

Sustainable Consumption and Production Hotspot Analysis Tool - Introduction

Llorenç Milà i Canals, PhD
Head of Secretariat – Life Cycle Initiative, UNEP

Sub-Regional Workshop on Strengthening Coordination for Measuring Progress on
Responsible Consumption and Production and Policy Coherence

HOTSPOT ANALYSIS TOOL FOR SUSTAINABLE CONSUMPTION AND PRODUCTION

to support science-based national policy frameworks

[VIEW MODULES](#)

SCP, Sustainable Consumption and Production

- **Aims to minimize negative environmental impacts** from consumption and production systems while **enhancing quality of life** for all
- **Considering all stages of the life-cycle of products and services**
- **Many operational solutions:** resource efficiency along the value chain, life-cycle thinking, eco-innovation, sustainable procurement, eco-labelling...
- **Decoupling** economic prosperity from environmental degradation

- Requirement for countries to **design policies for SCP and SDGs**
- Often, there's a **lack of knowledge** about **what areas to tackle**
- Tool to **support countries in prioritizing sectors and value chains for intervention**, while avoiding unintended trade-offs



The SCP Hotspots Analysis Tool (SCP-HAT)

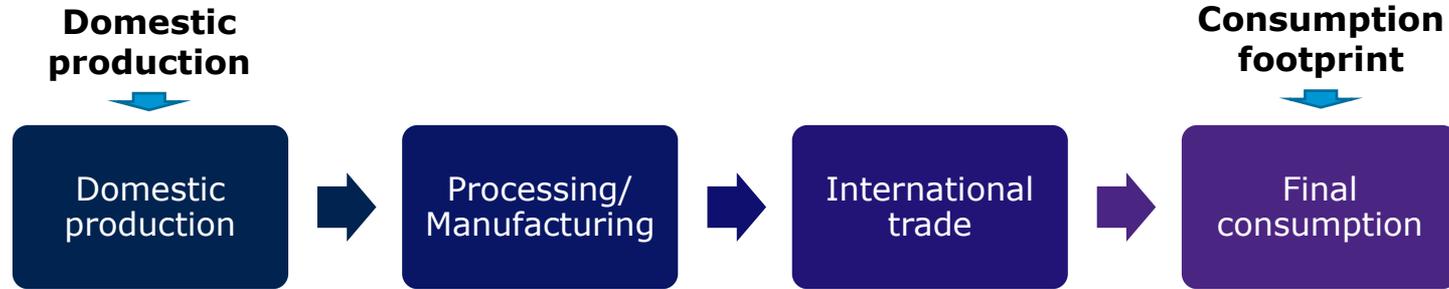
- ...can be found at scp-hat.lifecycleinitiative.org;
- ...was commissioned by the Life Cycle Initiative together with the One Planet Network and the International Resource Panel;
- **...aims at supporting science-based policy frameworks for SCP → SDG monitoring;**
- ...identifies hot spot areas of unsustainable production and consumption, to support setting priorities in national SCP and climate policies;
- **...identifies hotspots related to domestic pressures and impacts** (production perspective) **and** impacts occurring in foreign countries **linked to domestic consumption** (consumption or footprint perspective);
- ...provides a wide-range of analytical options related to production and footprint-type indicators through an intuitive and flexible online app;
- ...enables national offices to insert their own data;
- ...was developed by WU Vienna, in collaboration with CSIRO and kindly supported by Sydney University (GLORIA database).

