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**Strategic Approach  
to International  
Chemicals Management**

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**Open-ended Working Group of the International Conference  
on Chemicals Management**

**Third meeting**

Montevideo, 2–4 April 2019

Item 4 of the provisional agenda\*

**Progress towards the achievement of the 2020 overall  
objective of the sound management of chemicals**

**ICCA-UN Environment Symposium on Sound Management of  
Chemicals and Waste and the Circular Economy  
11 – 13 September 2018, Chengdu, China**

**Note by the secretariat**

The secretariat has the honour to circulate, in the annex to the present note, a report received from the International Council of Chemical Associations (ICCA) and UN Environment on the Symposium on Sound Management of Chemicals and Waste and the Circular Economy held from 11-13 September 2018 in Chengdu, China. The report is presented in the annex as received from the ICCA and UN Environment and has not been edited by the secretariat.

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\* SAICM/OEWG.3/1.

## Annex

# ICCA-UN Environment Symposium on Sound Management of Chemicals and Waste and the Circular Economy 11 – 13 September 2018, Chengdu, China

### Executive Summary

Circular economy aims to ensure products, components, and materials are continuously cycled at their highest utility and value at all times. It also aims to decouple economic growth from the consumption of finite resources and environmental impacts. There are many facets and different perspectives in how to achieve a more circular global economy. Some argue that a circular approach means an increased use of waste as raw materials, while others define circularity as an increased use of bio-based raw materials. Others will focus on innovative design to enhance recyclability or durability. Thus, there is a need to better understand what constitutes a circular economy in practice.

To this end, UN Environment and the International Council of Chemical Associations (ICCA), held a Symposium on Sound Management of Chemicals and Waste and the Circular Economy, with support from the Chinese Petrochemical and Chemical Industry Federation (CPCIF), from 11 to 13 September 2018 in Chengdu, China.

The Symposium aimed at coming to a common understanding of circular economy and how facilitating circularity is closely intertwined with sound management of chemicals and waste. To fully achieve a circular economy, new business models, technologies, and financing models are required. The Symposium provided practical examples for governments and industry on how to facilitate and implement more circular approaches, while also identifying enabling policy conditions to scale up circular approaches. The Symposium also helped to define roles and responsibilities for key stakeholders. However, participants agreed there was no “one size fit all” model for achieving a circular economy. Based on the discussions throughout the three-day Symposium, participants identified the following enabling conditions that need to be put in place to realize a circular economy:

1. **The importance of education and awareness raising:** especially for consumers, but also to ensure that scientists involved in R&D are connected with the policy experts to enhance understanding each other’s perspectives and goals;
2. **A circular economy can only be realized if a sound management of chemicals and waste is in place;** Compared to a linear system, a circular economy requires even more that knowledge and information on substances, including those contained in products must be shared;
3. **A circular economy needs collaboration at different levels;** collaboration over the value chain, collaborative innovation setups involving academia, industry, governments, financial sector and other key stakeholders. Article manufacturers, brand owners, and the informal local communities should not be overlooked;
4. **Enabling policies** that take a holistic view and consider all stages of a product life are needed, including a closure of loops at the end-of life, while being transparent, risk-based, and flexible in nature.
5. **Leadership from all stakeholder groups** at different levels is necessary (e.g. governments, CEOs) – circular economy needs champions.

This document provides an overview of the Symposium discussions, conclusions, and recommended next steps.

## Overview of Event

Over 65 organizations and representatives attended the three-day event. Participants included a broad range of Strategic Approach to International Chemicals Management (SAICM) stakeholders and sectors (e.g. governments, industry, NGOs) with expertise on issues related to the circular economy. ICCA member companies presented case studies showcasing business models that contribute to a circular economy, challenges that must be overcome to enable circular models, and the role of circularity within a sustainability and sound chemicals management context. In addition, intergovernmental organizations and government representatives from various regions, including China, the Netherlands, Canada, the Philippines, and the European Commission provided perspectives on how industry and governments can work together to facilitate circular business models.

## Discussion Highlights

Participants engaged in rich discussions on the linkages between chemicals and waste management and circularity. Throughout the discussions, four general themes emerged: 1) ensuring a common understanding of what is circularity and a circular economy; 2) improving capacities in the recycling industries; 3) enabling policies and conditions that promote circularity; and 4) enhancing connections and education among researchers, policy experts, industry, and governments. The discussions identified opportunities and challenges for the chemical and waste industries in a more circular economy.

### Successful & Innovative Business Models

Participants highlighted the following contributing factors to establishing successful, innovative, and circular business models: free markets and competition, profit and job creation, effective environmental legislation and related policies and enforcement of such policies, investments in Research & Development, and pursuing new partnerships with various stakeholders.

