# Digital Transformations

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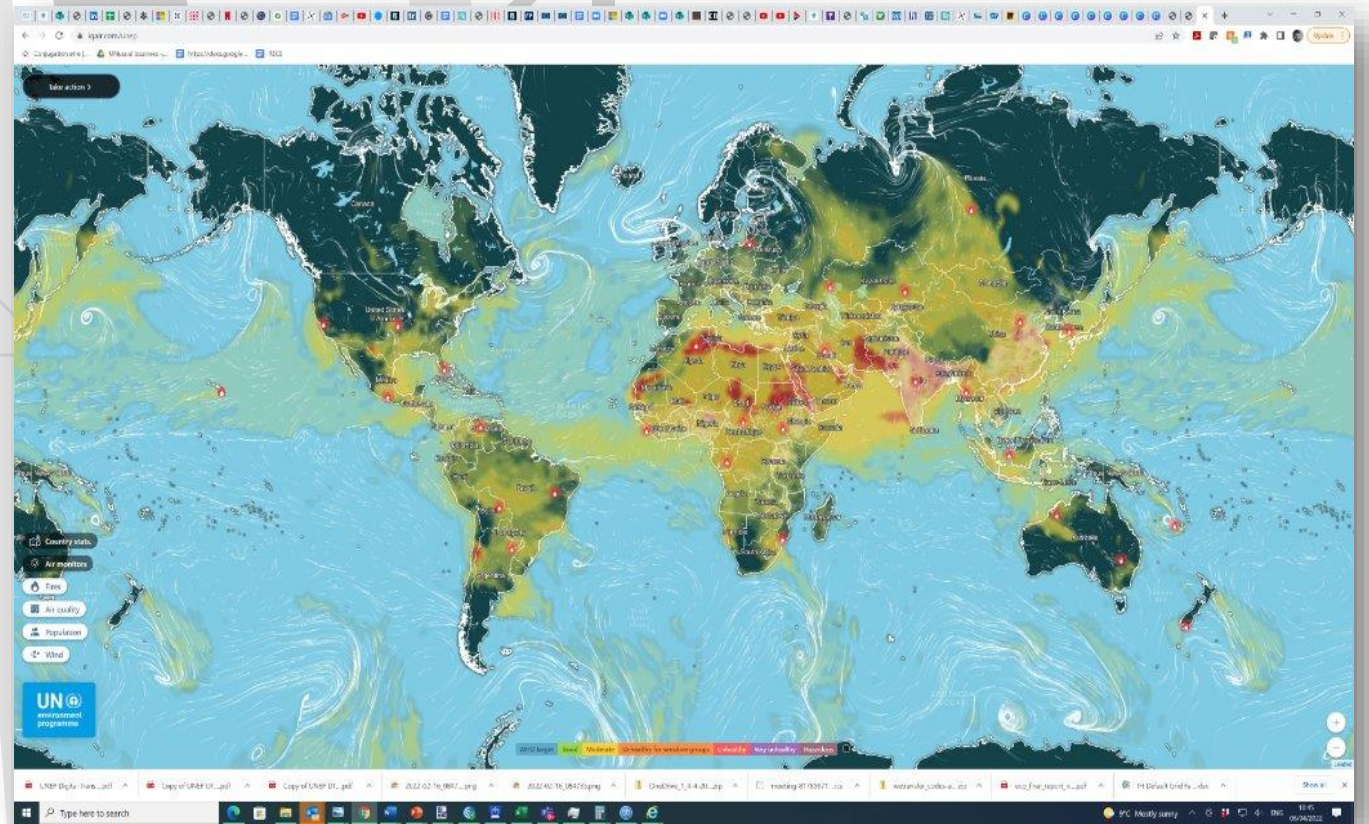
# A. Background: Programme Direction

## Programme Objective:

- Enabling the design and development of digital products and services that align with human-centered design principles to support countries and regions in achieving their environmental sustainability goals.