SCP-HAT method



- Tool requirements: for different levels of expertise
- Tool implementation: Interactive online tool
- Data/method requirements: open access, global coverage, high quality, scientifically sound
- Multi-regional input-output model: GLORIA (UN IRP) → 97 sectors
- Extended by environmental data on materials, land, emissions, air pollution, energy, water, and water pollution
- Extended by socio-economic data on population, employment, value added
- Pressures linked with impacts: Life Cycle Assessment (LCA) → coefficients as recommended by the Life Cycle Initiative

SCP-HAT method: Consumption footprint



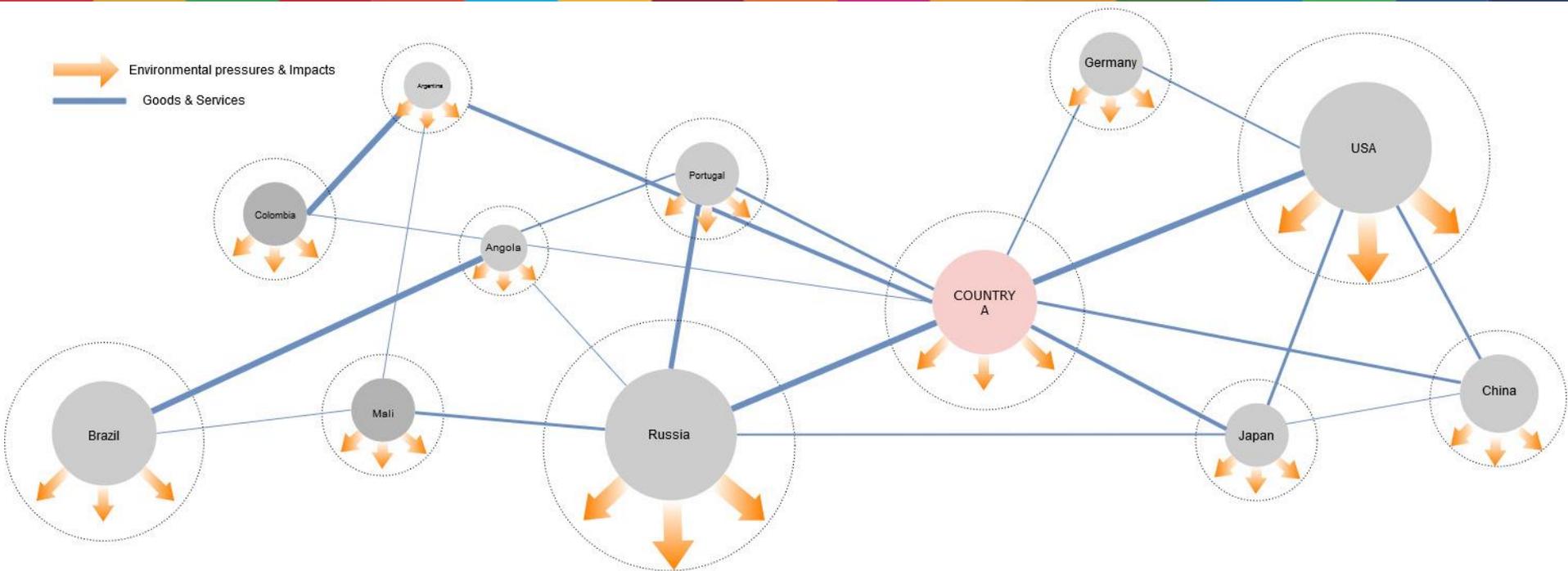
Value chain → direct use → indirect flows → „Footprint“

