

Circular economy – monitoring framework

Input to the Call for evidence (Revision of the framework)

June 2022

The **European Copper Institute (ECI)** welcomes the possibility of giving its suggestions and opinions to prepare the next revision of the Monitoring Framework of the Circular Economy. Metals such as copper are enablers of the green transition of the EU, which should occur sustainably, ensuring the shift toward more circular practices.

This framework should work as a reference to show the progress of the EU toward its green ambitions. However, the present version needs some corrections, and the new proposals coming from the second circular economy packages need careful reflection before their possible implementation into the framework.

This paper summarises ECI suggestions and necessary improvements, briefly summarized by the following points.

1. The assessment of the EU-self sufficiency needs to consider the role of material recycling in the EU.
2. The recycling statistics should align with the EU Waste Legislation and its calculation point of the recycling rates.
3. The contribution of the recycled materials to the raw materials demand should be measured in terms of recycling rate and not with recycled content metrics, at least for the copper and more in general for the metals that have a matured and well-developed recycling value chain.
4. The EU's performance in the trade of recyclable raw materials should consider a more extensive set of waste streams to intercept traded streams, such as PCBs and other end-of-life products that are rich in copper and other valuable metals.
5. The definition of new indicators incorporating material use and footprint should consider not only the burdens but also the benefits deriving from their use. For instance, the GHGs savings induced by the use of copper in electrification and green technologies vastly outpace the emissions at its production.
6. Data used by the framework should be publicly available and possibly coming from the EU data set (EUROSTAT).

Extensive comments and explanations are reported in the following parts of the paper. The ECI developed them to establish a proactive and constructive approach with the EU Commission.

Introduction

ECI prepared this submission to comment on some indicators used in the Circular Economy Monitoring Framework, published in 2018, and to give its views about the Call for evidence - Ares(2022)3492301 – published in light of this consultation. In particular, the basic framework is composed of different indicators that need some adjustments to track circular economy efforts more accurately. This is in line with CEAP 2.0. package, announcing already since 2020 the possibility for the establishment of new indicators to incorporate different aspects of the EU Green Deal pertaining to the footprint of products and materials.

1. Comments on some of the existing indicators

a. EU self-sufficiency for raw materials – Production and Consumption Group – Indicator 1

The indicator has been defined using the import reliance indicator created within the methodology of the Critical Raw Materials. However, it is worth stressing here that many raw materials, even those that are not classified as critical, have an essential role to play in the EU economy; in particular, those that are used in different product value chains that are functional to build green technologies, to enable the low-carbon transition and to support significant and broader electrification of the economy.

The EU needs to factor the contribution of recycling into the concept of self-sufficiency; for instance, when the recycling rate of a material is effectively occurring in the EU, this element should play as a reinforcing element of the EU self-sufficiency indicator. For this reason, the recycling rate should be considered a factor that mitigates the EU dependency.

ECI asks to consider the recycling rate of materials within the formula of the indicator of the EU self-sufficiency, i.e. value of the indicator increases when the recycling really occurs in the EU.

b. Overall recycling rates – Waste Management – Indicator 5

The measuring of the recycling rates showed in the past significant limitations due to the different measuring points adopted by Member States (MS) and the differentiation according to each waste stream. The last revision of the Waste Framework Directive – 851/2018/EU Directive – improved the situation, defining a unique calculation point of the recycling target, where the material recovered from waste enters the recycling process facility. This position will allow the EU Commission and the MSs to assess the tonnage of recycled materials better.

This new approach is relevant to the methodology used in the Circular Economy (CE) Framework to assess recycling, and thus the assessment methodology of the CE framework should be adapted to it. The recycling rate should be calculated as the tonnages of the materials recovered from waste and treated for being recycled divided by the total tonnages that have been collected.

ECI asks to align the calculation methodology with the reference methodology of the Waste Framework Directive, i.e. recycling occurs when the material enters a final recycling facility.

c. Contribution of recycled materials to raw materials demand – Secondary Raw Materials – Indicator 7

The contribution of the secondary sources to the raw materials demand is assessed by this indicator via the use of the recycled content and assuming the input coming from post-consumer waste fractions as a proper fraction. However, this approach works for sectors where the recycling activity and the

secondary raw materials market are not developed enough because the recycled content is a sector-specific indicator.

The contribution of recycled materials to the raw materials demand should be measured using the End Of Life Recycling Rate (EOLRR). This metric is much best fit for circular economy purposes because it gives the quantity of the materials recovered at the end of their life that can be made available for the next life cycle¹.

Moreover, the demand for metals is expected to grow because of – inter alia – the goals of the EU Green Deal (e.g., green technologies and electrification); therefore, the need for secondary raw materials will continue to exceed their availability. Thus, a metric that privileges future availability over the actual use of secondary raw materials is preferable, at least for metals. In addition, it is essential to mention that, for instance, the production of copper always mixes primary and secondary sources to get the best optimisation between energy efficiency and resource savings. Therefore, the two sources do not compete but synergically cooperate for a win-win outcome.