- Addressing and mitigating the potential negative environmental impacts associated with digital technologies.



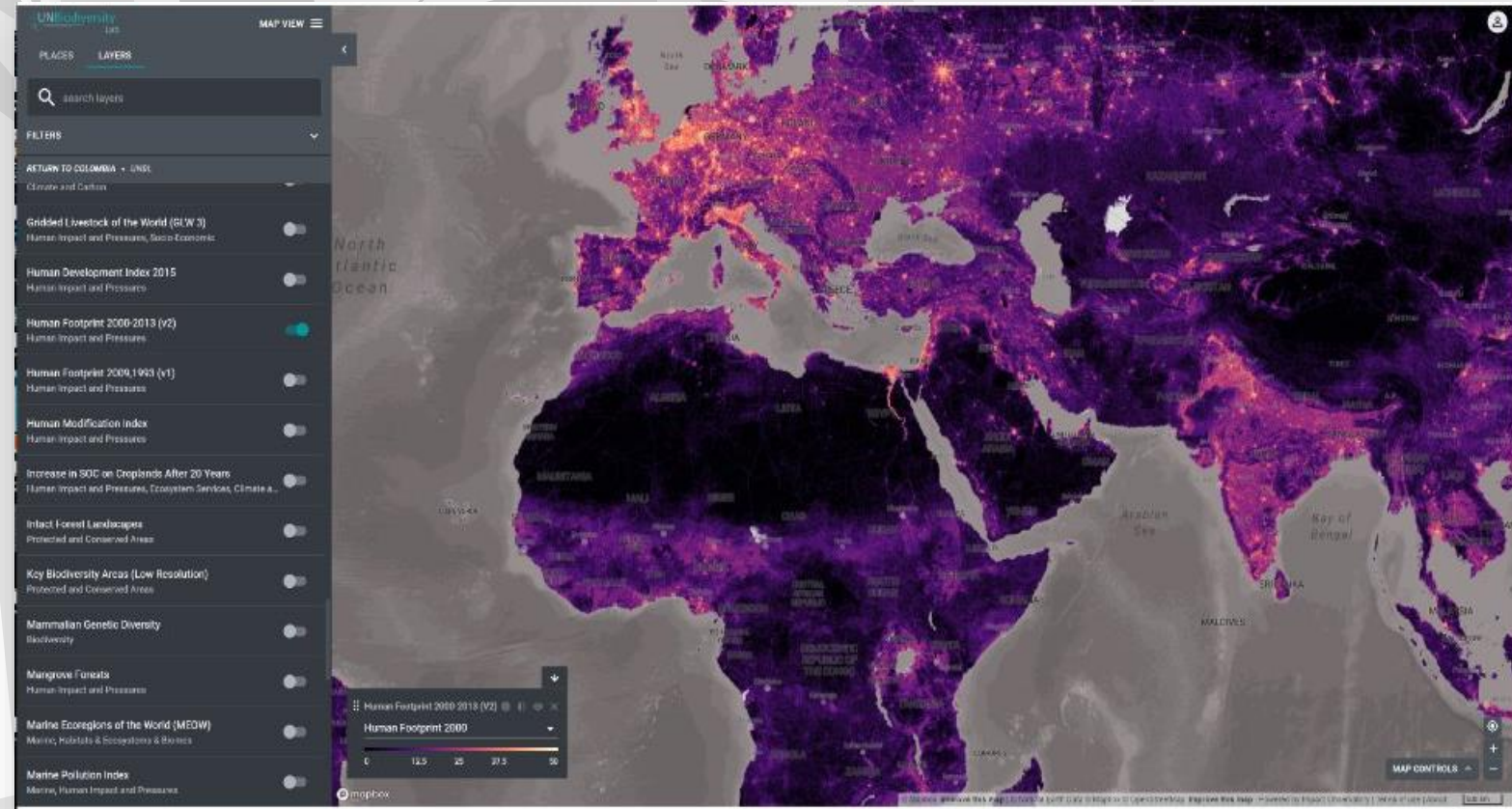**IQ Air Platform:** Co-design of low-cost air sensors 25,000 network 50 million users

## Programme Outcomes (key areas of work):

- Robust digital ecosystem of data and platforms, enabling effective trend and commitment monitoring, as well as the identification and uptake of innovative solutions, insightful analysis, and actionable recommendations to address the three planetary environmental crises.
- Strategic partnerships and multi-lateral engagements to influence markets, supply chains and consumer behaviors.
- Established country-level engagement processes to strengthen digital literacy, digital capacity, and governance.