SCP-HAT method



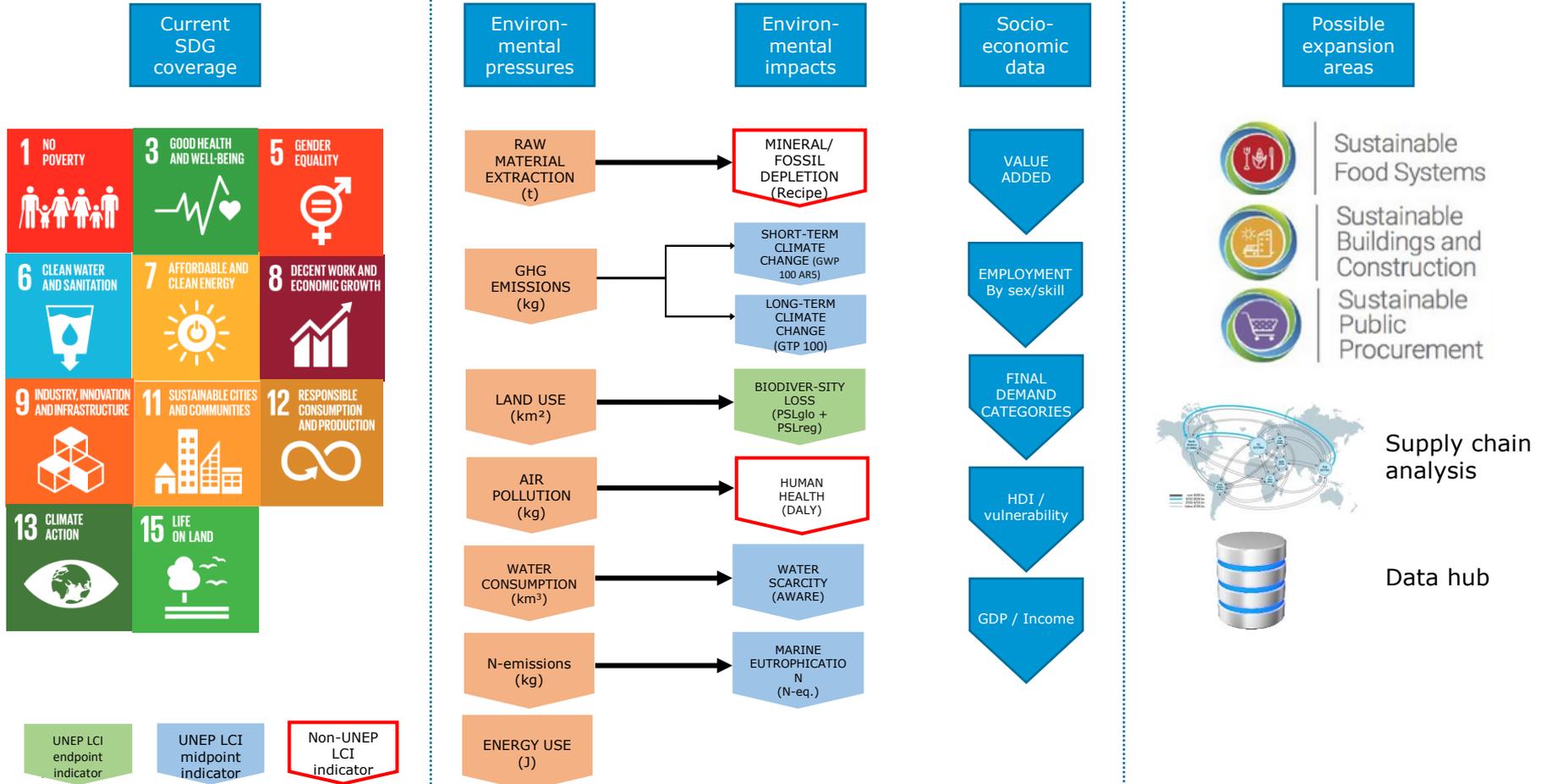
- **Domestic production (“territorial” approach)**: environmental pressures and impacts are allocated to the country where they physically occur, irrespectively where goods and services are finally consumed.
- **Consumption footprint (“footprint approach”)**: environmental pressures and impacts are allocated to the country where final consumers reside, irrespectively to where those pressure and impacts physically occur.

Linking the monetary model ('MRIO') with environmental pressures and impacts



Global MRIOs databases and models describe the **global economy** and how **environmental deterioration** and **international trade** relate to each other.

SCP-HAT – thematic linkages



SCP-HAT – how to use it?

- SCP-HAT is not targeted at providing the reporting for specific SDGs or policy questions, but to **inform policy strategies**.
- Strength: Using the same methodology and homogenous datasets for all countries in the world
- Advantage: Capability to **compare** different environmental categories, pressures and impacts, domestic and footprint perspectives and countries among each other
- SCP-HAT can provide **trends** at national and sector group level.

SCP-HAT – how to use it?

