Namibia Statistics Agency

UN environment programme

RESULTS OF THE WORK ON ECONOMY WIDE MATERIAL FLOW ACCOUNT (EW-MFA) IN NAMIBIA

VMM NAMBUNDUNGA
NSA / UNEP , JULY 2025

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Introduction

This presentation provides a clear overview of the outcome of the EWMF account for Namibia (NA) by NSA/UNEP.

Key areas cover the following aspects:

- ❖ DA14 project in NA.
- ❖ EWMFA output indicator.

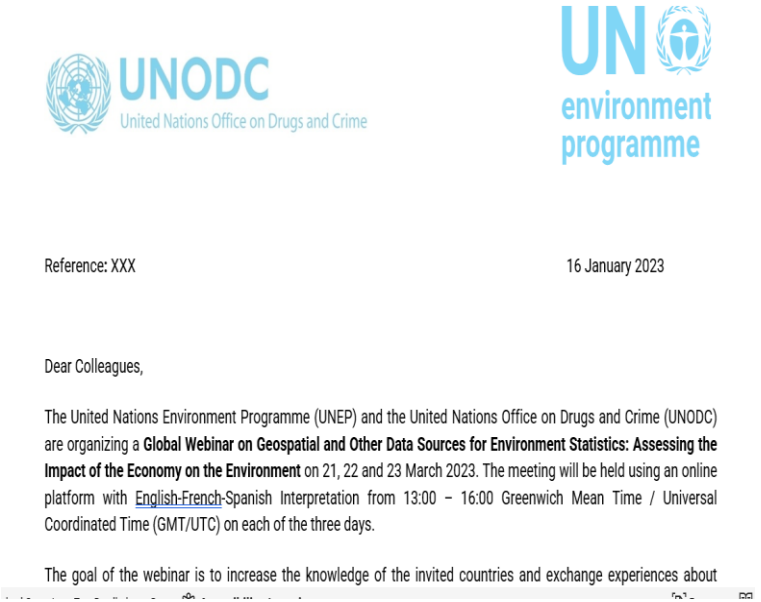
Economy-wide material flow account (EW-MFA) is a statistical accounting framework describing the physical interaction of the economy with the natural environment and with the rest of the world economy in terms of flows of materials.

EWMFA start off

- In Jan 2023: Invitation **Global Webinar on Geospatial and Other Data Sources for Environment Statistics: Assessing the Impact of the Economy on the Environment** on 21, 22 and 23 March 2023 and 18-20 April 2023.

Aim of the webinar: to increase the knowledge and exchange experiences about geospatial statistics and other data sources.

Target audience: NSO's responsible for the collection and dissemination of data and statistics on terrestrial, freshwater and marine ecosystems, as well as domestic material consumption.