# A. Background: Envisaged Impact and Strategic Coherence

**Envisaged impact of programme:**

- More timely, open and transparent monitoring of environmental change, progress and solutions that drive data-driven decision making.

- Strategic integration of environmental data, analytics, and norms by public and non-state actors within platforms, apps and algorithms that influence markets, supply chain and consumer behaviors.

- Selective development and adoption of data, digital technologies, and key governing policies by member states to achieve their environmental objectives, SDGs and commitments to MEAs.



**UN Biodiversity Lab:**
400 best available data layers 61 countries accessing data, analytics on essential life support areas
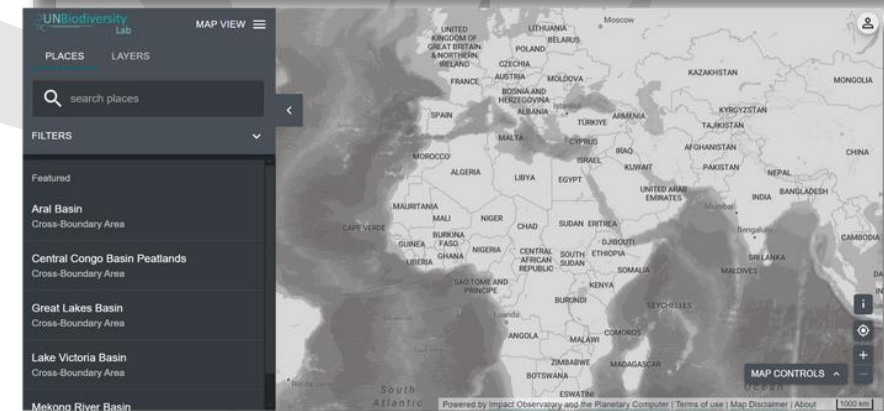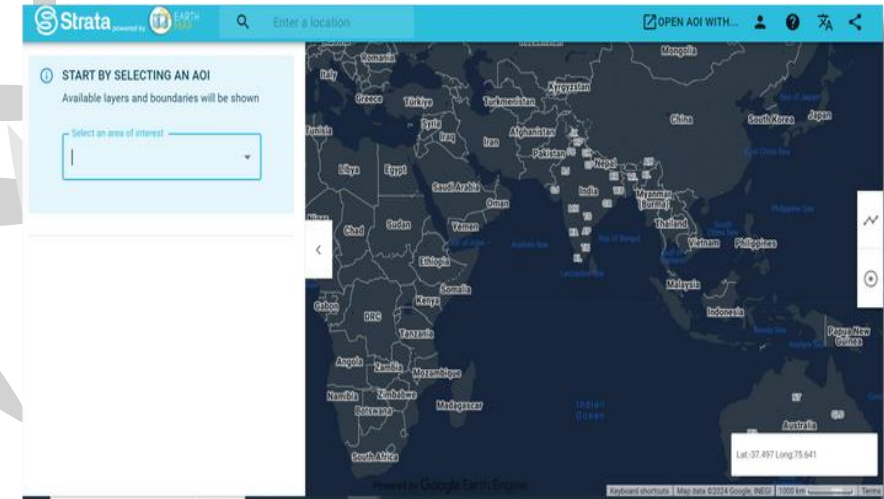
# A. Background: Contribution to MTS and PoW

**Contribution to MTS Outcomes (PoW 2025 Outcomes):**

- Catalyzing a digital ecosystem of data and platforms, enabling effective trend and commitment monitoring, as well as the development and uptake of innovative solutions, insightful analysis, and actionable recommendations to address the tree planetary environmental crises.

