

OECD –UNEP lunch time side-event: Circular economy in the sustainable management of minerals and metal resources

Time: 13.10 – 14.10, 27th November 2019, Auditorium

The use of natural resources has more than tripled from 1970 and continues to grow. From 1970 to 2017, the annual global extraction of materials grew from 27 billion tons to around 90 billion tons, while the annual average material demand grew from 7 tons to over 12 tons per capita. The extraction and processing of materials, fuels and food make up about half of total global greenhouse gas emissions (not including climate impacts related to land use) and more than 90 per cent of biodiversity loss and water stress. An estimated 11% of global species were lost by 2010 due to global land use. From 2000 to 2015, the climate change and health impacts from extraction and production of metals doubled. Analysis from the International Resource Panel (2019)¹ and the OECD (2019)² shows that, unless a fundamental change drives natural resource use away from the status quo, global materials use could more than double by 2060.

Minerals and metals underpin national economies, provide crucial raw materials for industrial activities, and are inputs to almost every sector of the global economy. Extractive resources will continue to play a central role in driving the global economy. Demand is likely to be driven by emerging economies with expanding populations, global middle-class growth, urbanization, and technology change including a global transition towards low-carbon energy production technologies.

However, in the absence of urgent and concerted action, rapid growth and inefficient use of natural resources will continue to create unsustainable pressures on the environment. These unsustainable dynamics affect the potential for future sustainable development, while adding substantial costs to national budgets.

Decoupling of natural resources use and environmental impacts from economic activity and human well-being is an essential element in the transition to a sustainable future (IRP, 2019. OECD, 2018). Achieving decoupling and addressing climate change is not only possible but can also deliver substantial social and environmental benefits, including repair of past environmental damage, while also supporting economic growth and human well-being (OECD, 2017. IRP, 2019)³.

In March 2019, the United Nations Environment Assembly also acknowledged that sustainable consumption and production and decoupling, which can be achieved through circularity, is transversal for several of the global agendas, including the Agenda 2030 – 50 of the 169 SDG targets are related to natural resources and resource management –, the sound management of chemicals and waste, biodiversity and ecosystem conservation and marine and ocean pollution. **The UN Environment Assembly also recognized that sustainable management of metal and mineral resources contributes significantly to achieving the Sustainable Development Goals** and underlined the need to share knowledge and experience on regulatory approaches, implementation practices, technologies and strategies for the

¹ Source: IRP (2019). Global Resources Outlook 2019: Natural Resources for the Future We Want. A Report of the International Resource Panel. United Nations Environment Programme. Available at: <http://www.resourcepanel.org/reports/global-resources-outlook>

² OECD (2019), *Global Material Resources Outlook to 2060: Economic Drivers and Environmental Consequences*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264307452-en>.

³ OECD (2017), *Investing in Climate, Investing in Growth*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264273528-en>.

sustainable management of metal and mineral resources, including over the whole life of a mine and the post mining stage⁴.

Governments and the private sector will need to act together to adopt more sustainable consumption and production patterns while ensuring that the objectives of the Agenda 2030 are met. The OECD (2019) has reviewed the current market penetration and assessed the potential scalability of circular business models, which represent the key activities required to transition to a more resource efficient and circular economy. While some circular business models have experienced rapid growth in recent years, largely in response to the emergence of new technologies, a broad set of policy approaches would be required to alleviate some of the barriers that currently hinder the widespread adoption of circular business models. The OECD (2019) *Due Diligence Guidance for Meaningful Stakeholder Engagement in the Extractive Sector* provides practical guidance to mining, oil and gas enterprises in identifying and managing risks with regard to stakeholder engagement activities to ensure companies play a role in avoiding and addressing adverse impacts of extractive sector on local communities.

A more circular economy can make deep cuts to emissions from heavy industry. For example, in an ambitious scenario, the cuts could amount to as much as 296 million tonnes CO₂ per year in the EU by 2050, out of 530 in total – and some 3.6 billion tonnes per year globally.⁵

In this context, the OECD and United Nations Environment Programme (UNEP) will co-organize a side-event during the 2019 Green Growth and Sustainable Development Forum to present how the circular economy concept provides a holistic framework to progress towards sustainable consumption and production patterns, achieving the 2030 Agenda and the Paris agreement targets and to discuss the role that heavy and extractive industries will play in this framework.

Objectives of the session

- Provide an understanding of the circular economy concept, its scope and how it contributes to promoting sustainable consumption and production patterns;
- Understand the potential benefits of circular business models: they can i) address natural resource constraints to growth, ii) reduce and manage waste, iii) provide shared opportunities and benefits to transform to more inclusive green economies and iv) improve environment and health.
- Discuss the implications that circular economy will have for enterprises from the heavy and extractive sectors
- Explore how the UNEP approach to and experience in circular economy can promote innovative approaches for the sustainable management of metal and mineral resources.

Agenda of the session

- 1) Welcome by moderator & setting the scene: Shardul Agrawala, OECD
- 2) Why take action: Janez Potočnik, International Resource Panel
- 3) Pathways for a transition to circular economy: Ligia Noronha, UNEP
- 4) How does it apply to the extractive industry and the role of the private sector: Benjamin Katz, OECD
- 5) Discussions and Q&A

* A Light lunch will be provided.

⁴ UNEP/EA.4/ Resolution 19 on “Mineral resource governance”, available at:

<http://wedocs.unep.org/bitstream/handle/20.500.11822/28501/English.pdf?sequence=3&isAllowed=y>

⁵ Source: Material Economics (2018). The Circular Economy - a Powerful Force for Climate Mitigation. Available at:

<https://materialeconomics.com/publications/the-circular-economy>