- **Caution:**

- SCP-HAT cannot explain the reason behind the trends.
- Global data bases will necessarily harmonise data – national data will differ from data included in SCP-HAT.
- Sector detail will always be restricted – sector comparisons are valuable; sector-specific analyses are feasible only to a certain extent.
- SCP-HAT does not provide information about products or technological processes.
- Allocation of pressures to specific sectors underlies assumptions – results have to be interpreted bearing these assumptions in mind.
- 68 Countries with input-output data (~40%). The rest estimated on the basis of macroeconomic and trade data

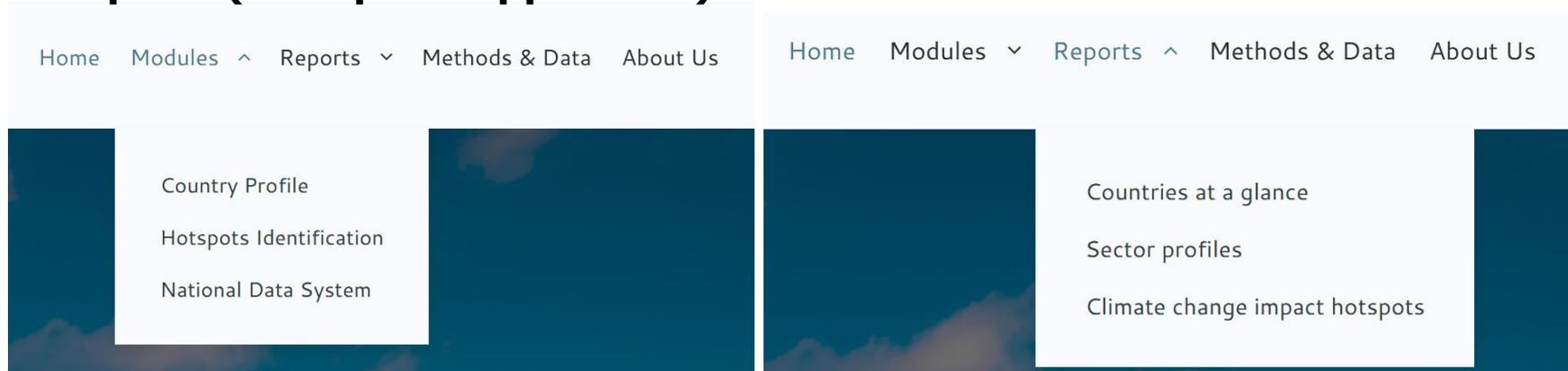
Potential applications of SCP-HAT

- Answering **policy questions** like...
 - How efficient is a country's economy in using domestic natural resources for production?
 - Is a country increasing its carbon productivity/efficiency?
 - Does a country manage to decouple (economic) development from environmental degradation (GHG emissions, biodiversity loss, air pollution...) – in relative or absolute terms?
 - Where do environmental and social pressures and impacts caused by domestic production and consumption occur?
 - Where are the hotspots in production and consumption where action is needed? → largest impacts / largest gains?

→ Informing **policy areas related to resource efficiency, climate action (NDCs), etc.**