- Convening partnerships and multi-lateral engagements to influence markets, supply chains and consumer behaviors.

- Facilitating country-level engagement to strengthen digital literacy, digital capacity, and governance.
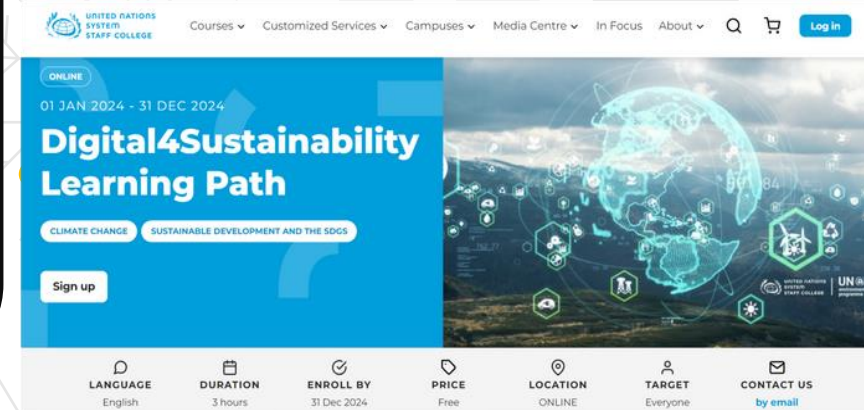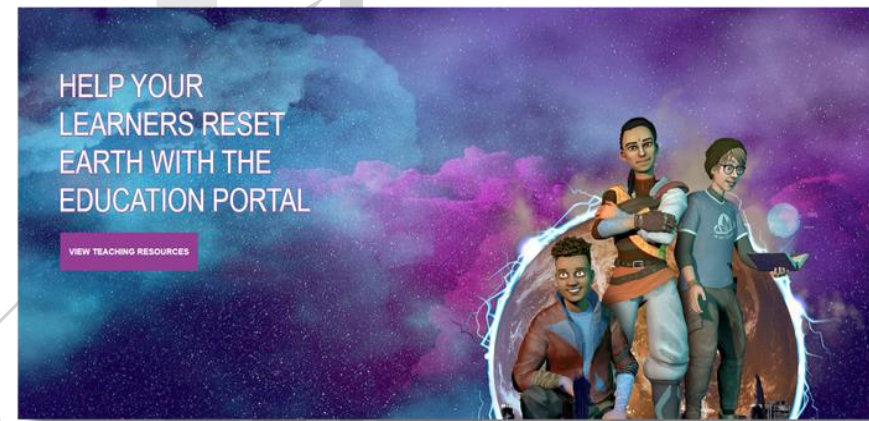
**Contribution to PoW Direct Outcomes:**

