

Technical assistance to the Ministry of Environment, Water and Ecological Transition (MAATE) of Ecuador for the development of pilot Economy-Wide Material Flow Accounts

11 – 15 November 2024 | Quito, Ecuador

Technical Assistance Report



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Summary

1. Objective of the technical assistance mission

In response to an official request from the *Ministry of Environment, Water and Ecological Transition (MAATE)* of Ecuador for assistance in developing Economy-Wide Material Flow Accounts (EW-MFA), the United Nations Environment Program (UNEP) organized a five-day technical assistance mission. This mission was held from 11 to 15 November 2024, in Quito, Ecuador.

The mission was part of the Statistics and Data project "Resilient and Agile National Statistical Systems to Meet Post-COVID-19 Data Needs to Recover Better". This project is supported by the 14th tranche of the United Nations Development Account (DA14 project) and aims to enhance the capacity of national statistical systems (NSS) in selected countries to provide high-quality, timely, and relevant data for post-COVID-19 recovery efforts. It also aims to enhance the resilience and agility of NSS in beneficiary countries to respond to emerging economic, social and environmental data needs in times of crises and disasters through the use of innovative data sources, advance data acquisition methods and modern technologies, while ensuring a path towards the achievement of the 2030 Agenda. Specifically, the DA14 project is supporting several countries to strengthen the System of Environmental-Economic Accounting (SEEA) at the national level with a focus on Economy-Wide Material Flow Accounts (EW-MFA) and the calculation of relevant indicators under the Sustainable Development Goals (SDGs) 8 and 12. These indicators are critical for assessing progress towards sustainable economic growth, resource efficiency, and sustainable consumption and production patterns.

The main objective of the mission was to enhance the technical capacity of the Ministry of Environment, Water and Ecological Transition (MAATE) in developing pilot Economy-Wide Material Flow Accounts (EW-MFA). This objective involved:

- Presentation by the MAATE and the National Statistics and Census Institute (INEC) on the current status of data collection, data availability, and identifying data gaps.
- Engaging key stakeholders by collaborating with relevant institutions, including government ministries, agencies, and organizations involved in data collection and environmental accounting.
- Providing technical assistance through offering support and capacity-building activities aimed at strengthening Ecuador's ability to understand and compile EW-MFA.
- Developing a pilot EW-MFA for a specific year, which could serve as a model for the following years.

2. Participants

A total of 38 participants, including 16 females and 22 males, participated in the meetings during the technical assistance. Of these, 13 participants were from the Ministry of Environment, Water and Ecological Transition (MAATE), 5 from the Ministry of Agriculture and Livestock (MAG), 4 from the Central Bank of Ecuador (BCE), 3 from the National Institute of Statistics and Census (INEC), 3 from the Ministry of Energy and Mines (MEM), 7 from other different national institutions, as well as 2 from UNEP and 1 from FAO.

The list of participants is available in Annex 1.

3. Outline of the mission

The five-day face-to-face technical assistance began with a one-day national workshop organized by the Ministry of Environment, Water and Ecological Transition (MAATE) at the Technical University of Loja.



The workshop opened with remarks from Nathalie Aguirre from the Technical University of Loja, Holger Zambrano from the MAATE and Javier Neme, from UNEP. Following the introductions, Mónica Luz Ureña, a consultant from UNEP, provided a comprehensive overview of the mission's objectives. This was followed by a presentation on the current status of environment statistics and environmental accounting by the MAATE and the National Institute of Statistics and Census (INEC).

Next, Mónica Luz introduced the EW-MFA framework, explained the available methodological tools and resources to support EW-MFA calculations, and outlined the data requirements. Working groups were then formed to discuss potential data sources and identify data gaps.

The objective of this national workshop was to familiarize stakeholders and users, including members of the academic community, with the EW-MFA framework. Participants were actively engaged in an initial activity to identify relevant data sources, resulting in the identification of numerous available data sources. The workshop concluded with closing remarks from representatives of INEC, MAATE and UNEP.