SCP-HAT overall structure

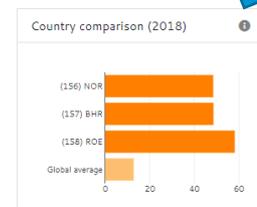
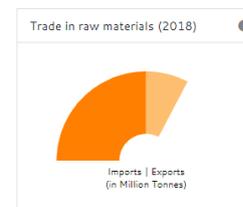
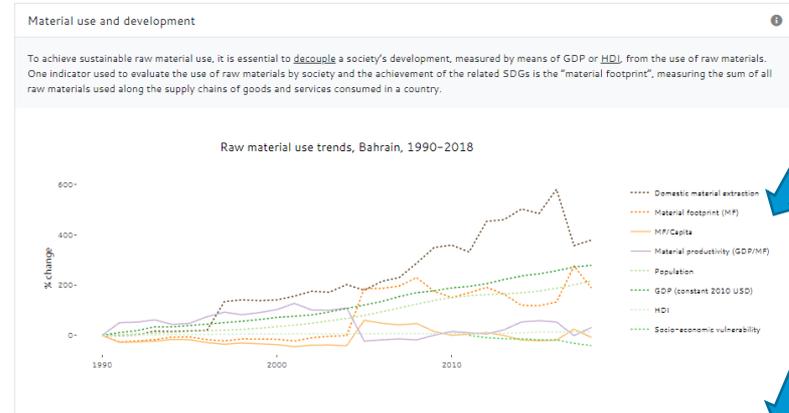
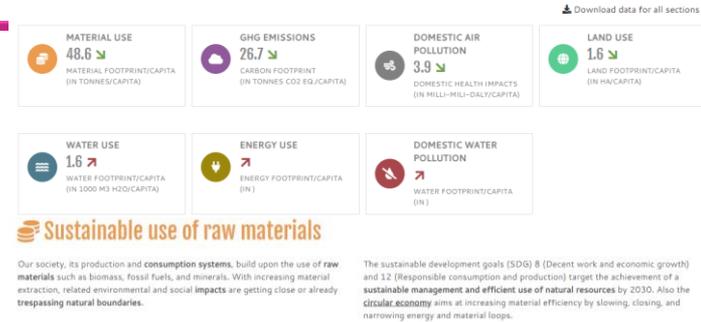
- **3 Modules:** Country profile, Hotspot identification, National data system (currently under revision and not available)
- **3 reports:** Countries at a glance, Sector profiles, Climate change impact hotspots
- **Range of** environmental and socio-economic **indicators**
- **Domestic production (“territorial” approach”) vs. Consumption footprint (“footprint approach”)**



SCP-HAT Module 1: Country Profile

- For policy makers, NGOs and the general public.
- Key information on country's environmental performance
- Clustered in **seven environmental categories**
 - Raw material use
 - Air pollution & health impacts
 - GHG emissions & climate change
 - Land use
 - Water consumption and scarcity
 - Energy use
 - Water pollution & ecosystem impacts
- For each environmental category, **policy context and main indicators** used are explained.

