

Ongoing work at UNECE Statistical Division to measure circular economy

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UNECE



Why did the CES Bureau decide to establish a Task Force on measuring CE?



- ❑ CES select key topics for an in-depth review every year to
 - ❑ improve coordination of statistical activities in the UNECE region
 - ❑ identify gaps or duplication of work
 - ❑ address emerging issues
- ❑ Measuring Circular Economy was chosen for an [in-depth review](#) in February 2020; paper was presented to CES Bureau in October 2020:
 - ❑ Authors: Finland (lead), Belarus, Canada, Netherlands, the European Environment Agency (EEA), Eurostat and OECD
 - ❑ Inputs also provided by Colombia, UNECE, UNSD and UNEP
- ❑ The in-depth review recommended to establish a Task Force for developing guidance on measuring CE
- ❑ CES Bureau approved ToR in February 2021



Main measurement issues identified by the in-depth review



- **Measurement scope**
- **Definitions and classifications**
- **Data availability and fitness**
- **Coordination across institutions and within the NSO**
- **Demand and expectations by users (e.g. policy makers, research etc.)**
- **Dissemination**
- **Other**



Main objectives and activities of the UNECE Task Force on Measuring Circular Economy



- Main objective: draft practical guidelines for measuring circular economy, including:
 - a) Definition of the measurement scope;
 - b) Clarification of key terms and definitions;
 - c) Identifying key statistics and indicators needed from the policy point of view;
 - d) Identifying data sources for measuring circular economy, with particular attention on SEEA and FDES;
 - e) Describing the required institutional collaboration.
- Other objectives:
 - a) Contribute to the coordination and collaboration of international organisations' related work; and
 - b) Provide platforms for exchange of experience and knowledge (e.g. through OECD/UNECE Seminars on SEEA Implementation).



OECD and UNECE joined forces to draft joint guidelines for measuring circular economy



OECD

Expert Group on information for a Resource Efficient and Circular Economy

Continuation of WPEI and WPRPW work initiated in 2018-19

Harmonised framework for monitoring progress and supporting policy development and evaluation

Guidance on how to produce, use and communicate CE information

Co-ordination and joint work



Envisaged goal:

Joint guidelines on measuring circular economy

UNECE

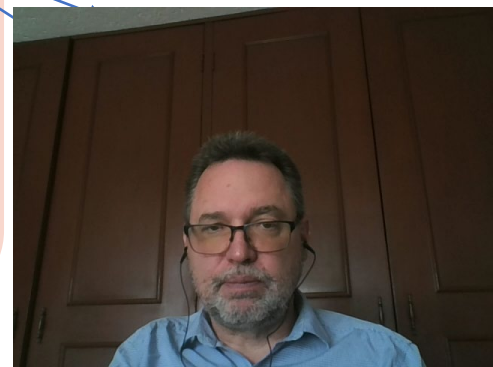
Task Force on measuring circular economy

Draft practical guidelines for measuring circular economy

Coordination and collaboration with other international organisations / expert groups

Platforms for exchange of experience and knowledge (e.g. joint OECD/UNECE SEEA Seminar)

- UNCEEA
- Eurostat: EU-Monitoring FW
- Bellagio Process
- UNEP: EW-MFA



Joint work of OECD and UNECE Expert Groups



- Work proceeds in parallel (2021-22)
- Complementary expertise, multiple synergies
- Split into three interrelated Work Packages (WP)
 - WP1: Conceptual monitoring framework (OECD, EEA)
 - WP2: Statistical measurement framework (Italy)
 - WP3: CE indicators (UNEP)





A working definition to guide the monitoring of progress

- **Agreed principles**
 - A hierarchy of definitions
 - A simple headline “definition” that, while pointing at the key purposes of a CE, is general enough to serve both policy needs and measurement needs
 - Accompanied with short explanations and references to underlying mechanisms and strategies
 - To be adapted as appropriate to specific needs: country needs, specific sectors or materials
 - To be expanded with details needed to guide statistical measurement
 - To be complemented with a glossary of terms and definitions
- **Proposed headline working definition**
 - Inspired by existing definitions (in particular OECD, EU/EEA, UNECE TF W
 - Building on discussion outcomes





Proposed headline working definition

A circular economy is an economy where:

- **the value of materials in the economy** *[for the economy and society]* is maximised and maintained for as long as possible
- **the input of materials and their consumption is minimised**
- **the generation of waste is minimised** *[prevented] [waste is prevented from being generated]* and **negative environmental impacts reduced throughout the life-cycle of materials**

(alternative wording in *italics* and between brackets)

“Materials” are understood to include natural resources and the materials and products derived therefrom (i.e. materials at all points throughout their life-cycles).”

