for waste management

05

Monitoring

Assesses data collection on waste, levels of compliance with regulations, and progress toward nationally set targets

06

Status

Provides quantitative assessment of waste management practices at the national level

Key Stakeholders in Data Collection

Government Ministries

Ministry of Local Government, Chieftaincy and Religious Affairs (MLGCRA),
Ministry of Finance (MoF),
Ministry of Agriculture (MoA), and
Ministry of Environment, Science and Technology (MEST)
Provide policy and budgetary data

Private Facilities

Privately managed recycling and treatment facilities contribute operational data and best practices

Waste Sites

Public and privately managed landfills and dumpsites provide critical waste volume and management data

A stakeholder meeting is planned to engage these institutions, inform them about WMPSS, explain the need for their input, and demonstrate how their data will be updated and accurately entered into the system.

Continuous Improvement for Sustainable Impact

> Ghana will continuously update data on the WMPSS annually to improve its performance of ensuring waste is well managed with the requisite input and fair distribution of resources to meet both local and internationally committed goals and targets.

Annual Data Updates

Regular collection and refinement of waste management data

Performance Enhancement

Continuous improvement in waste management practices

Meeting Targets

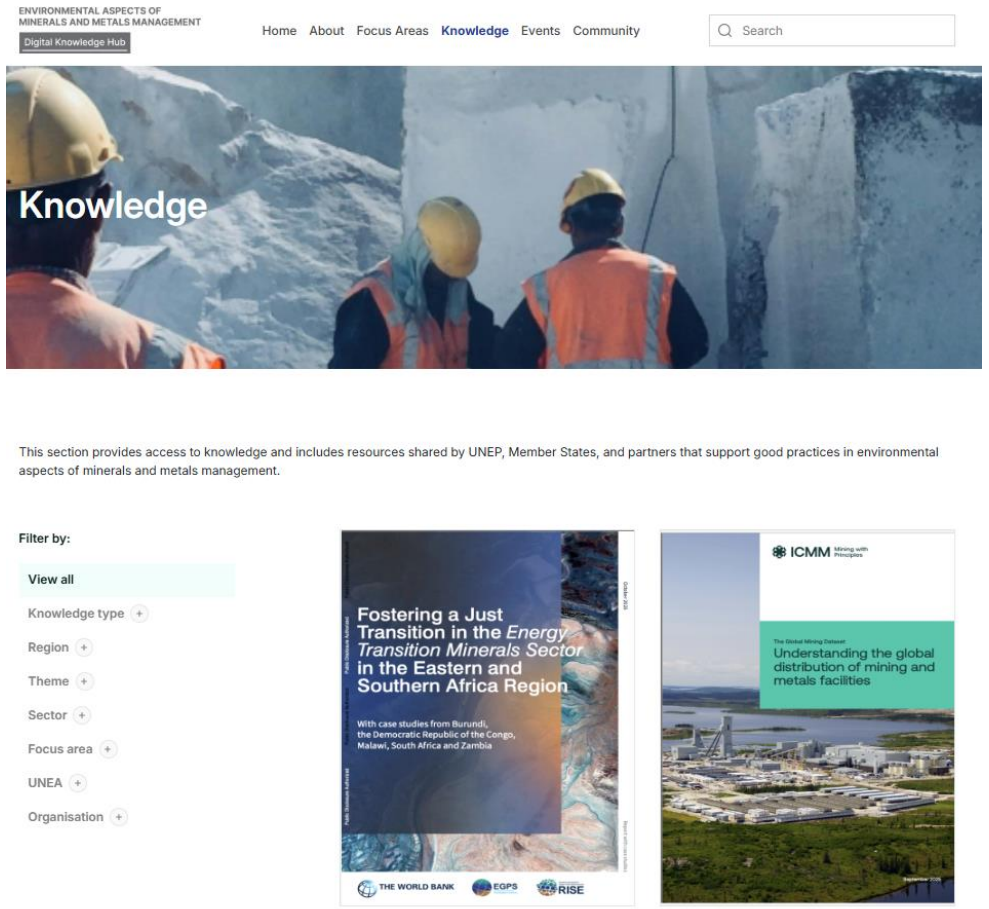
Achieving local and international sustainability commitments