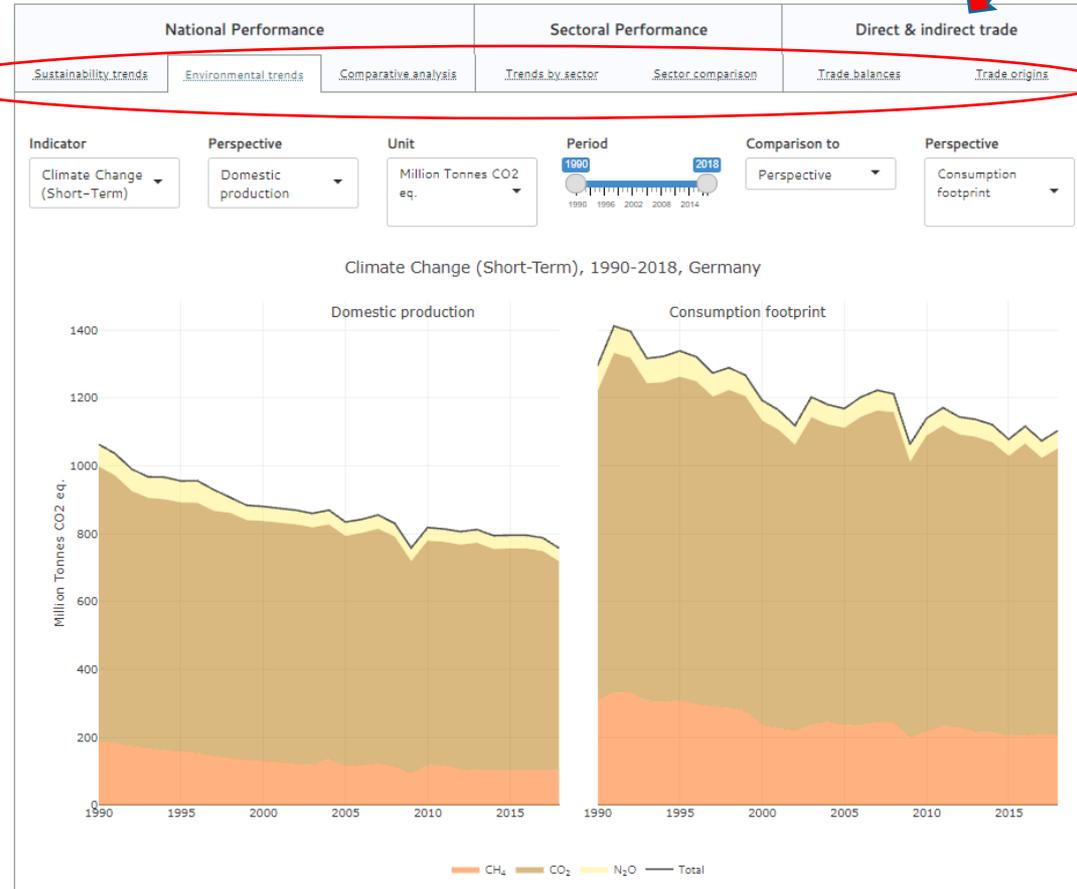
Country Profile for Bahrain-



SCP-HAT Module 2: Hotspot identification

Find out more about a selected country's **dependency on foreign resources**. The pressures and impacts caused along the supply chains of imported and exported products are compared to understand if the country is a net importer or net exporter of pressures and impacts, and to what extent the country's environmental consumption footprint has domestic and foreign sources.

- For **policy advisors and researchers** with expertise
- **Toolbar with a range of SCP indicators** (environmental and socio-economic indicators) **for hotspot analysis**
 - Comparison of **national vs. footprint perspective**
 - **Comparison of country to regional average/ Comparison of regions**
 - **Sector analysis & comparison**
 - **Trade balance**



Open questions?



Using SCP-HAT

- Is Jordan decoupling its economic development from material use?
 - Option 1: Module 1
 - Option 2: Module 2 – Sustainability trends

Using SCP-HAT

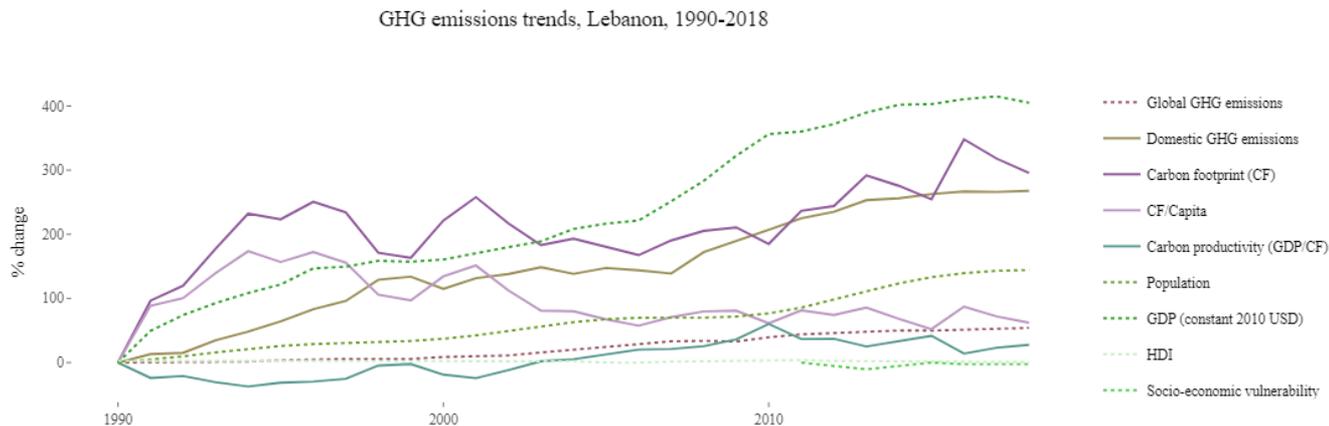
- How much land is Iraq's economy using?
 - Two perspectives: Module 2 – Environmental trends

