

REPORT ON

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

Outputs and experiences gained from the Regional Conference on Circular Economy

WITHIN THE PROJECT

*Improved environmental monitoring and assessment
in support of the 2030 Sustainable Development Agenda
in South-Eastern Europe, Central Asia and the Caucasus*



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Summary

This report presents key outcomes of the Second Regional Conference: Measuring and monitoring the circular economy and the use of data for policymaking, which was organized under the UNDA funded project “Improved environmental monitoring and assessment in support of the 2030 Sustainable Development Agenda in South-Eastern Europe, Central Asia and the Caucasus.” The conference was held as an online event on 10 November 2021.

1. Organization of the seminar

The seminar was chaired by Dr. Gustavo Longaray Moraga and Ms. Ksenia Nechunaeva.

The seminar was structured in the form of 5 sessions:

- Session 1: Opening and introduction;
- Session 2: Science;
- Session 3: Policy;
- Session 4: Statistics;
- Session 5: Science, Policy, and Statistics.

All documents of the meeting are available at

<https://unece.org/info/Environmental-Policy/Environmental-Monitoring-and-Assessment/events/360160>

2. Summary of the meeting and main conclusions

Session 1: Opening and introduction

The objective of this section was to present the agenda and give an overview of the project "Improved environmental monitoring and assessment in support of the 2030 Sustainable Development Agenda in South-Eastern Europe, Central Asia and the Caucasus."

Mr. Nicholas Bonvoisin (UNECE) and Ms. Ksenia Nechunaeva (UNECE) jointly made the keynote. The objective of this keynote was to present the aims and outputs of the project thereof. Several project outputs were related to capacity building and work being carrying out regarding the use of indicators, data needs, and improvement of decision making. The presented outputs are either completed or near completion. In addition, attention was given to five regional capacity development webinars on themes of air, energy, waste, freshwater, and biodiversity, which were completed from late 2020 to mid-2021. The material from these webinars is being used for ongoing activities, such as an e-learning course and a knowledge-sharing platform to be released later this year.

Session 2: Science

This session provided an introduction to the concept and science behind circular economy to underpin the importance of a more sustainable and circular society.

The European Environment Agency (EEA) opened the session. Dr. Ioannis Bakas, representative of the EEA, gave the keynote "Circular Economy as a transformational agenda – monitoring is a joint effort." The presentation aimed to underline the importance of sustainable development with the use of a circular economy. Furthermore, he presented a general view of the European circular economy, highlighting the role of the EEA in producing measurements and regulations in the selection/development of circular economy indicators for countries and regions.

Following this, Ms. Monja Korter from the International Organization for Standardization (ISO) gave a presentation about standardization actions for a circular economy. This keynote aimed to highlight in a nutshell the works done by the Technical Committee 323 (TC 323). She highlighted the role of standardization to develop guidance, requirements, and supporting tools for implementing the circular economy in organizations. The standardization of the circular economy can maximize the contribution to sustainable development. Moreover, UNECE was mentioned to be one of the future organizations in the liaison of the TC 323. Particularly interesting was the presentation of the ISO definition for the circular economy and the invitation for participation in the discussion of the standardization process.

Conclusions

Some conclusions of the session can be summarized as follows:

- There is an important trend of increasing environmental impacts, which is related to the growth of the economy. Hence, we need a new economic model.
- Currently, little material gets back to the cycling. An increased waste generation contributes to inequalities.
- The circular economy can be a model to improve society and the environment, but it cannot happen in isolation: international cooperation is needed.

Session 3: Policy

This session provided general examples of the policy structure towards a circular economy and the links with regional and national measuring systems.

The European Commission (EC) opened the session. Ms. Barbara Bacigalupi (EC's Directorate-General for Environment), representative of the EC, made the keynote "Monitoring progress towards the circular economy in the EU." The aim of the presentation was to give the general policy content of the EU circular economy. More specifically, Ms. Bacigalupi showed the current EC's monitoring system presenting general trends and limitations of the indicators,

which complemented what was presented by EEA. Moreover, possible new indicators for the circular economy were presented to contribute to a more sustainable and resilient Europe and global society. Finally, the EC presentation was concluded with the pathways for the improvement of the EC's monitoring framework. This could be done by implementing the Bellagio Declaration and other existing supporting initiatives (such as promoting the circular economy in cities and regions, and linking the concept to SDGs).