UNODC
United Nations Office on Drugs and Crime

UN environment programme

Reference: XXX

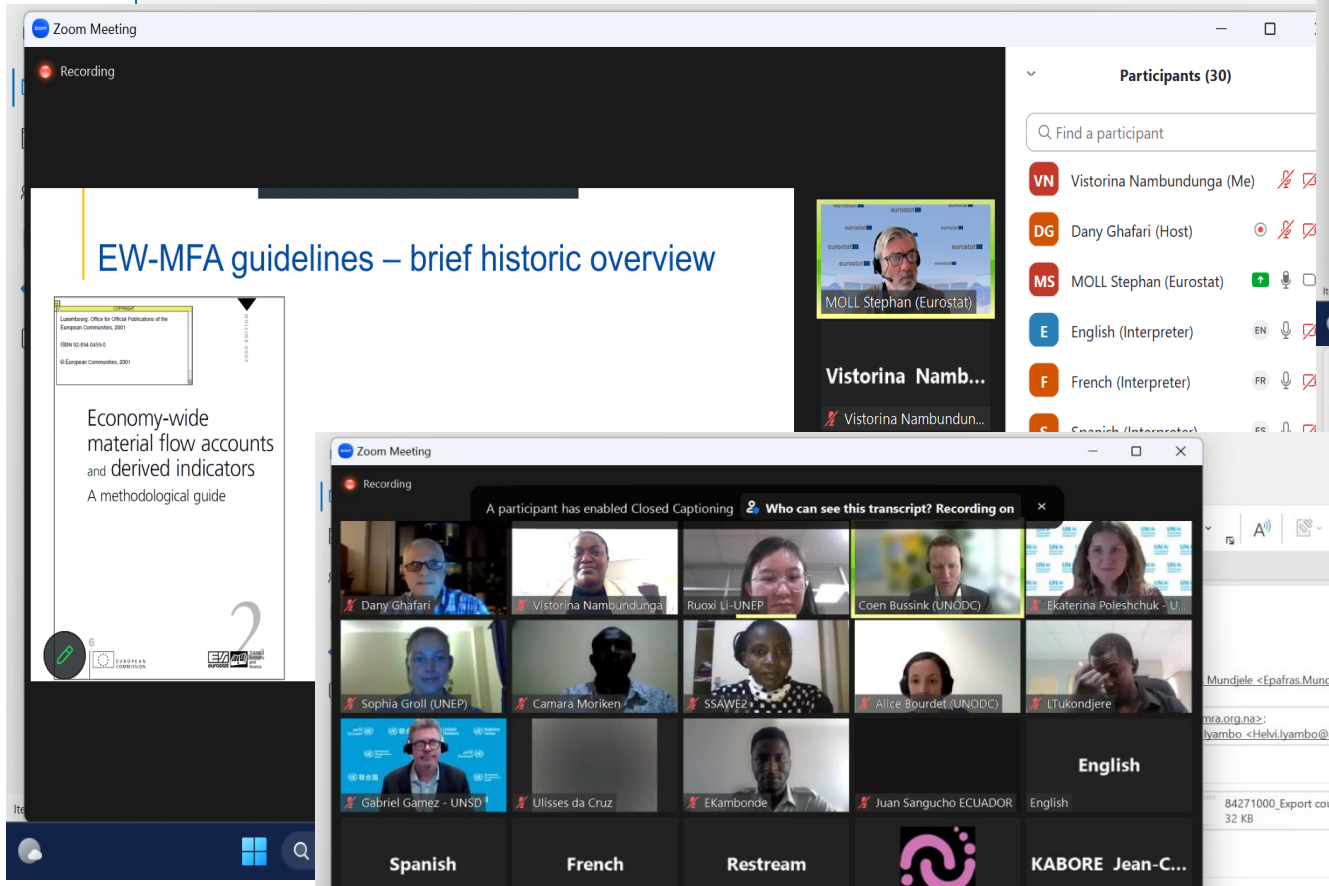
16 January 2023

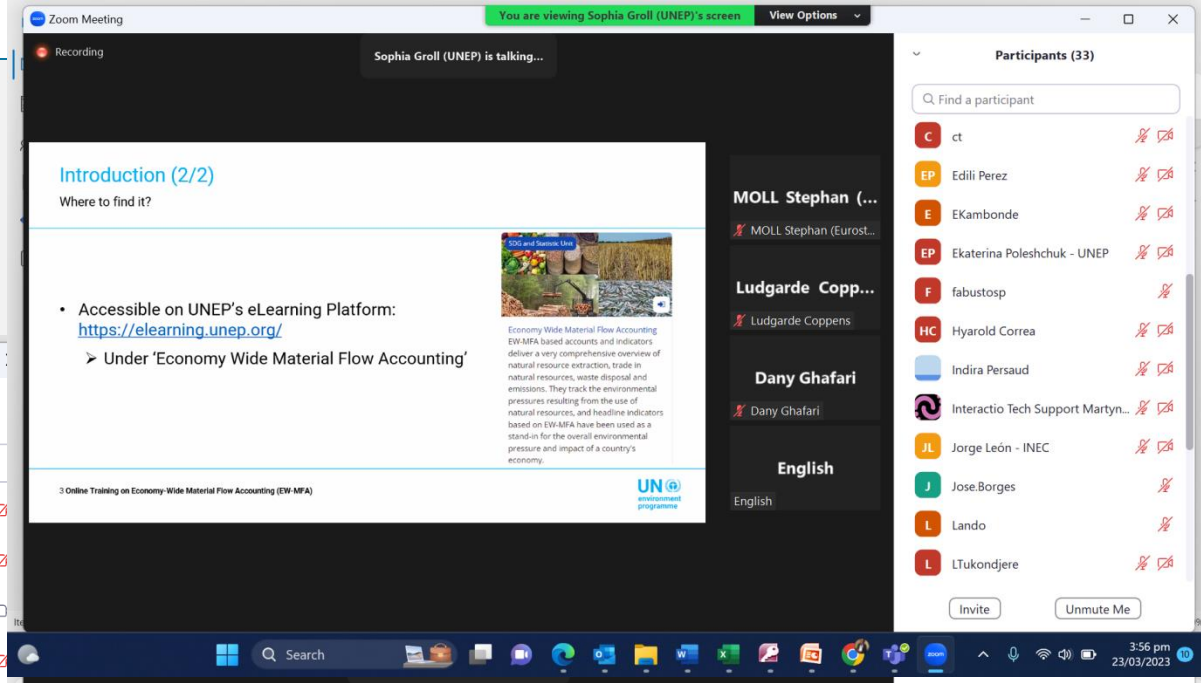
Dear Colleagues,

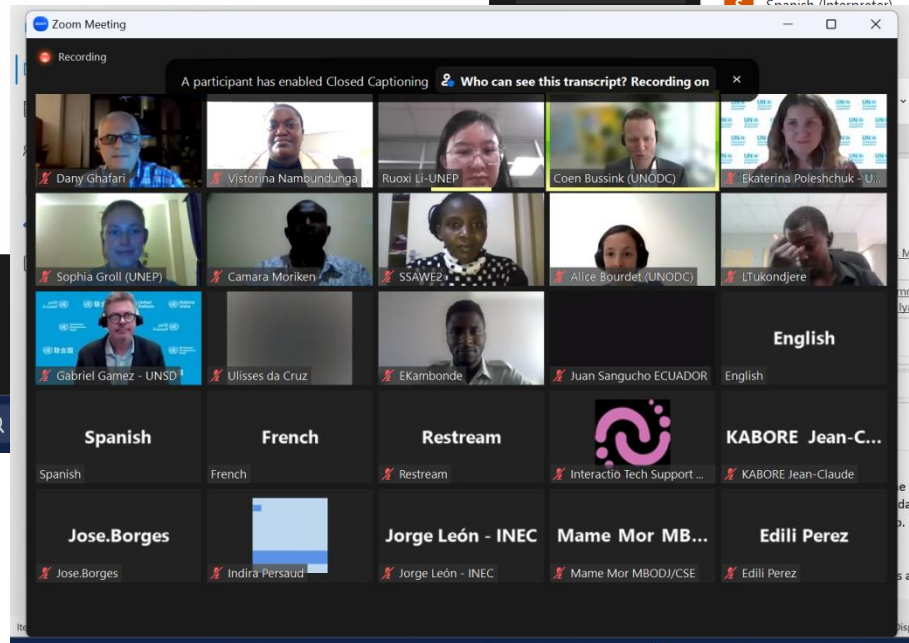
The United Nations Environment Programme (UNEP) and the United Nations Office on Drugs and Crime (UNODC) are organizing a **Global Webinar on Geospatial and Other Data Sources for Environment Statistics: Assessing the Impact of the Economy on the Environment** on 21, 22 and 23 March 2023. The meeting will be held using an online platform with English-French-Spanish Interpretation from 13:00 – 16:00 Greenwich Mean Time / Universal Coordinated Time (GMT/UTC) on each of the three days.