Participants provided case studies of innovative business models, such as waste-to-chemicals processes, and the use of mass balance techniques, while discussing challenges they overcame to implement such models. Some of the challenges discussed included how to create economic incentives for more sustainable or circular feedstocks and products and how to encourage companies to pursue new business models, partnerships, and invest in technologies that may create more circular technologies and processes.

### Enabling Policy Environment

Focusing on enabling policy conditions and infrastructure, participants identified there is a need to develop policies that promote new circular solutions and waste management infrastructure. At every level of government – from global institutions to local governments – there should be cooperation between government agencies to streamline policies. This is particularly important to improve alignment in waste management policies (e.g. definitions) and cooperate to invest in waste management infrastructure. Furthermore, the participants identified the following policy elements to facilitate progress towards a more circular economy:

- Legislation and effective policies to improve transparency and communication on products and materials and recyclability throughout the value chain for information sharing and identifying potential collaboration activities.
- Policies to enhance life-cycle approaches and identify holistic solutions that consider the design and production phase, midstream (consumption and reuse) and downstream phases (disposal and recycling).
- Increase government coordination with all actors of the value chain and prioritize actions in the value chains, based on potential impact and feasibility of implementation.
- Policies to incentivize and promote acceptance of new processes and technologies, such as mass balance, chemical recycling, renewable material use, etc.
- Regarding the stakeholder engagement and the roles and responsibilities of different stakeholders, participants discussed that leaders of governments, international institutions, and industry throughout the

value chain, should champion circular economy approaches and need to take a leadership role. Participants also discussed that governments should be better sensitized to the benefits of circularity and that policy developers and agencies should strive to engage all ministries/agencies to understand the systemic value of circularity while also avoiding any potential unintended consequences.

### Defining Circularity

The Symposium allowed participants to identify potential project and activities to advance circularity globally. Most notably, it was through these discussions that participants discussed the meaning of circular economy. Participants agreed that the term and meaning of “circular economy” will continue to evolve and means something different to each individual stakeholder, making it difficult to identify one definition. Therefore, it is essential to raise awareness throughout society and with consumers, while continuing to advance circular technologies and processes. However, participants were able to come to a common understanding in that a circular economy is one in which resources and materials are continuously cycled to eliminate waste while creating value for all.

Once a general understanding was reached, participants discussed the drivers for both industry and governments to change from traditional business and policy models to more flexible, yet effective models that facilitate innovation. Below is a summarized list of the tangible ideas and activities generated to drive progress towards a circular economy:

- **Material flow analysis for priority components and material streams.** This would allow to prioritize actions, and act as a starting point for identifying action for business. Though no inventory of materials exists, this is not reason not to act now. ICCA and UN Environment are to consider how to make this happen, and one example provided is through the International Resource Panel.
- **Online platform to help identify materials and products that are in local waste streams, including the potential for material/product reuse, recycling, and recovery.** Materials management is key to driving circularity, connecting value chains and developing circular solutions. The suggested stakeholders to undertake this work were national governments, jointly with the academia. It was noted that a challenge to this will be to ensure confidential business information (CBI) is protected.
- **Waste management** is a priority for enabling circularity. There is a need to identify the factors to improve waste management in different countries, and that could be done by bringing together governments and industry leaders, while industry associations could be utilized to facilitate discussions and build relationships and partnerships.
- **Awareness building and curriculum development** for various student levels is an opportunity to enhance knowledge on circularity and policies could help connect academics, policy makers, and industry.
- **Innovative collaborations** by stimulating market supply and demand forces of circular products and materials. To do so, engagement needs to include the financial sector, as it can serve as a facilitator. Another opportunity is to pursue Public-Private Partnerships (PPPs) to create basic drivers and incentives, identify circularity champions and develop infrastructure for circularity.

### **Conclusion and Next Steps**

The Symposium identified circularity as a tool to achieving progress towards all of the Sustainable Development Goals and greater overall sustainability. The Symposium confirmed that the circular economy is a journey that has the potential to identify solutions to waste management and other resource challenges, as well as a new pool of growth and opportunities.

Participants stressed that a practical approach should be taken as circularity begins from the design stage, and that better communication on chemicals throughout the value chain is needed. Experiences showed that to close the loops, changes in the waste policies are also required. The participants also noted that progress towards the circular economy must include the responsible use of natural resources and redesign of products, but also enable reuse, repurposing, recycling and recovery of value locked materials that may traditionally be viewed as waste.

A common understanding was also reached, defining a circular economy as one in which resources and materials are continuously cycled to eliminate waste while creating value for all. Additionally, when looking at facilitating circularity, we need to ensure it is in the context of broader sustainability.

Participants agreed the Symposium should only be the beginning of the multi-stakeholder discussions regarding circular economy. Participants discussed holding future events to identify and initiate innovative circularity projects. Additionally, in order to relay knowledge and to gain greater momentum to facilitate progress towards a more circular economy, this outcome document is intended to feed into the SAICM and the sound management of chemicals and waste beyond 2020 intersessional process and the fourth session of UNEA.

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