The second day focused on assessing the available data sources based on the results of the workshop, as well as organizing meetings with various potential data providers throughout the week.

In the afternoon, *GEO Ecuador 2023* report was presented in the presence of the Minister of Environment, Water and Ecological Transition, as well as other high-level representatives from Ecuador's institutions and UNEP. The presentation was made by Holger Zambrano, Director of Environmental Information and Education at the MAATE.



Over the next three days, nine meetings were held with twelve different institutions. These meetings included presentations on the EW-MFA framework and methodology, with a particular focus on data availability within each institution. The discussions highlighted the strong collaboration mechanisms in place across the country and the institution's capacity to work together and share information. As a results, all participating institutions expressed their commitment to collaborating on the pilot EW-MFA project.



The final session provided a wrap-up discussion and feedback, followed by preparations for the debriefing. Mónica Luz presented a draft work plan, and the mission concluded with a presentation of the mission's findings, next steps and strategic recommendations.

The technical assistance agenda is available in Annex 2.

4. Main outcomes

The series of sessions conducted for participants from Ecuadorian institutions successfully provided a comprehensive overview of the Economy-Wide Material Flow Analysis (EW-MFA) framework. These sessions not only introduced key methodological aspects but also fostered a collaborative environment to enhance coordination among stakeholders. Participants gained valuable insights into potential data providers, available data, and the identification of key stakeholders essential for the successful implementation of EW-MFA in Ecuador.

The central focus of the sessions was to create a conducive environment for collaboratively building the EW-MFA. This strengthened the participants' methodological understanding of EW-MFA.

In addition to building technical capacity, the sessions facilitated increased collaboration among various stakeholders, both within the MAATE and among other participating institutions. This cooperation is essential for ensuring a coordinated and efficient approach to EW-MFA in Ecuador. The discussions also led to identifying ways to share and disseminate the results, with the idea of a national publication proposed as a key avenue for broader engagement and transparency.

The implementation of EW-MFA in Ecuador has already led to the following significant outcomes:

1. **Comprehensive understanding of Ecuador's data landscape:** Through the sessions, participants gained a thorough understanding of the current data availability related to EW-MFA, as well as the identification of gaps in the data. This insight is crucial for planning future data collection efforts and ensuring the accuracy and reliability of material flow analysis.
2. **Strengthened capacity of the MAATE and the INEC teams.** Both teams have significantly enhanced their ability to develop and implement the EW-MFA framework, including a deeper technical understanding of the methodology.
3. **Enhanced collaboration and coordination among stakeholders:** The sessions have fostered stronger collaboration among various stakeholders involved in EW-MFA. This includes not only internal MAATE teams but also other national institutions.
4. **Roadmap for full implementation of EW-MFA:** A major accomplishment of sessions was the development of a clear and actionable roadmap for the full implementation of EW-MFA in Ecuador.

These outcomes represent a significant step toward achieving Ecuador's long-term goals of more sustainable and data-driven economic and environmental planning. The increased capacity and collaboration established through these sessions will serve as a foundation for future successes in the full implementation of the EW-MFA framework.

The workshop materials can be accessed through the following link:
<https://sdgs.unep.org/national/activities>

5. Next steps

The table below outlines the planned activities and identifies the stakeholders participating in each one.

Activity	Time	Stakeholders
Meetings between MAATE and key stakeholders, identified as potential data providers.	November 2024 – February 2025	MAATE Direction of the National Park of Galápagos Charles Darwin Foundation Public Research Institute for Aquaculture and Fishing. MAATE – Direction of Marine Coasts and Oceans Ministry of Production and Foreign Trade- Direction of Fisheries Control
Reception of available data from all the institutions	November 2024 – January 2025	MAATE National institutions
Assessment of data availability and population EW-MFA tables	December 2024 – February 2025	MAATE
Elaboration a national publication summarizing the progress made and pilot results	January – February 2025	MAATE
Online expert support for populating EW-MFA tables, evaluating data quality and drafting publication.	November 2024 – March 2025	Mónica Luz Ureña (UNEP's consultant)
National workshop to present the pilot EW-MFA results.	March 2025 (in person, Ecuador)	UNEP MAATE Relevant ministries and national agencies