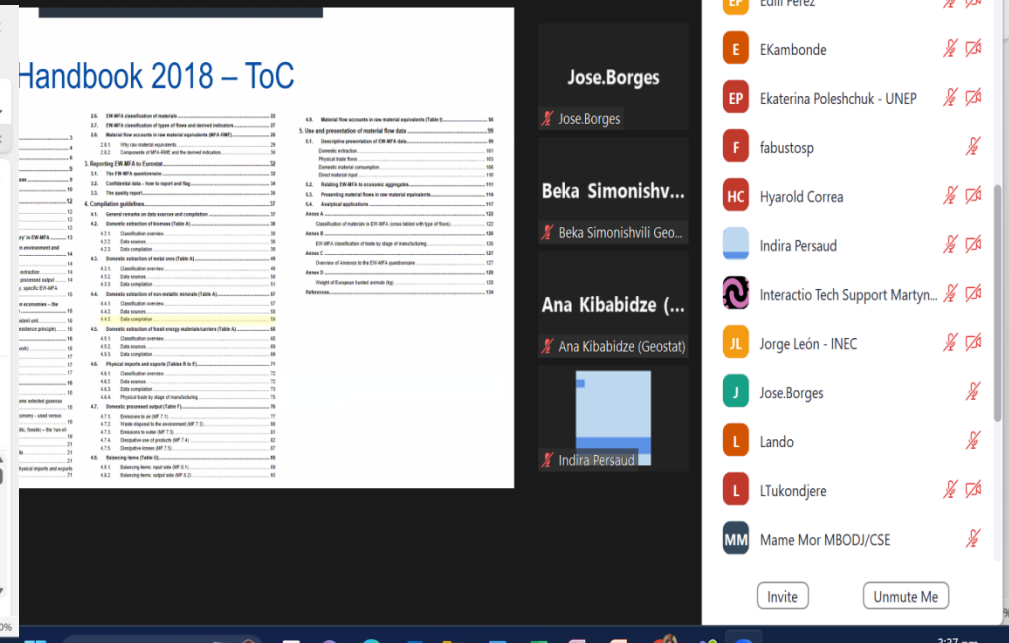
The goal of the webinar is to increase the knowledge of the invited countries and exchange experiences about

EWMFA start off









EWMFA start off

14:20 – 14:35	**SDG indicator 8.4.2/12.2.2 and UNEP Questionnaire on EW-MFA for these SDG indicators** – *Dany Ghafari, UNEP* **Q&A**
14:35 – 15:05	**Calculation of DMC using EW-MFA at the country level:** • **Global estimation provided for countries** – *James West, CSIRO Land and Water, Sustainability Pathways Program, Australia (10 mins)* • **Validating the Economy-wide Material Flow Accounts (EW-MFA) in Namibia** – *Vistorina M.M Nambundunga, Namibia Statistic Agency (10 mins)* **Q&A** *(10 mins)*
15:05 – 15:40	**Panel discussion** on the advantages and disadvantages of the DMC methodology – *Stephan Moll (Eurostat), Sophia Leticia Groll (UNEP), Ezekiel N. Kambonde (Namibia Statistic Agency)* **Open discussion**
15:40 – 15:45	**Closing remarks** – *Ekaterina Poleshchuk, UNEP*

07:35 – 08:05	**Calculation of DMC using EW-MFA at the country level:**

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	• **Global estimation provided for countries** – *James West, CSIRO Land and Water, Sustainability Pathways Program, Australia (10 mins)* • **Validating the Economy-wide Material Flow Accounts (EW-MFA) in Namibia** – *Vistorina M.M Nambundunga, Namibia Statistic Agency, tbc. (10 mins)* **Q&A** *(10 mins)*
08:05 – 08:40	**Panel discussion** on the advantages and disadvantages of the DMC methodology – *Stephan Moll (Eurostat), Sophia Leticia Groll (UNEP), Ezekiel N. Kambonde (Namibia Statistic Agency)* **Open discussion**
08:40 – 08:45	**Closing remarks** – *Ekaterina Poleshchuk, UNEP*

EWMFA start off

- Late 2023, made our submission why Namibia should be selected for the Pilot DA-14 Project
- Apr 2024 positive response from UNEP that Namibia has been selected as one of the target countries out of 50 beneficial countries.
- The 14th Tranche of the Development Account is a Statistics and Data Project – aiming to build resilient and agile National Statistical Systems (NSS) to meet post-COVID-19 data needs to recover better (DA14 project runs from 2022-2025).

UNEP SG SHORT STATEMENT:

Mr. Alex Shimuafeni, Statistician General/CEO of the Namibia Statistics Agency, stated that Domestic Material Consumption (DMC) measures the annual quantity of raw materials extracted in Namibia, physical imports and all physical exports hence quantifying the net material that our economy has used.

Data on DMC is crucial to inform Namibia's policies on issues surrounding responsible consumption and production as the C indicator helps the country identify materials extracted, ɔs track the rate of extraction and aids with the sustainable zation of resources to keep track of the reserves considering h the domestic and foreign demand of national resources. ıce, an account with these crucial indicators such as domestic raction will also aid in determining the impact of extracting ɔective materials, e.g gold, has on the environment of which rvention will be required from policy makers and relevant anizations.

Early Warning and Assessment Division

UN environment programme

Reference: EWAD/SDG&ESU/LC/ep (DA14 Project) 22 April 2024

Dear Mr Shimuafeni,

We are pleased to inform you that due to the interest of the National Statistics Agency (NSA) of Namibia in supporting technical capacity in statistics, demonstrated during the activities under the **14th Tranche of the Development Account: Statistics and Data Project - Resilient and agile National Statistical Systems (NSS) to meet post-COVID-19 data needs to recover better** (DA14 project), as well as NSA's requests to the United Nations Environment Programme (UNEP) to strengthen the institutional environment and production process in the national statistical system to compile and produce specific SDG indicators, in particular based on Economy-Wide Material Flow Accounts, Namibia has been selected as the target country out of 50 beneficial countries under this project.