Jean-Marie Bope Bope Lapwong

- Head Officer and National Coordinator of CCPM, Ministry of Environnent and Sustainable Development, Democratic Republic of Congo

Leveraging Strategic Partnerships and Digital Solutions to Build Collective Intelligence and Amplify Impacts

- 1. The importance of digital solutions
- 2. The multi-sectoral benefits of digital solutions in science and knowledge
- 3. The support of UNEA Digital Hub


ENVIRONMENTAL ASPECTS OF MINERALS AND METALS MANAGEMENT
Digital Knowledge Hub
Home About Focus Areas Knowledge Events Community
Search
Knowledge
This section provides access to knowledge and includes resources shared by UNEP, Member States, and partners that support good practices in environmental aspects of minerals and metals management.
Filter by:
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Knowledge type
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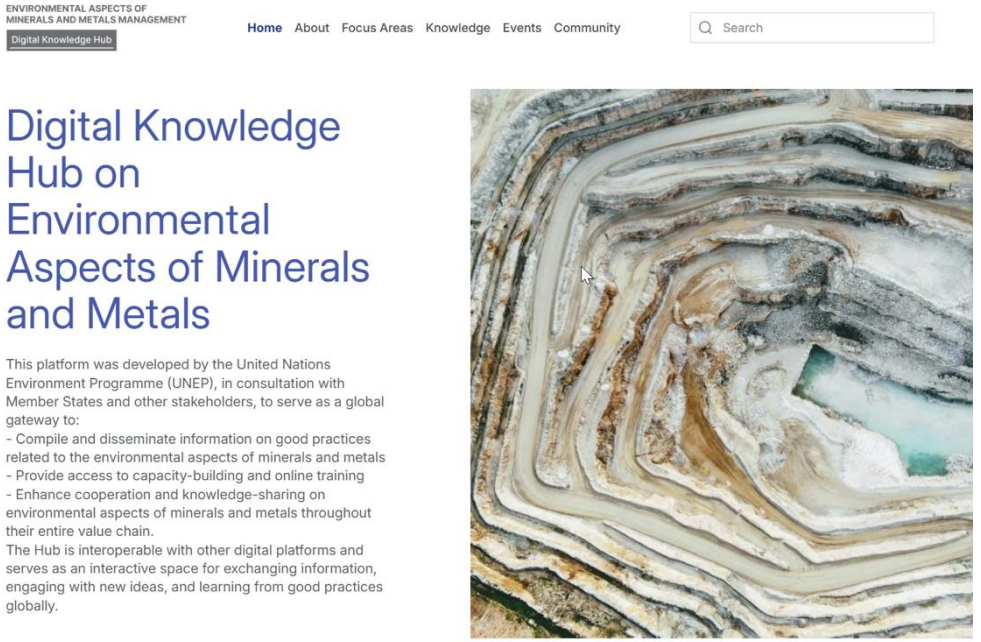
Theme
Sector
Focus area
UNEA
Organisation
Fostering a Just Transition in the Energy Transition Minerals Sector in the Eastern and Southern Africa Region
With case studies from Burundi, the Democratic Republic of the Congo, Malawi, South Africa and Zambia
THE WORLD BANK
EGPS
RISE
1 October 2025
Research
ICMM
Understanding the global distribution of mining and metals facilities
1 September 2025
Research


ENVIRONMENTAL ASPECTS OF MINERALS AND METALS MANAGEMENT
Digital Knowledge Hub
Home About Focus Areas Knowledge Events Community
Search
Digital Knowledge Hub on Environmental Aspects of Minerals and Metals
This platform was developed by the United Nations Environment Programme (UNEP), in consultation with Member States and other stakeholders, to serve as a global gateway to:
- Compile and disseminate information on good practices related to the environmental aspects of minerals and metals
- Provide access to capacity-building and online training
- Enhance cooperation and knowledge-sharing on environmental aspects of minerals and metals throughout their entire value chain.
The Hub is interoperable with other digital platforms and serves as an interactive space for exchanging information, engaging with new ideas, and learning from good practices globally.

Closing remarks

- **Elisa Tonda**, Chief, Resources and Markets Branch, Industry & Economy Division, UNEP