Following this, Dr. Maikel Kishna from the Netherlands Environmental Assessment Agency (PBL) gave a presentation about the Integral Circular Economy Report of the Netherlands. The aim of the presentation was to show the transition and monitoring process towards a circular economy in the country. After presenting the current status of the use of material resources, Dr. Kishna presented the advances of the transition process in the Netherlands. Although numbers show an increased use of materials, 80% of the waste is recycled in the country. However, it is still a challenge to increase the quality of recycled materials and to measure other forms of circularity beyond recycling. Altogether, the Dutch Government has created a basis and structure for achieving a circular economy, but their transition is still in an initial phase.

Conclusions

Some conclusions of the session can be summarized as follows:

- Countries and regions still function according to linear economic principles.
- Countries and regions must ensure a policy approach of sustainable circular economy, with a clear vision and concrete goals.
- We must find ways to measure higher strategies (e.g., reuse, refurbish, rethink).
- Coercive measures, such as taxation and regulation, may ensure a faster transition to a circular economy.
- No single indicator can give the picture of the circular economy, but a monitoring framework can be a way to measure a systemic change.

Session 4: Statistics

This session advanced the examples of monitoring systems towards a circular economy focusing on specific data need and implementation.

UNECE opened the session with the presentation of Mr. Michael Nagy. The presentation aimed to show the outputs of the UNECE Task Force on Measuring Circular Economy. This Task Force is an expert group established under the auspices of the Conference of European Statisticians (CES) to evaluate and develop guidance on measuring the circular economy. In this sense, an in-deep review was published in February 2020. This review identified issues related to the measurement scope, definitions and classifications, data availability and fitness, coordination across institutions and statistical offices, and others. It also found some commonalities; for example, although no single agreed-upon definition of a circular economy

exists, definitions seem to have many common elements. This in-depth review also presented examples of implementation systems in several countries, and it is being used to draft practical guidelines for measuring the circular economy, including, among other things, the identification of key statistics and indicators needed from a policy point of view. These guidelines will be aligned with recommendations from other sources, many of them already cited in other sessions (e.g., EU Monitoring Framework, Bellagio Process, and ISO/TC 323). Finally, some of these guidelines will be developed jointly with Organization for Economic Co-operation and Development (OECD).

Following this, the Colombian government presented its proposal for measuring the circular economy, focusing on data availability. Mr. Ricardo Valencia from the Colombian Statistical Department (DANE) gave a keynote about the Circular Economy Information System (SIEC), a system with indicators based on the accounting of materials, water and energy, and their productivity in terms of added value. The SIEC aims to facilitate policymaking showing Colombia's transition towards a circular model of production and consumption. This system was organized so far in four publications showing a large set of indicators. Furthermore, it was highlighted the importance of Sankey diagrams in monitoring the flow of material resources, which was also mentioned by UNECE, EEA, EC, and PBL.

Conclusions

Some conclusions of the session can be summarized as follows:

- We need to find a common understanding of what the circular economy entails.
- Existing indicators can be used to give a picture of the circular economy.
- Future indicators can be built upon existing information, but more guidelines are needed.
- Sankey diagrams can give an important picture of the flow of materials and improve policymaking.
- Engaging in the building coalition in data sources could provide extra information.

Session 5: Science, Policy, and Statistics

This session aimed to create a conclusion of the previous sessions, bringing together Science, Policy, and Statistics in monitoring the circular economy and data use for policy making. This session happened in three parts.

First, Dr. Gustavo Longaray Moraga presented the background document prepared for the conference, with the keynote "Bridging Science, Policy, and Statistics in the target countries." This presentation showed that the need for a circular economy could be demonstrated by the projections of a growing footprint and waste production associated with the use of materials. A transition towards a circular economy in the target countries could accelerate development with reduced environmental impacts and resource dependency. However, the target countries are at different levels in developing policies and legislation for a circular economy.

The presentation concluded with a proposal of a framework with existing circular economy indicators that could be used by the target countries. These countries already produce data to feed several of those indicators. Available data could already tell a story about footprint and material/waste flows.