The suggested capacity-building activities to be undertaken in Namibia include the strengthening the System of Environmental-Economic Accounting at the national level with a focus on Economy-Wide Material Flow Accounts to support national reporting on SDG indicators 8.4.1/12.2.1 "Material footprint, material footprint per capita, and material footprint per GDP" and 8.4.2/12.2.2 "Domestic material consumption, domestic material consumption per capita, domestic material consumption per GDP" and institutional statistical environment to quantify South-South cooperation.

The activities in Namibia will be implemented from 2024 to early 2025, coordinated by UNEP, in partnership with the United Nations Economic Commission for Africa (ECA) and the United Nations Statistics Division (UNSD), through the following respective focal points: Ms. Ekaterina Poleshchuk (ekaterina.poleshchuk@un.org) from UNEP and Mr. Léandre Ngogang Wandji (ngogangwandji@un.org) from ECA.

To facilitate efficient communication, we kindly request you send us by 6th May 2024 the name and contact information of the nominated focal point(s) from NSA. Thereafter, we will arrange an initial coordination call to discuss the roadmap and any other details.

DA-14 Project and support received

Workstreams

- WS 1.1 – Governance
- WS 1.2 – Innovation
- WS 2.1 – Climate Change and Disaster Related Statistics
- WS 2.2 – Monitoring Economic Disparities
- WS 2.3 – Measuring Gender and Social Discrimination
- WS 2.4 – Assessing the Impact of the Economy on the Environment

Beneficiary counties: 2022-2025

- Sub-regional, regional and interregional events and activities
- Development and translation of methodological guidelines, tools, learning material, e-learning ...

Target countries: 2024-2025

- Identification of 16 target countries to be conducted by all entities and for two or more workstreams
- Assistance delivered according to a roadmap to be established for each target country

Support received…. Work stream activities

WS 2.4 – ASSESSING THE IMPACT OF THE ECONOMY ON THE ENVIRONMENT	**Expected outcome:** Pilot Economy-Wide Material Flow Accounts are developed in close cooperation with the national and international experts		
Lead: UNEP	Other implementing entities: ECA	Main national partner: National Statistics Agency (NSA) of Namibia	
Activity	**Dates**	**Focal points**	**National agencies involved**
Preparatory activities for getting started with Economy-Wide Material Flow Accounts (EW-MFA) *Note: UNEP will share additional information with NSA on EW-MFA and provide any necessary advice to prepare for the upcoming face-to-face work with the consultant*	August - September 2024	UNEP: Ekaterina Poleshchuk (ekaterina.poleshchuk@un.org); Patryk Guenther (patryk.guenther@un.org) NSA: Vistorina Nambundunga (VNambundunga@nsa.org.na)	NSA
Face-to-face work with a UNEP consultant to build pilot national EW-MFA *Note: The face-to-face work will require the ongoing participation of two NSA experts who are responsible for the EW-MFA in NSA, as well as the separate presence of other relevant national experts (on industry, trade, agriculture, energy statistics) for half/one day each on a schedule that will be discussed before the meeting.*	October 2024 (5 working days in person)		NSA, Ministry of Trade and Industry (MIT), Ministry of Agriculture, Water and Land Reforms (MAWLR) and Ministry of Mines and Energy (MME)
Online expert support in finalizing pilot national EW-MFA	October – November 2024		NSA, MIT, MAWLR, MME,

Support received…. Work stream activities

National workshop to present national pilot EW-MFA and test the Global Footprint Tool *Note: to support reporting on SDG indicators 8.4.1/12.2.1 and 8.4.2/12.2.2*	Two days in March 2025 (suggested: 3-4 March 2025; in person)		NSA and NSS
Report national data on EW-MFA to UNEP using the UNEP Questionnaire on EW-MFA for the SDG indicators 8.4.1/12.2.1 and 8.4.2/12.2.2 under the 2024 data collection cycle	May 2025		NSA
Online expert support in using the Global Footprint Tool to calculate the national Material Footprint indicator	March–May 2025		NSA

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** Note: WS2.4 The team has started planning for the face-to-face workshop to be held 21-25 October 2024 at the NSA by a UNEP contracted consultant.*