The “value of materials in the economy” is understood to encompass the value for society as a whole taking into account economic efficiency, environmental effectiveness and social equity. Maintaining the value for as long as possible links to circularity mechanisms.

Minimising the input of materials and their consumption contains a quantitative and a qualitative dimension. Links to the preservation of natural assets, to resource efficiency, to environmental quality

By referring to the life-cycle of materials.
(i) waste prevention at all reflected
(ii) all associated environmental impacts including the generation of impacts on climate, biodiversity etc.



“Translation” of the headline definition in statistical terms (UNECE TF WP2)



The proposed headline definition will receive annotations which will explain the used terminology in statistical terms and their definitions.

For example:

- “Value” refers to different types of values such as revenues, savings, productivity, sustainability, satisfaction, empowerment, engagement, experience, trust
- “Input of materials” refers to input of natural resources (SEEA terminology)
- “Generation of waste” refers to generation of residuals (SEEA terminology)
- Etc.



Measurement scope (UNECE TF WP2)

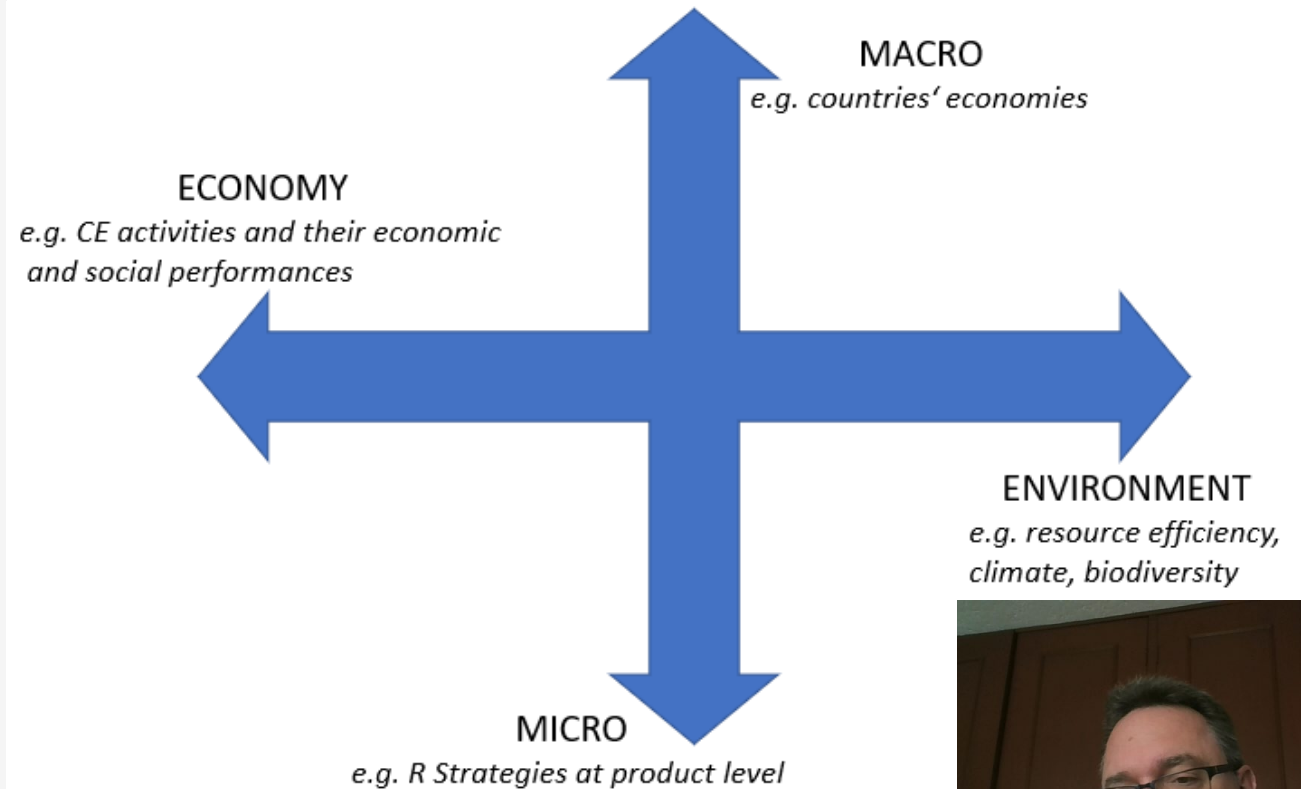


The proposed measurement scope takes into account the different dimensions of a circular economy.