- Climate action: 1.1
- Nature action: 2.7
- Chemicals and pollution action: 3.13
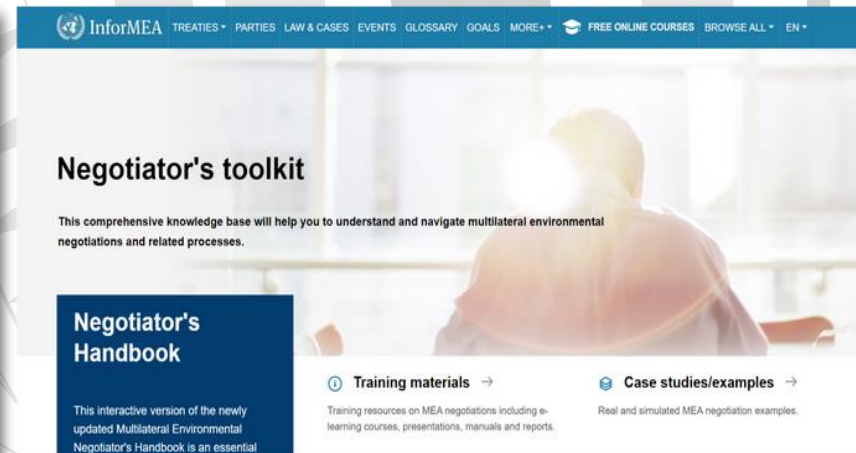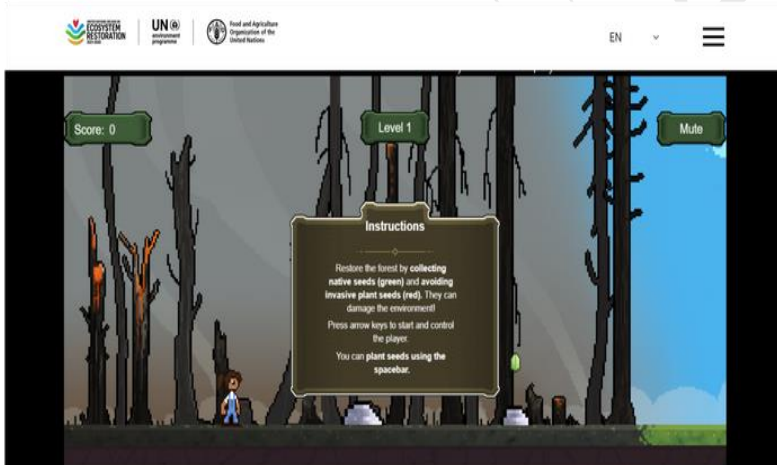
# B. Project Portfolio: Overview

**Description of Project Portfolio:**

- World Environment Situation Room (WESR).
- Global Environmental Data Strategy (GEDS).
- Capacity Building on Green Digital Transformation.

**Synergies to achieve programme objectives:**

- The Digital Transformation Programme and Sub-programme are closely aligned.
- The programme has an enabling, cross-cutting nature.
- It 51 projects with digital components across all UNEP programmes.
- The programme guidance on innovative technologies to address the three planetary environmental crises.

# B. Project Portfolio: Illustrative Examples

**World Environment Situation Room (WESR)**
- UNEP's data and applications platform.
- Redesigning and building the new WESR data architecture.
- Defining WESR use-cases.
- Establishing data and digital policy and governance.

**Global Environment Data Strategy (GEDS)**
- Strategy highlighting global perspectives, best practices, and key recommendations for environmental data.
- Five (5) pillars of GEDS.
- Stakeholder consultations.
- UNEA 7 – presentation of GEDS.

**Capacity Building (Digital Accelerator Lab)**
- Showcases 10 prototypes for user feedback and 10 digital applications, along with reports and resources.
- Provides funding, technical support, and user-centered design services.
- Presented at major events offering opportunities to gather feedback, validate ideas, and raise awareness.

# C. Results Achieved

## Result – WESR and GEDS

- UNEP is one of the founding organizations of CODES.
- Comprehensive inventories of UNEP's data, data platforms, and standards.
- Assessment of WESR.
- Development of new WESR data architecture and platform PoC.
- Improving WESR user experience
- Prototyping WESR use cases: AI Sandbox, EnvironmentGPT, Solutions Hub for Wastewater, Country Environment Dashboards.
- Provided financial and technical support to 13 digital projects.
- GEDS - consultations in 5 regions with over 150 participants, ongoing expert consultations with 60 organizations.