…… **THE END**……

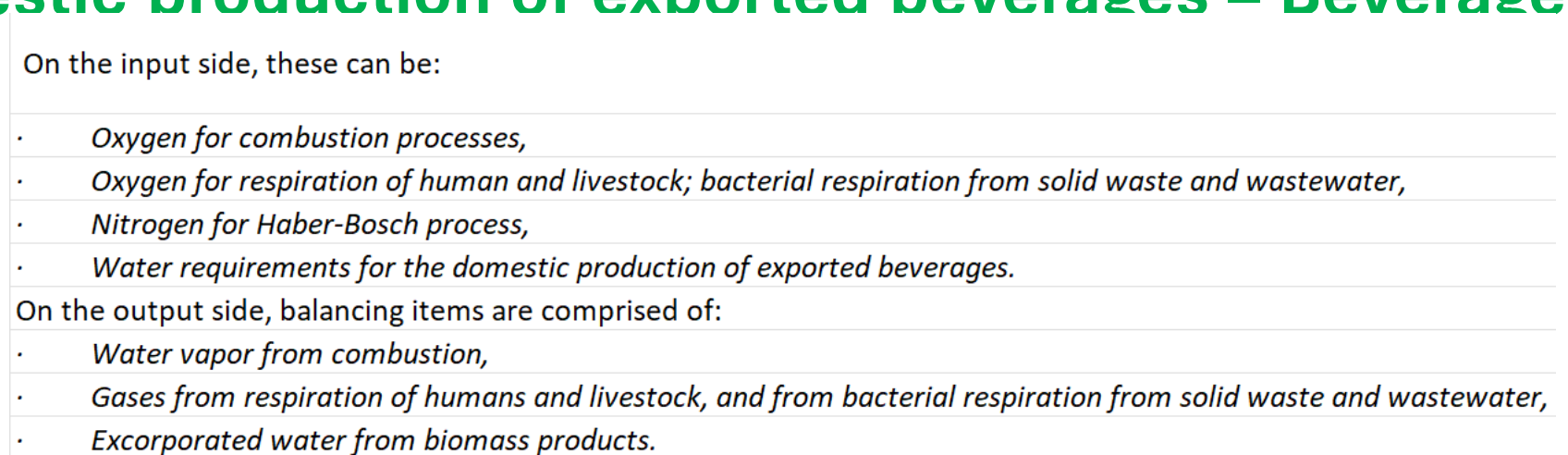
Data sources / collection methodologies

Data sources / collection methodologies

- **Table_A - Domestic extraction (DE)-** Domestic extraction includes four groups of extracted materials: A.1 Biomass, A.2 Metal ores, A.3 Non-metallic minerals, and A.4 Fossil fuels. **Administration Data from line ministries – MAFWLR, NSA- Agri sub-division (NAB), Grazed biomass – MEFT (NIR), Crop residues: Data was estimated using *crop data, the harvest factor and recovery rate* for the Sub Sahara Africa region provided in the EW-MFA template, Metals (Other total estimated) and non-metallic materials- MIME.**
- **Table_B - Imports of materials & Table_C - Exports of materials-** allow the capture of additional goods which have been processed to some degree, and even some manufactured goods and traded: **Data sourced from NSA IMTS.**
- **Table_D - Material outflows-** outputs to the environment are summarized as Domestic Processed Output (DPO) and include five major categories: D.1. Emissions to air; D.2. Waste landfilled (uncontrolled); D.3. Emissions to water; D.4. Dissipative use of products; D.5. Dissipative losses. **Sources of data MEFT, GHG - Local Authorities data**

Data sources / collection methodologies

- **Table_E - Balancing items-** DE + Imports + Balancing items (input side) = Exports + DPO + Net Additions to Stock (NAS) + Balancing items (output side), where NAS includes Intermediate consumption + Final consumption + Accumulation (or Stock).
- Balancing items are defined as the additional inputs and outputs necessary to establish a material balance. **(Water requirements for the domestic production of exported beverages – Beverage company).**



On the input side, these can be:

- *Oxygen for combustion processes,*
- *Oxygen for respiration of human and livestock; bacterial respiration from solid waste and wastewater,*
- *Nitrogen for Haber-Bosch process,*
- *Water requirements for the domestic production of exported beverages.*

On the output side, balancing items are comprised of:

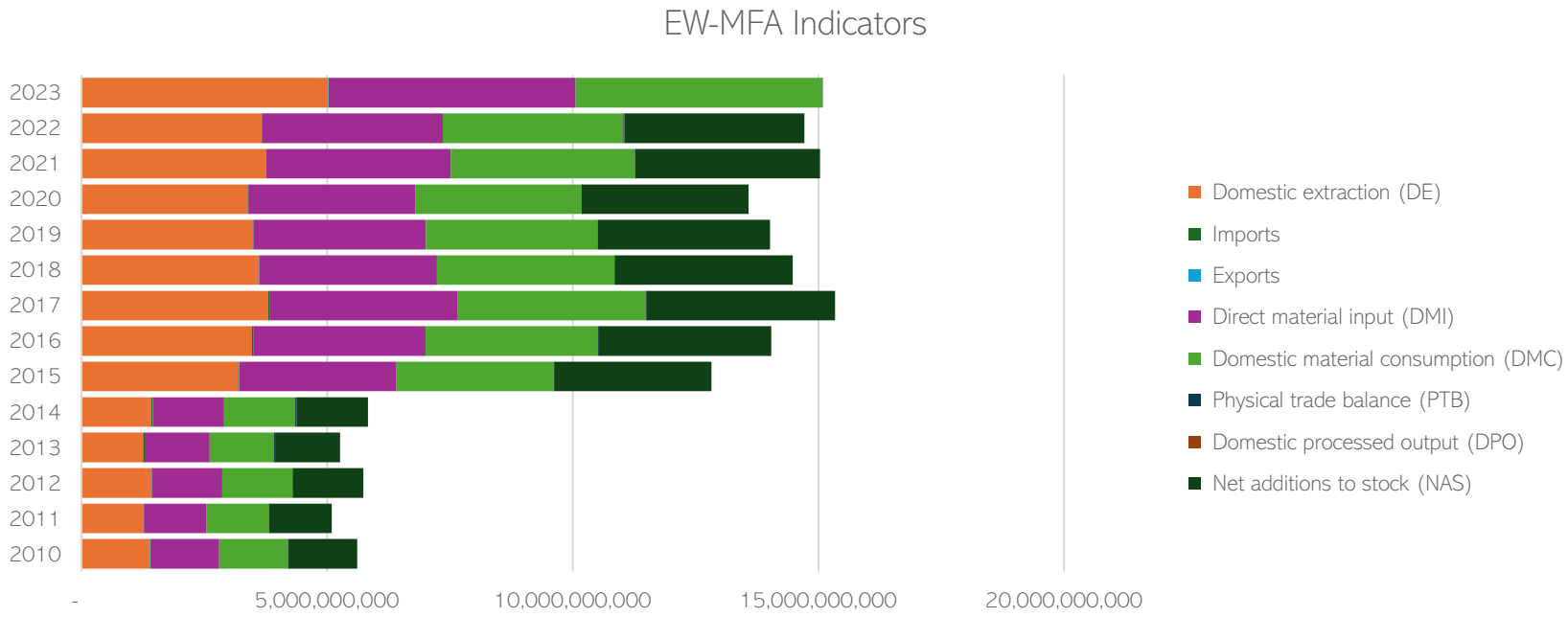
- *Water vapor from combustion,*
- *Gases from respiration of humans and livestock, and from bacterial respiration from solid waste and wastewater,*
- *Excorporated water from biomass products.*

Data sources / collection methodologies

- **Table_F - Headline indicators-** Based on EW-MFA, the following indicators can be calculated: Domestic Extraction (DE), Imports, Exports, Direct Material Input (DMI), Domestic Material Consumption (DMC), Physical Trade Balance (PTB), Domestic Processed Output (DPO) and Net Additions to Stock (NAS).