In the second presentation, Georgia, one of the target countries, showed their case study of transition towards a circular economy. The keynote was made by Ms. Irma Gurguliani, Deputy Head of the Waste and Chemicals Management Department in the Georgian Ministry of Environmental Protection and Agriculture. The presentation was aimed at showing the actions and results of Georgia's vision to become a preventing and recycling society. The background of this vision was established in the country's waste management code and the waste management regulations. An important policy tool in the Georgian transition is the Extended Producer Responsibility (EPR). Several targets were made to recycle and recover waste streams covered by EPRs, such as waste oils, tires, batteries, and WEEE. Moreover, Ms. Gurguliani points out that data collection issues challenge the measurement of these targets; nonetheless, we must be ambitious, she said.

Finally, during the third part, the session was closed with a roundtable discussion about monitoring the circular economy and current gaps. The roundtable was facilitated by Dr. Gustavo Longaray Moraga with the panelists Dr. Kees Baldé (United Nations University – UNU), Ms. Therese El Gemayel (United Nations Environmental Program – UNEP), Mr. Matthew Fraser (CIRCLE Economy), and Mr. Theo Geerken (Flemish Institute for Technological Research – VITO). The objective of this roundtable was twofold: to give insights on (i) policy and legislation for a sustainable circular economy and (ii) measuring the circular economy.

In the beginning, the panelists shared their vision of measuring the circular economy based on their ongoing work on the subject. Then, the panelists collaborated in answering questions on how we can ensure a sustainable transition to the circular economy. The panelists also commented on tools used to measure the flow of materials. In this sense, Dr. Baldé mentioned the use of Sankey diagrams, which are also related to UNU's work on e-waste monitoring. Ms. El Gemayel shared details for the UNEP's manual for economy-wide material flow accounts, which illustrates how to perform material flow analysis. On the same note, Mr. Fraser shared details of the Circularity Report Gap, which measures circular economy in a material-flow approach considering societal needs. Mr. Geerken points out the need for consistency in the measuring systems, and that much still needs to be done in converging circular economy and SDGs. A point of attraction in the discussion was about what is the next challenges to measure the circular economy. Some of these challenges can be mentioned as measuring quality in materials (particularly important for waste recycling) and how to measure a circular economy that brings environmental justice for countries in different development stages.

Final conclusions

Some final conclusions can be drawn from the discussion and the previous sessions:

- Circular economy must go hand in hand with sustainable development. For this, countries must set clear policy goals towards a sustainable circular economy.
- Countries must collaborate for developing guidelines and sharing information.
- As a circular economy can encompass many focal areas, countries can start selecting specific actions that are important in their situation.

3. Recommendations and guidance for the target countries

Building upon the information provided in the concept note for the event and in the light of the discussions, the following can be recommended:

- Some target countries are already incorporating circular economy strategies in their policymaking, either by specific frameworks or by including the circular economy in existing frameworks for sustainable development and green economy. However, most target countries still need to advance the inclusion of circular economy strategies in their policymaking, and this can be done by taking examples of the international experience.
- For the development and selection of circular economy indicators, target countries can use the extensive standardization developed by UNECE based on the Shared Environmental Information System (SEIS); this can foster transparency with the use of indicators and make the result comparable among countries. Also, it is important to be attentive to the particular situation in each country and the result of certain indicators. For example, indicators per capita (e.g., municipal waste generation per capita) may show the distorted figures for countries highly dependent on tourism (that is, a large, unregistered population).
- The ISO/TC 323 is an important step towards the development of an international widely accepted conceptualization of the circular economy. At this point, however, it is unclear what ISO/TC 323 outputs represent in terms of policy and measurement to be defined in the target countries. Thus, any policy towards a circular economy will be limited in scope. A starting point is to create instruments to decrease waste generation with, for example, fostering recycling rates. Further development can look at the whole lifecycle of products, including, for example, durability or repairability.
- Incentivizing the service industry towards the circular economy is an important step in developing new green jobs (e.g., repair shops, second-hand shops and product-service systems).
- A transition to the circular economy should take into consideration environmental impacts. For this, the promotion of green energy is greatly important.
- Policy and process implementation indicators should be defined regarding the particular situation of each country. For example, the promotion of less waste generation can be quite different depending on the economic situation in each country. On the one hand, countries highly dependent on the mining of primary resources should look to diversify their industry and decrease waste generation in mining (such as tailings) by promoting better extraction technology. On the other hand, countries dependent on tourism and hospitality services can promote decreasing food waste either by, for example, raising the awareness of industry and citizens or by creating instruments for green waste separate collection.