Special consideration of issues related to

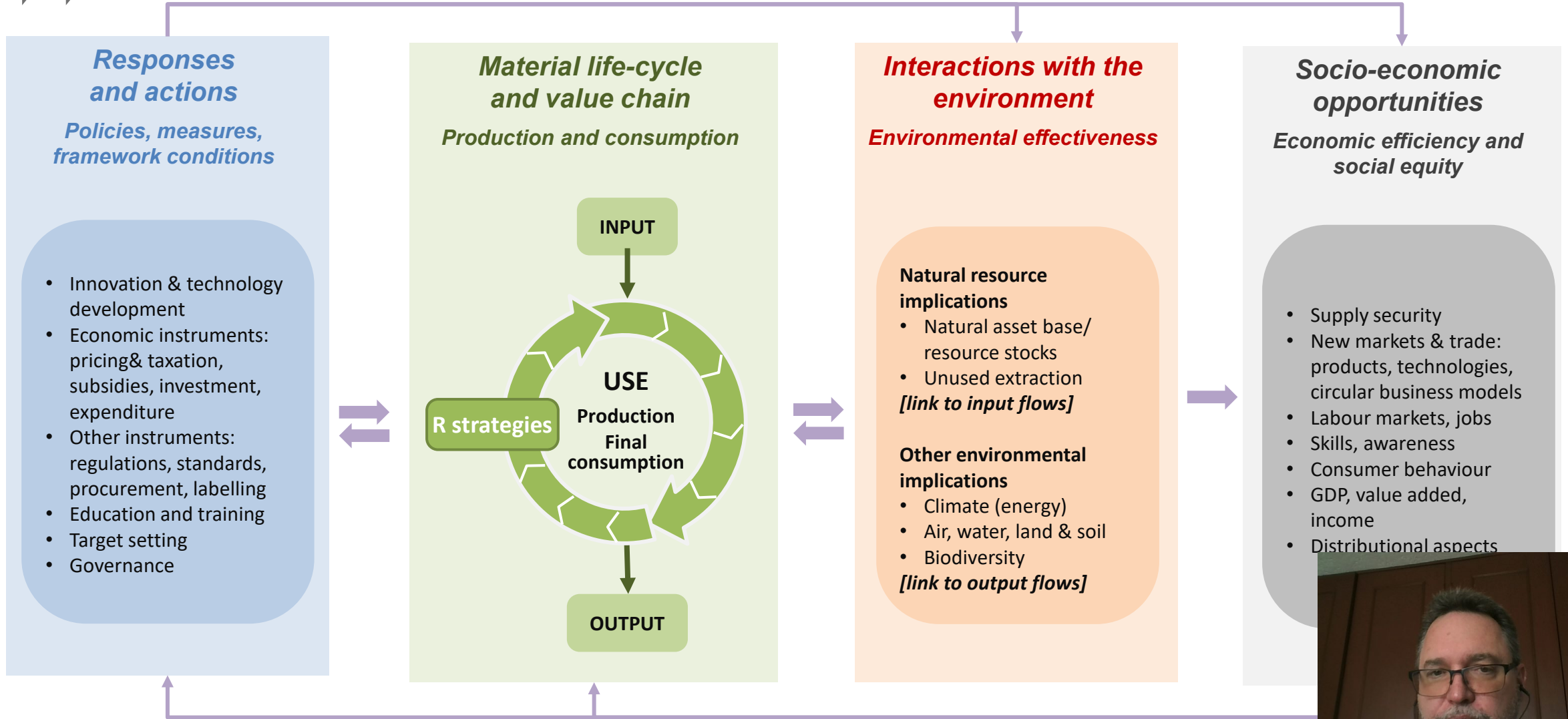
- Energy
- Water
- Measurement of environmental impact

These issues are related with CE, but only selected aspects are in the proposed measurement scope (e.g. water abstraction, but not the full water cycle)





Conceptual monitoring framework – Proposed building blocks



Selection of indicators for each of these building blocks (UNECE TF WP3)