Quiz - Question 1

- In Lebanon, from 1990-2018, did:
 - domestic GHG emissions increase or decrease?
 - by how much? (Module 1)
 - the carbon footprint increase or decrease?
 - by how much? (Module 1)

Quiz - Answer 1

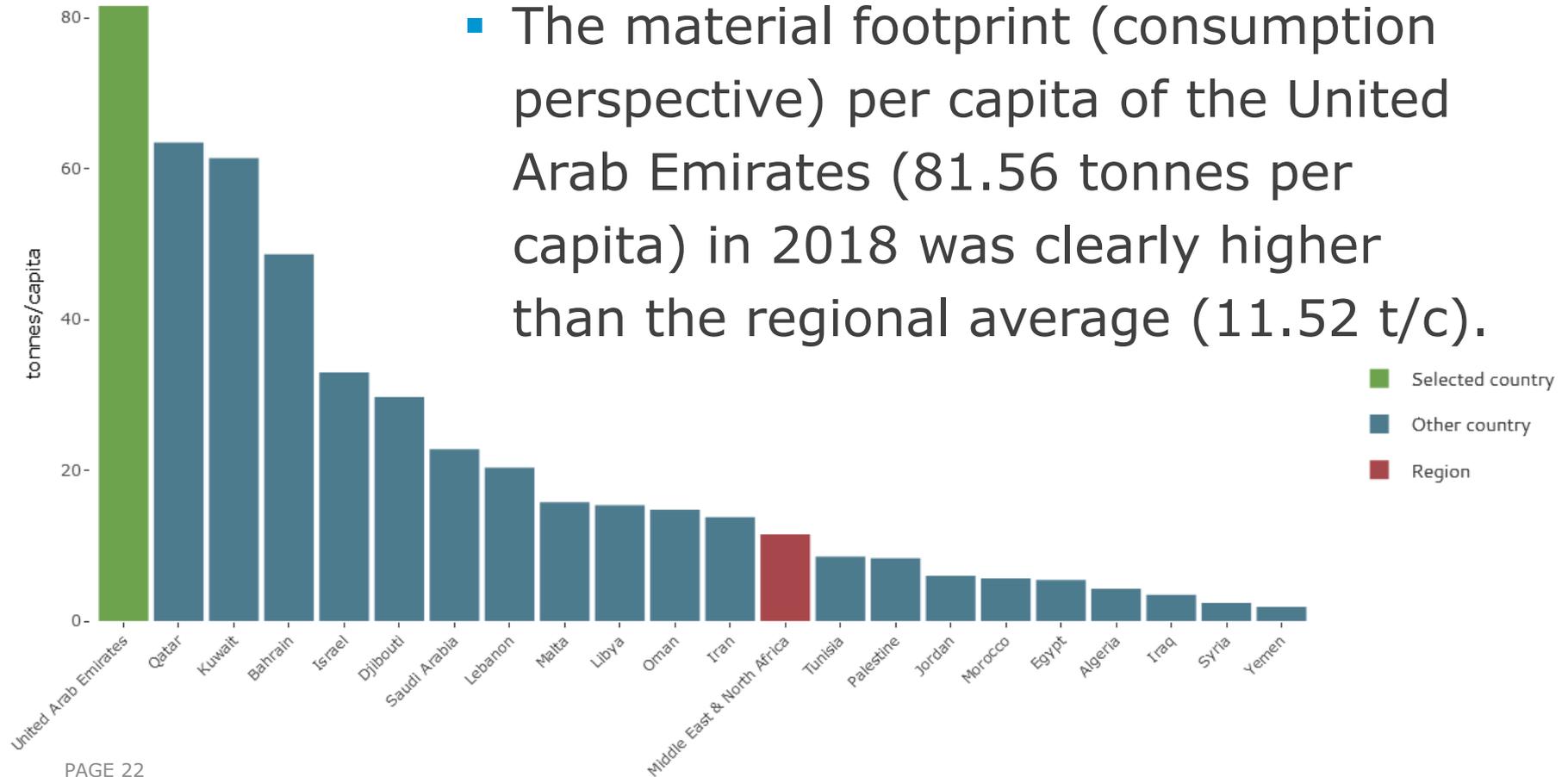
- In Lebanon, from 1990-2018,
 - domestic GHG emissions increased by 267.8 %.
 - the carbon footprint increased by 295.8 %.