Annexes

Annex 1: List of participants

No	Name	Organization	Attendance
1.	Alejandra Medina	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
2.	Alex Pérez	Central Bank of Ecuador (BCE)	In-person
3.	Alex Posso	Ministry of Energy and Mines (MEM)	In-person
4.	Alex Ramirez	Agency of Water Control and Regulation (ARCA)	In-person
5.	Carlos Pilataxi	National Institute of Statistics and Census (INEC)	In-person
6.	Cecilia Pozo	Association of Ecuadorian Municipalities (AME)	In-person
7.	César Viteri	Charles Darwin Foundation for Galapagos Islands (FCD)	In-person
8.	Daniela García	FAO	In-person
9.	David Salazar	National Institute of Statistics and Census (INEC)	In-person
10.	Diana Manosalvas	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
11.	Diego Bastidas	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
12.	Edison Plazas	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
13.	Fredy Valencia	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
14.	Gabriel Andino	Association of Ecuadorian Municipalities (AME)	In-person
15.	Gina Moreta	Ministry of Energy and Mines (MEM)	In-person
16.	Guillermo Fernández	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
17.	Henry Sarango	Central Bank of Ecuador (BCE)	In-person
18.	Holger Zambrano	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
19.	Jacqueline Guevara	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
20.	Javier Fontalvo	Geological and Energy Research Institute	In-person
21.	Josselyn Balcázar	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
22.	Juanita Morán	Central Bank of Ecuador (BCE)	In-person
23.	Lizbeth Pesantes	Association of Ecuadorian Municipalities (AME)	In-person
24.	Luis Vallejo	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
25.	Marcelo Díaz	Ministry of Energy and Mines (MEM)	In-person
26.	María José Soria	Ministry of Agriculture and Livestock (MAG)	In-person
27.	Milton Ordoñez	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person

28.	Nathalie Aguirre	Technical University of Loja (UTPL)	In-person
29.	Nayeli Quilumba	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
30.	Pamela Paredes	National Institute of Statistics and Census (INEC)	In-person
31.	Patricia Llanga	Ministry of Environment, Water and Ecological Transition (MAATE)	In-person
32.	Ricardo Sánchez	Ministry of Agriculture and Livestock (MAG)	In-person
33.	Ronnie Andrade	Ministry of Agriculture and Livestock (MAG)	In-person
34.	Santiago Segovia	Central Bank of Ecuador (BCE)	In-person
35.	Tobias Bustamante	Ministry of Agriculture and Livestock (MAG)	On-line
36.	Xavier Jiménez	Ministry of Agriculture and Livestock (MAG)	On-line
37.	Javier Neme	UNEP Latin America and the Caribbean Office, PMO	In-person
38.	Mónica Luz Ureña	UNEP, Consultant	In-person

Annex 2: Agenda

Agenda

11 – 15 November 2024

Ministry of Environment, Water and Ecological Transition (MAATE)
Quito, Ecuador

Day 1	Monday, November 11, 2024
08:30 – 09:00	Participants register
09:00 – 09:45	Welcome to all institutions by Nathalie Aguirre (UTPL), Holger Zambrano (MAATE) and Javier Neme (UNEP)
09:45 – 10:05	Mission overview presented by Mónica Luz (UNEP's consultant)
10:05 – 10:25	Presentation by Jaqueline Guevara (MAATE) and Paloma Paredes (INEC) on the current status of environment statistics and environmental accounting in Ecuador
10:25 – 10:40	Coffee break
10:40 – 11:00	Presentation on EW-MFA framework, methodological tools and data requirements by Mónica Luz (UNEP's consultant)
10:00 – 11:40	Working groups on data providers and sources identification. Identification of existing data gaps
11:40 – 12:00	Closing workshop by Holger Zambrano (MAATE), David Salazar (INEC) and Javier Neme (UNEP)
12:00 – 14:00	Lunch break
14:00 – 16:00	<u>Session 1</u> : Collaborative work with the Environmental Information and Education Direction team from the MAATE. Discussion about workshop outputs, including potential data providers and data sources.
16:00 – 16:30	Wrap-up & review of the day's progress

Location: Technical University of Loja (Av. 6 de Diciembre N31-50, Quito 170517).