## Result – Capacity Building

- Digital4Sustainability on-line course – over 11 000 learners.
- Issues Note Launched at UNGA – AI End-to-End: The Environmental Impact of the Full AI Lifecycle Needs to be Comprehensively Assessed – over 24 000 on-line views.
- Participation in major events (CoP28 and UNEA6, AI for Good) to gather feedback on digital products – about 700 participants.
- Establishment of the Data and Digital Governance Group to provide governance and technical guidance, supporting UNEP's digital ecosystem.
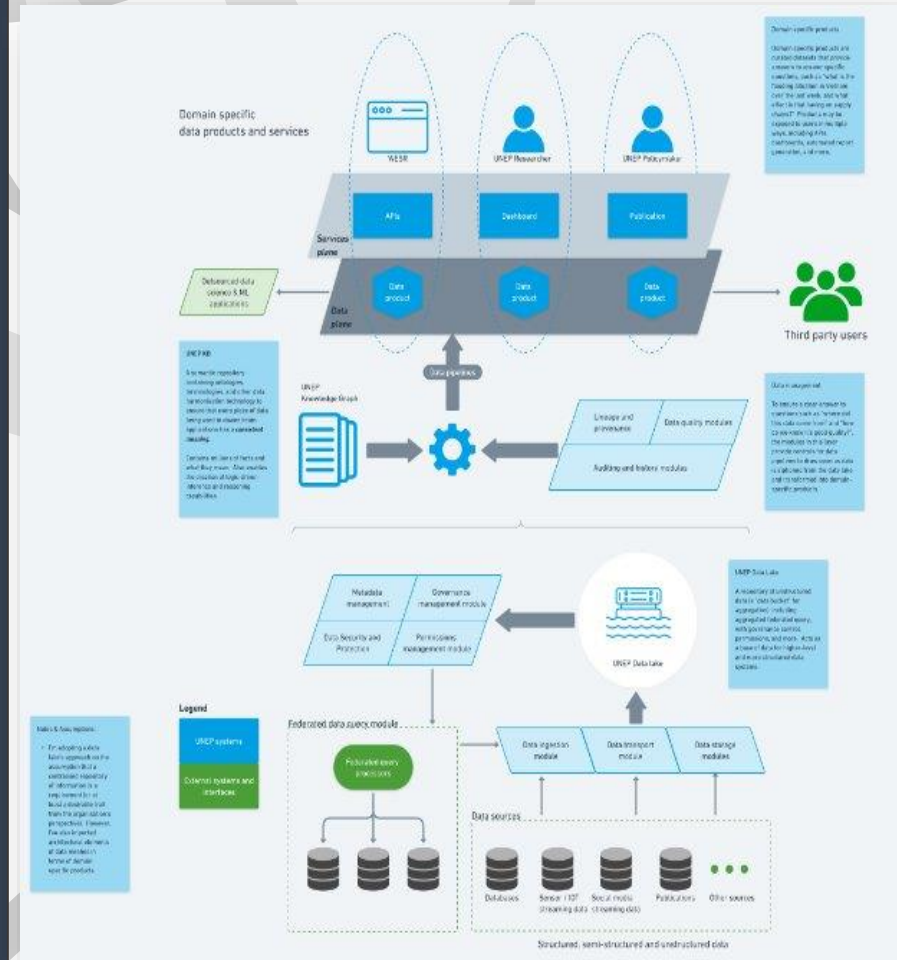
# D. Lessons Learned

## Lessons Learned:

- Based on initial consultations the 5 pillars of GEDS are: Quality and Provenance, Governance, Access and Affordability, Interoperability, Capacity Building.
- Capacity building for policymakers has been incorporated into GEDS.
- Need for digital capacity building for Member States to bridge the digital divide.
- Internal digital capacity building is needed to better address the three planetary crises using digital tools.
- Environmental aspect of governance for new and emerging technologies (e.g. AI, connectivity).

## Changes Made:

- Strategic portfolio realignment to improve efficiency.
- Addressing emerging issues such as AI and the digital divide in GEDS.
- Greater focus on AI initiatives, both internally and externally.
- Increased emphasis on governance and policy issues.
- Strengthened efforts in capacity building.
- In-depth technical development of WESR as a data and applications platform.

# E. Way Forward

A: Implementation of WESR

B: Finalization of GEDS

C: AI – Policy and Implementation

D: Capacity Building

E: Data and Digital Governance

Thank you

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