Quiz - Question 2

- How did the material footprint (consumption perspective) per capita in the United Arab Emirates in 2018 compare to the regional average?
 - (Module 2, Comparative analysis)

Quiz - Answer 2



Quiz - Question 3

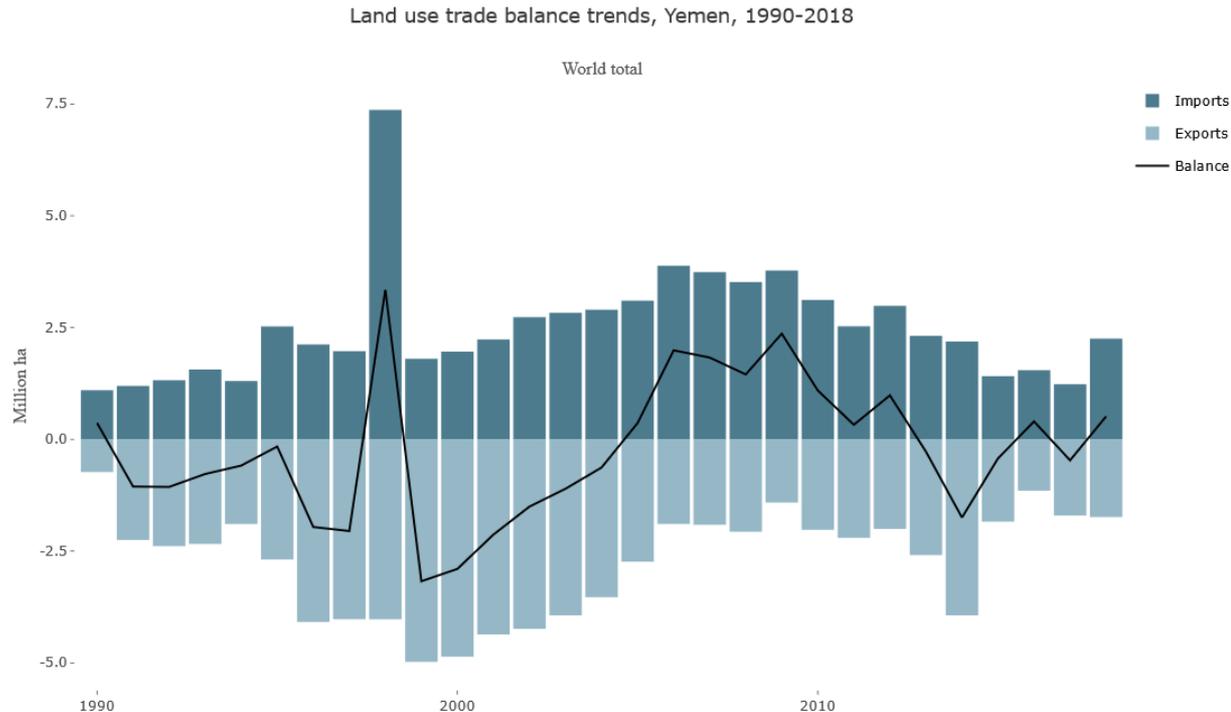
- Was Yemen a net-importer or net-exporter of indirect land use* in trade in 2018?
 - (Module 2, trade balances)

* Indirect land imports (also: land embodied in imports) contain all pressures and impacts caused abroad to produce goods and services consumed domestically.

Indirect land exports (also: land embodied in exports) contain all pressures and impacts caused domestically for the production of exported goods and services.

Quiz - Answer 3

- Yemen was a net-importer of indirect land use in 2018.



Thank you