DE = DE (A.1 Biomass) + DE (A.2 Metal ores) + DE (A.3 Non-metallic minerals) + DE (A.4 Fossil fuels)
Imports = Imports (B.1 Biomass) + Imports (B.2 Metal ores) + Imports (B.3 Non-metallic minerals) + Imports (B.4 Fossil fuels) + Imports (B.5 Mixed / complex products n.e.c.) + Imports (B.6 Waste for final treatment and disposal)
Exports = Exports (C.1 Biomass) + Exports (C.2 Metal ores) + Exports (C.3 Non-metallic minerals) + Exports (C.4 Fossil fuels) + Exports (C.5 Mixed / complex products n.e.c.) + Exports (C.6 Waste for final treatment and disposal)
DMI = DE + Imports
DMC = DMI - Exports
PTB = Imports - Exports
DPO = Emissions to air + Waste landfilled (uncontrolled) + Emissions to water + Dissipative use of products + Dissipative losses
NAS = DE + Imports + Balancing items (input side) - Exports - DPO - Balancing items (output side)

Outcome of the EWMF account



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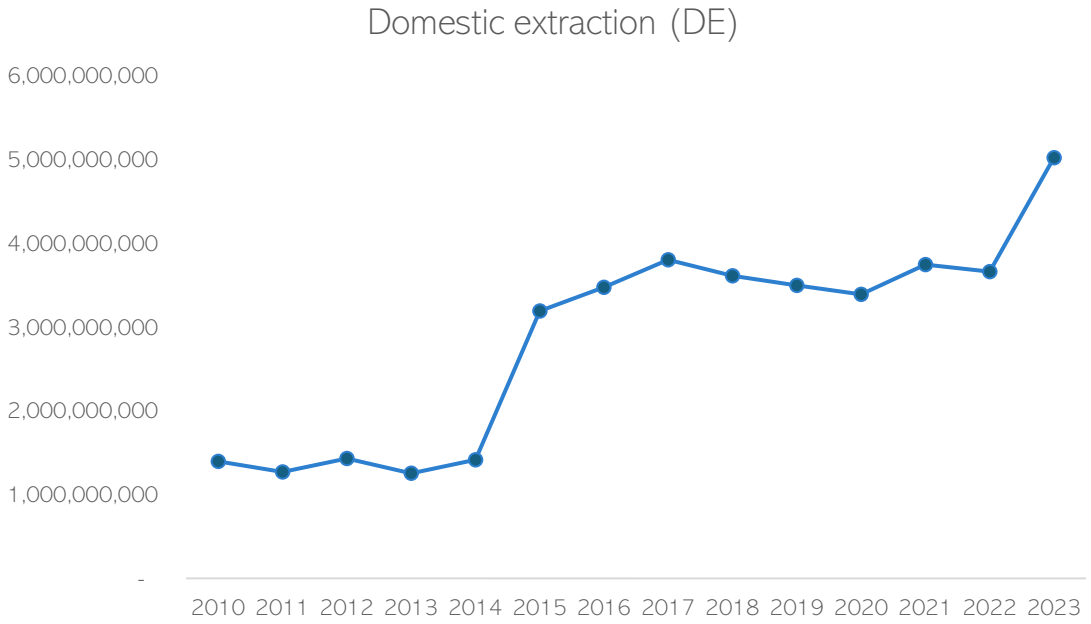