Day 2	Tuesday, November 12, 2024
10:30 – 12:00	<u>Session 2</u> : Analysis of available data provided by MAATE
12:00 – 14:00	Lunch break
14:00 – 19:00	Presentation of the report “GEO 2024” by the MAATE

Location: Cultural Center Pedro Vicente Maldonado (El Dorado, Quito 170517).

Day 3	Wednesday, November 13, 2024
09:00 – 10:00	<u>Session 3</u> : Meeting with the Ministry of Energy and Mines (Environmental Monitoring Direction). Presentation of the EW-MFA and discussion about data availability and additional data sources.
10:00 – 10:15	Coffee break
10:15 – 12:30	<u>Session 4</u> : Meeting with the Ministry of Environment, Water and Ecological Transition (Forestry Direction) and the Ministry of Agriculture and Livestock (Forestry Production Sub-Secretary). Presentation of the EW-MFA and discussion about data availability and additional data sources.
12:30 – 14:30	Lunch break
14:30 – 16:00	<u>Session 5</u> : Meeting with the Central Bank of Ecuador: Sub-Management Office of Short-Term Statistics (STS) and National Accounts and Sub-Management Office of Statistics Information. Presentation of the EW-MFA and discussion about data availability and additional data sources.
16:00 – 16:30	• Wrap-up & review of the day's progress.

Location: Ministry of Environment, Water and Ecological Transition (Av. Toledo N22-286, Quito 170517).

Day 4	Thursday, November 14, 2024
09:00 – 10:00	<u>Session 6</u> : Meeting with the Ministry of Environment, Water and Ecological Transition: Solid Waste Management and Inclusive Circular Economy Project and the Association of Ecuadorian Municipalities (AME). Presentation of the EW-MFA and discussion about data availability and additional data sources.
10:00 – 11:00	<u>Session 7</u> : Meeting with the Food and Agriculture Organization of the United Nations (FAO). Presentation of the EW-MFA and discussion about data availability and additional data sources.
11:00 – 12:00	<u>Session 8</u> : Meeting with Ministry of Environment, Water and Ecological Transition (Climate Change Sub-Secretary) and the Geological and Energy Research Institute (Innovation Sub-Secretary). Presentation of the EW-MFA and discussion about data availability and additional data sources.
12:00 – 13:30	<u>Session 9</u> : Meeting with the National Statistics and Census Institute (Agricultural Statistics Direction). Discussion about data availability and additional data sources.
13:30 – 14:30	Lunch break
14:30 – 16:00	<u>Session 10</u> : Meeting with the Agency of Water Regulation and Control (Drinking Water Direction). Presentation of the EW-MFA and discussion about data availability and additional data sources.
16:00 – 16:30	Wrap-up & review of the day's progress.

Location: Ministry of Environment, Water and Ecological Transition (Av. Toledo N22-286, Quito 170517).

Day 5	Friday, November 15, 2024
09:00 – 10:30	<u>Session 11</u> : Meeting with the Ministry of Agriculture Livestock (General Coordination Office of National Information). Presentation of the EW-MFA and discussion about available data at the Ministry of Agriculture.
10:30 – 10:45	Coffee break
10:45 – 12:00	<u>Session 12</u> : Collaborative work with NSA team about data availability.
12:00 – 14:00	Lunch break
14:00 – 15:00	Final discussion, feedback session and preparation for debriefing.
15:00 – 16:30	Debriefing - Presentation of mission findings, recommendations and work plan by Mónica Luz to the MAATE Environmental Information and Education Director.

Location: Ministry of Agriculture and Livestock (Av. Rio Amazonas, Quito 170517) and Ministry of Environment, Water and Ecological Transition (Av. Toledo N22-286, Quito 170517).