A second relevant aspect is the waste streams to be considered in calculating the indicators. Uniquely the materials recovered from the post-consumer waste stream are considered. However, it is worth considering that considerable amounts of secondary raw materials are recovered and recycled by waste streams generated during the industrial production processes along several supply chains and product value chains. This practice might be perceived as the inefficiency of a system. Still, instead, it represents a mature and effective form of industrial symbiosis where, e.g. the copper left-overs (so-called by-products or other engineered minerals) generated by e.g. downstream final product manufacturers or other copper processors are returned to the copper scrap market, directly to the copper industry, or even to other sectors (e.g. iron silicate from copper production as safe and sustainable substitute for virgin raw materials in the construction sector). Therefore, both post-consumer and pre-consumer waste streams (i.e. old and new scrap) should be considered.

ECI asks to consider the End-Of-Life Recycling Rate as the reference indicator for the recycling, at least for copper and metals more in general.

ECI asks to consider the valuable materials that are recovered from waste streams generated at industrial levels (i.e. pre-consumer waste) and used in various applications; and not only post-consumer waste.

d. Trade in recyclable raw materials – Secondary Raw Materials – Indicator 8

The trade of waste streams containing recyclable and valuable fractions is relevant; thus, measuring such activity in the framework is essential. However, it is also crucial to enlarge the monitoring and trace complex products containing significant copper fractions and other valuable metals. The indicators consider waste and by-product streams for assessing the export of plastic; paper, and cardboard; precious metal; iron and steel; copper, aluminium and nickel. But, other streams need to be considered as Waste of Electric and Electronic Equipment or End-of-Life Vehicles, among many others, contain relevant fractions of metals and copper, in particular.

Moreover, these indicators should not be considered in isolation compared to other important information, such as the existence of recycling capacity in the EU and the environmental and safety standards applied at the destination countries where EU waste is exported. These two elements should be part of the framework related to secondary raw materials to highlight elements related to EU

¹ Luis A.Tercero Espinoza, *Critical appraisal of recycling indicators used in European criticality exercises and circularity monitoring*, Resources Policy, Vol. 73, October 2021

competitiveness in recycling and waste processing and check when the waste export is a sustainable option compared to the domestic processing or EoL treatment.

ECI asks for the enlargement of the waste stream (Custom Codes) considered in the assessment of the trade indicators. Also, the end-of-life product streams should be taken into account.

2. General comments on the proposals and aims of this call for evidence

The second circular economy action plan and the call for evidence on the circular economy framework propose the following elements:

- the definition of new indicators;
- the use of the European Statistics as much as possible;
- the possible subsequent use of new circular metrics, created as an outcome of Horizon Europe projects;
- the creation of complex indicators cross-linking material consumption and footprint in the EU and beyond.

This proposal wants to track better the progress of the EU towards its goals of the Green Deal. However, it is worth considering the following aspects as a minimum necessary condition for having a system that is efficient in its use and effective in giving relevant information.

- a) The frame needs to use publicly available data from the EU data set (e.g., EUROSTAT); however, it is also vital to secure that all the Member States report on a comparable basis: same data, same methods and assumptions.
- b) The selection of new indicators and the modification of some of the existing ones is necessary because the Green Deal and the transition toward a Circular EU Economy are progressive processes that evolve together with the knowledge around and within them. However, it is vital to limit the number of indicators to just a few relevant ones that use factual data and are reliable, credible and robust.
- c) The framework is an instrument to inform about the general high-level trends towards the headline targets; however, these indicators should not be linked to any legislative target. They are, on the contrary, essential to check the effects of the legislation in the medium-term towards the headline ambitions.
- d) The creation of indicators or metrics that mix material consumption and footprint have been discussed since 2014 when the EU Commission prepared the first draft of the circular economy package. It is relevant that these indicators will take into account also the benefits of using certain materials in society and technological applications, e.g. cradle-to-cradle LCA along the supply chains where the materials are used. For instance, copper production is associated with greenhouse gas emissions, but its use in green technologies and electrification saves much more CO₂ than what is emitted. This aspect should be taken into account by these new potential indicators necessarily. Otherwise, there could be unintended consequences that will go against the Green Deal goals.

During the revision of the framework, ECI asks the EC to consider not only the burdens but also the benefits linked to the use of materials in society. The footprint associated with materials should be assessed using a cradle-to-cradle LCA.

ECI asks the EC that only a few relevant indicators should constitute the framework.

ECI remains available for any additional information or clarification the EU Commission might require. ECI expertise can provide helpful insight in developing the guidelines about sustainability due diligence for the copper sector, via the interactions of ECI with international copper colleagues in the International Copper Association (ICA) – <https://copperalliance.org/> - and with the experts in due diligence of the Copper Mark – <https://coppermark.org/> - an independent third-party verified assurance framework set up to promote the responsible production of copper.

About the European Copper Institute

Based in Brussels, the European Copper Institute (ECI) is the leading advocate for the copper industry in Europe and is the EU Regional HUB of the International Copper Association (ICA). Through a team of policy, industry and scientific experts, ECI acts to support copper's role in achieving the EU's policy goals. Our members mine, smelt, refine and recycle copper for use across the economy, in the electricity system, buildings, transport and industry.

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