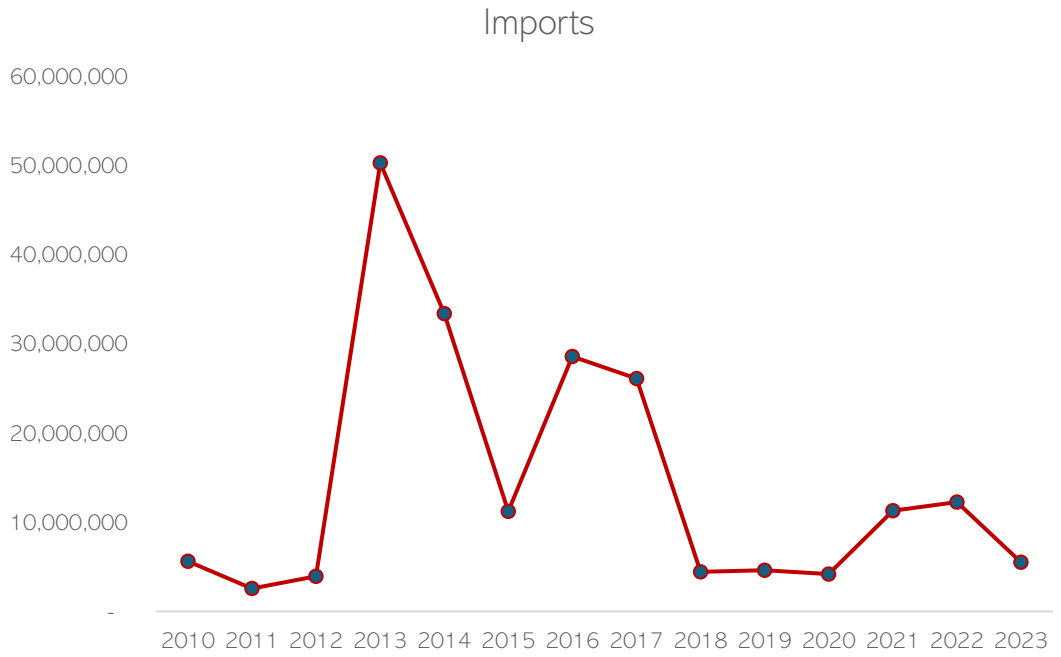

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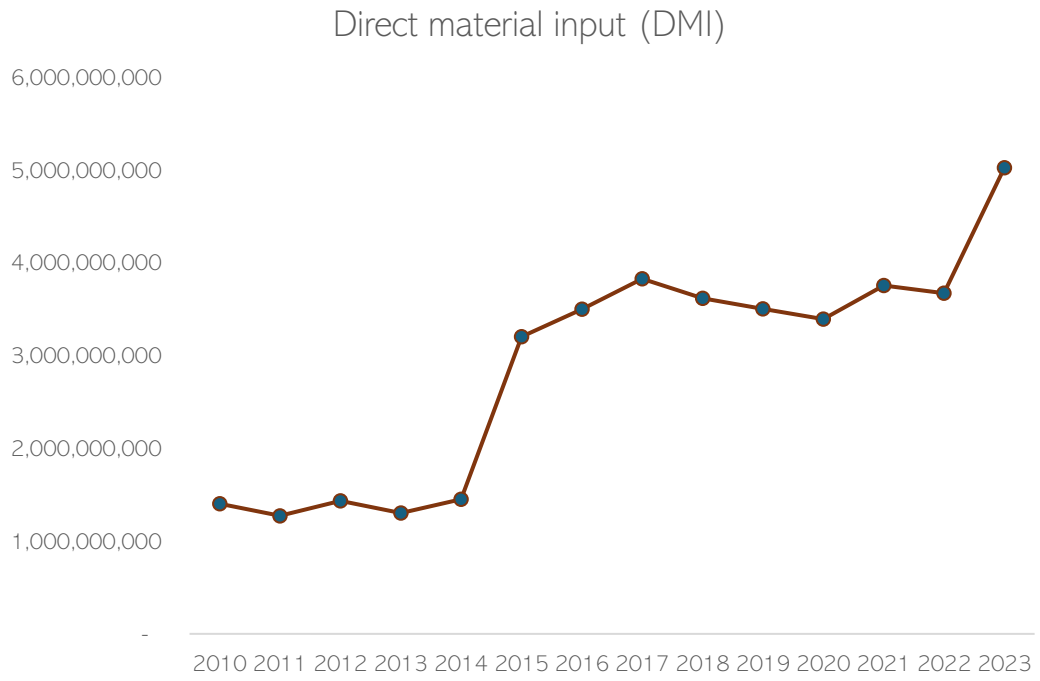

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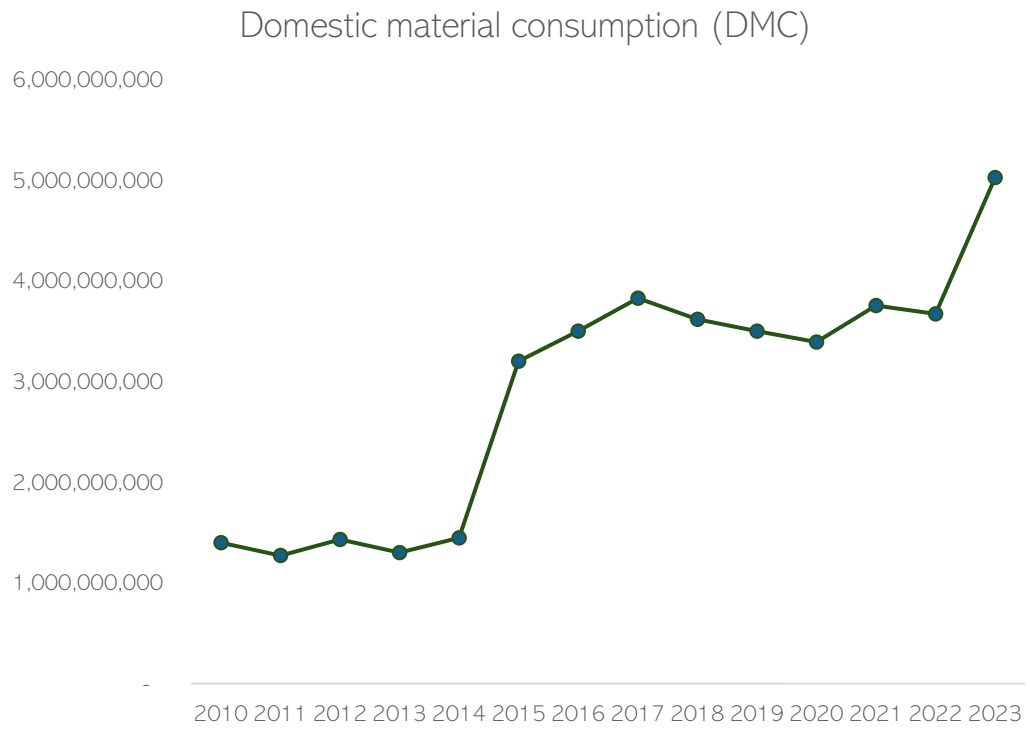