- WP3 is in the process of identifying indicators for each of the building blocks and its sub-categories.
- Taking into account several existing indicator frameworks, including SDGs, Eurostat, PACE, ISO, OECD, some national indicator frameworks and others.
- An indicators inventory was developed, currently including 643 indicators (with duplications)
- Main objective: Small set of “core indicators” recommended for regular production + recommended contextual and operational indicators
- Selection criteria for core indicators: Relevance, methodological soundness, data availability.
- Currently 22 core indicators proposed



Role of System of Environmental-Economic Accounting (UNECE TF WP2)



Strengths:

- Tackles environmental-economic effects for a whole economy: environmental-economic analyses at the macro and meso level.
- International statistical standard
- Ability to combine different environmental and economic information (e.g. from National Accounts) – provides CE relevant insights that are not available when individual statistics are considered.

Limitations:

- Less suitable for the measurement of processes related to the transition towards a CE: consumer behavior, innovative economic activities or product design, product lifespan, etc.
- Level of detail in the SEEA classification is limited due to its macro-economic approach. SEEA is not very suitable to obtain information on specific products or production processes: e.g. specification of second-hand or bio-based commodities.
- Transactions between households, e.g., supply and use of secondary goods, considered, because these transactions take place within a single economic entity.
- Recycling within an industrial plant is not recorded. Also, the sale and purchase (of a secondary good) of capital goods within an industrial sector is not recorded.



Conclusions and next steps



- A draft headline definition of a circular economy has been developed
- It will be accompanied with annotations explaining it from the measurement point of view
- Drafts exists also for:
 - Monitoring framework
 - Measurement scope
 - Core indicators
 - Strengths and limitations of SEEA
- More needs to be done on:
 - Related classifications
 - Other statistical standards
- OECD and UNECE are currently integrating draft results and discussing open issues with their expert groups
- Draft report expected to be available end of 2022



Other activities: Joint online Seminar with Statistics Canada (World Circular Economy Forum 2021) 14 December 2021



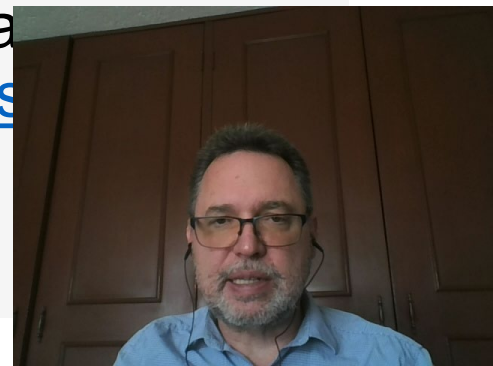
- **Seminar: The stats we need and how to get them**
 - **Opening by Assistant Chief Statistician of Canada and Executive Secretary of UNECE**
 - **What Statistics do we need? Speakers from PBL Netherlands, City of Toronto, Royal DSM**
 - **How to get the statistics? Speakers from Statistics Canada, DANE Colombia, Eurostat**
 - **Roundtable with experts from NSOs, international organisations, research, private sector: Strengths and challenges for measuring CE**
- Seminar documents, recordings of the meeting and final report are available at <https://unece.org/statistics/events/joint-statistics-can-unece-online-seminar-measuring-circular-economy-stats-we>



Other activities: Session on “Towards Circular Economy Measurement” at the Joint OECD/UNECE Seminar on SEEA Implementation (31 March 2022)



- **National examples from**
 - Netherlands
 - Denmark
 - Finland
 - Georgia
 - **Related international work presented by**
 - OECD and UNECE (joint presentation)
 - UNEP
- Seminar documents, recordings of the meeting and final report are available at <https://unece.org/statistics/events/joint-oecd-unece-seea-seminar-2022>



Other activities: Series of UNECE Podcasts: One world, zero waste? The circular economy explained



- This is a podcast series commissioned by the United Nations Economic Commission for Europe (UNECE), which explores different aspects of the circular economy.
- First podcast (launched on 21 March) was on forest products, now available via this [link](#)
- Next postcast will be on “Setting the scene and measuring CE”
 - Speakers: Greg Peterson (Assistant Chief Assistant of Canada) and Dr Kees Baldé (Senior Scientific Specialist at the Sustainable Cycles Programme at the United Nations Institute for Training and Research (UNITAR)).
 - Will be launched before end of this month





Thank you very much for your attention!

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