DRAFT UNECE/OECD GUIDELINES FOR MEASURING CIRCULAR ECONOMY

PART A: CONCEPTUAL FRAMEWORK, STATISTICAL FRAMEWORK AND INDICATORS

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In 2021 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 (RECE-XG)
- 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

**UNECE**
- Task Force on measuring circular economy
- 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 SEA Seminar)

Co-ordination and joint work
Envisaged goal: Joint guidelines on measuring circular economy

- UNCEEA
- Eurostat: EU-Monitoring FW
- Bellagio Process
- UNEP: EW-MFA
- PACE
- ISO
Joint UNECE/OECD Guidelines for measuring Circular Economy

**Structure**

**Part A: Conceptual Framework, Statistical Framework and Indicators** (draft submitted to CES Bureau)
- Headline definition
- Measurement scope, terms and definitions
- Relationships with existing statistical standards (e.g. SEEA, classifications)
- National and regional examples

**Part B: Guide on measuring progress towards a circular economy** (to be drafted this year)
- Data sources
- Institutional collaboration
- Guidance on using indicators

**Status of work and acknowledgements**
- In February, the CES Bureau approved draft of Part A for wide electronic consultation (end March)
- Jointly by OECD RECE-XG and UNECE TF on Measuring CE
- Experts from Austria, Belgium, Canada, Colombia, Denmark, Eurostat, Finland, India, Italy, Netherlands; EEA, Eurostat, IMF, OECD, PACE, UNECE, UNEP, UNITAR, UNSD, WRI
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Part A – Conceptual and measurement framework (presentation to CES in 02.2023):

1. Introduction
2. Policy background
3. The circular economy concept and the headline definition of a circular economy
4. The statistical framework
5. Indicators for measuring CE
6. List of issues for further work
7. Glossary of terms
8. References

Annex: 10 case examples: Belgium (Flanders), Canada, China, Colombia, Denmark, European Union, Finland, France, Japan, Netherlands
Circular Economy: 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
  - To be complemented with explanations on underlying mechanisms and strategies
  - To be expanded with details needed to guide statistical measurement
  - To be adapted as appropriate to specific needs: country needs, specific sectors or materials
  - To be complemented with glossary of terms and definitions
A circular economy is an economy where:

• the value of materials in the economy is maximised and maintained for as long as possible;

• the input of materials and their consumption is minimised; and

• the generation of waste is prevented and negative environmental impacts reduced throughout the life-cycle of materials.

“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.

The “life-cycle of materials” is understood to include all phases of the material cycle e.g. extraction, transportation, product design, manufacture, final consumption/use, reuse, end-of-life, recovery and final disposal, as well as the associated waste management activities and R strategies. Reference to the “life-cycle” reflects waste prevention at all stages (importance of higher level Rs) and all associated environmental impacts.
Conceptual monitoring framework – Building blocks

Responses and actions
Policy, measures, framework conditions
- Innovation & technology development
- Economic instruments: pricing& taxation, subsidies, investment, expenditure
- Other instruments: regulations, standards, procurement, labelling
- Education and training
- Target setting
- Governance

Material life-cycle and value chain
Production and consumption
- Input
- Production
- Final consumption
- Output
- R strategies

Interactions with the environment
Environmental effectiveness
- Natural resource implications
  - Natural asset base/resource stocks
- Other environmental implications
  - Climate (energy)
  - Air, water
  - Land & soil
  - Biodiversity

Socio-economic opportunities
Economic efficiency and social equity
- Socio-economic effects
  - Supply security
  - New markets & trade: products, technologies, business models
  - Labour markets, jobs
  - Skills, awareness
  - Consumer behaviour
  - GDP, value added, income
  - Distributional aspects
Statistical Framework - grounded in the SEEA
Characteristics
- Balanced coverage of main CE features
- Reflect major trends and structural changes related to the transition towards a CE
- Fit into an overall narrative framework while supporting more granular analysis
- Lend themselves to being interconnected to inform about policy outcomes

Selection criteria to guide and validate the choice
- Policy relevance; analytical soundness; measurability

Indicator set of manageable size
- Builds on existing sets complemented with new/improved indicators to fill gaps
- Distinguishes between core, complementary & contextual indicators

Indicator list close to final
- Consensus on core & complementary indicators and level of detail
- Balance between operational and aspirational indicators
- Challenge: identify core indicators that (i) reflect the main characteristics of CE going beyond linear waste and materials management; (ii) are measurable in the short to medium term; (iii) provide a common vision of the measurement agenda

Core indicators:
- address main policy questions; provide big picture;
- point at developments that require further analysis & possible action;
- limited number;
- provide minimum reference list for international work.

Complementary indicators:
- complement the message conveyed by core indicators;
- provide additional detail (sectoral, products/materials);
- cover additional aspects, incl. country-specific.

Contextual indicators:
- inform about “drivers”, socio-economic & environmental background variables;
- facilitate interpretation in context.
### What can be measured with SEEA? (examples)

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<th>Responses and actions</th>
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<td>• Waste, material flows</td>
<td>• Natural resource implications</td>
<td>• Employment</td>
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<td>• Investments</td>
<td>• Several R strategies, e.g., 3 Re-use, R4 Repair, R5 Refurbish, R6 Remanufacture, R7 Repurpose, R8 Recycling, R9 Energy recovery</td>
<td>• Other environmental implications</td>
<td>• GDP, value added</td>
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- SEEA provides a standard framework for measuring the interactions between the environment and the economy: well suited for environmental-economic analyses at the macro- and meso- levels.
- Enables the **combination of data from different SEEA accounts** and the integration of environmental and economic data (e.g., from National Accounts)
- Provides a basis for harmonised indicators
- Provides CE relevant insights that are not available when individual statistics are considered.
Some limitations of SEEA for CE measurement

- Less suitable for measuring specific aspects and actions of a CE transition
  - Consumer behavior, innovative economic activities or product design, product lifespan, material composition of products, etc.

- Less suitable for data on specific products or production processes.
  - Level of detail of classifications used in SEEA is limited. Relevant distinctions for e.g., second-hand or bio-based commodities do not exist.
  - Transactions between households, e.g., supply and use of secondary goods, are not considered, because these transactions take place within a single economic entity.
  - Recycling and circularity within industrial plants is not recorded. Also, the sale and purchase (as a secondary good) of capital goods within an industrial sector is not recorded.

- Timeliness may be an issue

- Other data sources and methods need to be exploited, including new and innovative sources and methods
• Draft “Joint OECD/UNECE Guidelines on Measuring Circular Economy” (part A) will be sent for e-consultation end of March.
  • Feedback on pre-selected core indicators and complementary indicators will be taken into account for final list of indicators

• Revised draft submitted to CES for endorsement at its meeting in June

• Part B Implementation guidelines to be developed in 2023/2024