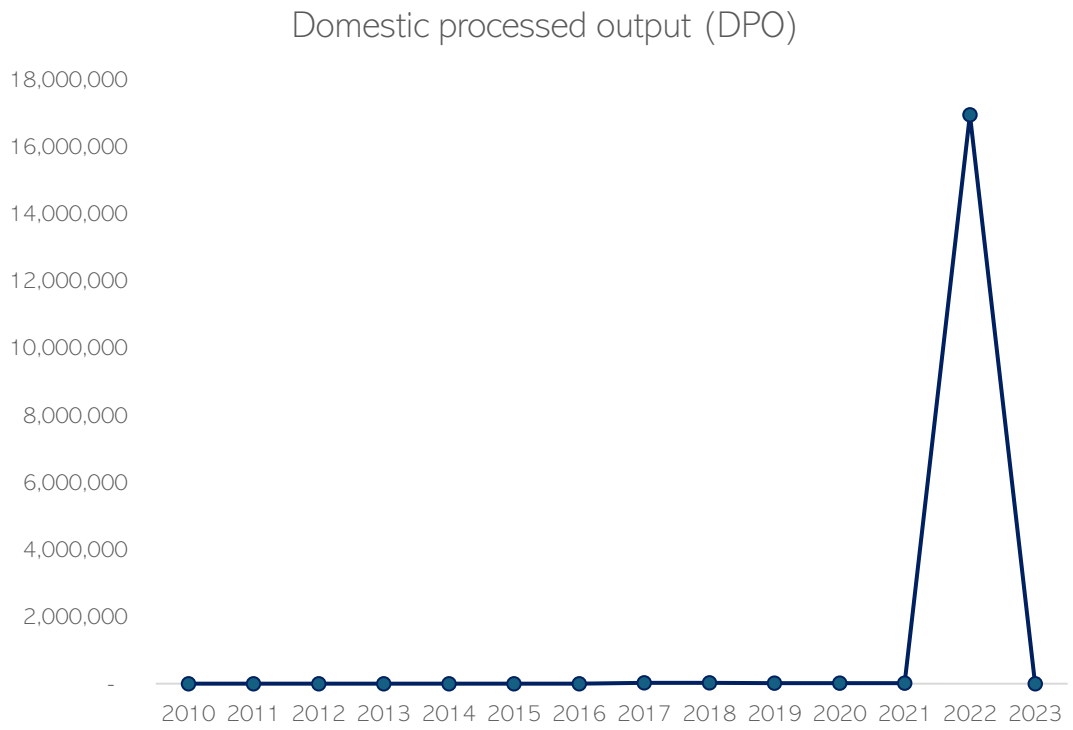

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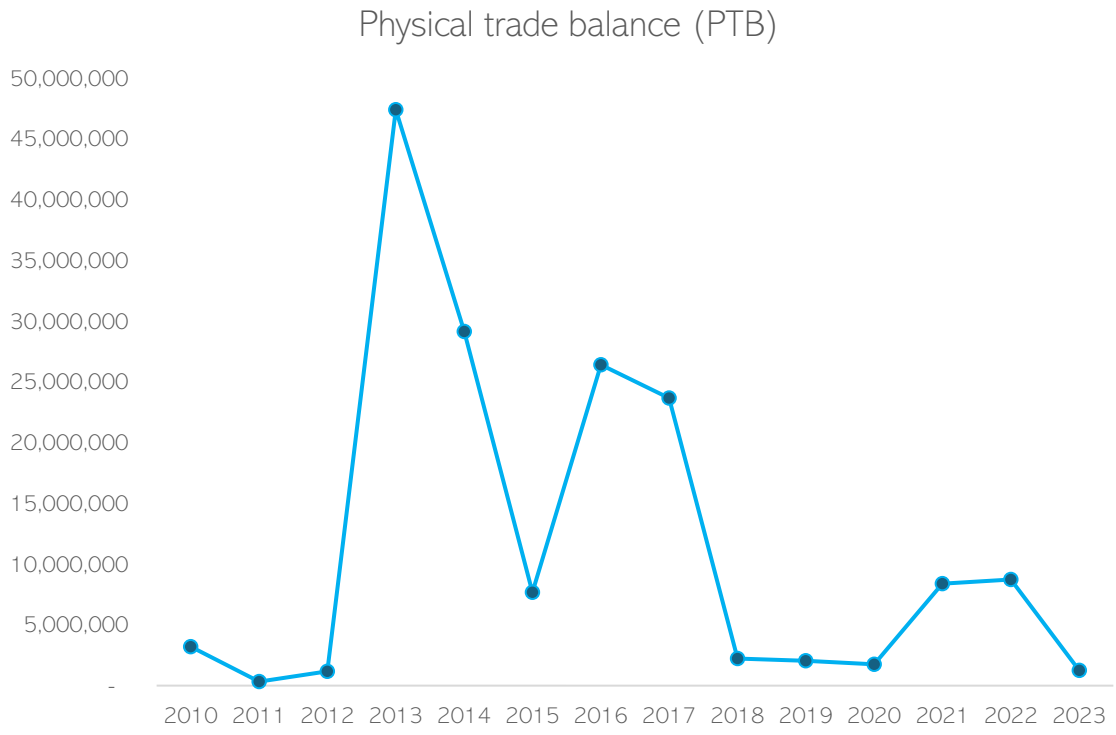
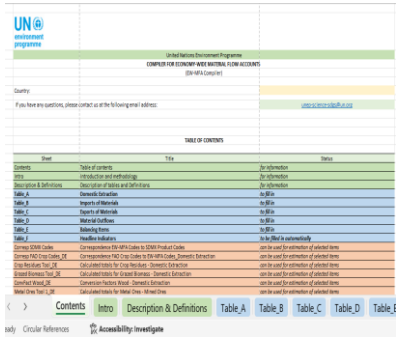


Way Forward



- ✓ **Further Collaboration with OMA's**
- ✓ **Final Validation**

- ✓ **Publish an EWMFA Bulletin**

Report national data on EW-MFA to UNEP using the UNEP Questionnaire on EW-MFA for the SDG indicators 8.4.1/12.2.1 and 8.4.2/12.2.2

My NAMIBIA
MY COUNTRY. MY PRIDE

THANK YOU…

UN environment programme

Namibia Statistics Agency