

Investments in a circular built environment

The EU Taxonomy directs investments to the economic activities most needed for the European Green Deal objectives and it includes criteria for a circular economy.

Currently there is very limited uptake of the EU Taxonomy Substantial Contribution criteria for circular economy in the built environment due to implementation challenges.

This paper summarises the challenges and outlines recommendations to improve uptake.

European Commission targets

The European Commission set a 70% waste recovery target under the Waste Framework Directive (WFD), and the Circular Economy Action Plan identifies construction materials as an area of focus.

Is the built environment on track?

The built environment is responsible for half of global resource use. Currently, 45% of the sector's greenhouse gas (GHG) emissions come from the production and consumption of resources and materials.¹

Construction and demolition waste is the largest waste stream in the EU – responsible for more than a third of all waste generated.²

Even when recovered, most waste materials go to backfilling (filling in excavated areas with suitable waste) – a missed opportunity for higher value reuse and recycling of the materials.

Circular design and robust waste management reduce consumption of primary materials, optimise the lifespan of materials and products, enable materials reuse (thus eliminating waste), and allow regeneration of our ecosystems.

^{1.} Ellen MacArthur Foundation

^{2.} European Commission

Circular Economy in the EU Taxonomy

The EU Taxonomy includes both Substantial Contribution criteria and Do No Significant Harm criteria for circular economy.

A Substantial Contribution to a circular economy can be achieved for the construction and the renovation of buildings.

Do No Significant Harm (DNSH) criteria must also be met for the construction and renovation of buildings when pursuing a Substantial Contribution climate change mitigation or adaptation.

A summary of the criteria are provided below.

The clarity, feasibility and comprehensiveness of these criteria play a significant role in the extent of their current implementation.

Substantial Contribution

- 90%/70% of non-hazardous waste is reused or recycled
- Calculation of the life cycle Global Warming Potential
- Circular design including design for adaptability and deconstruction
- Minimum 50% of the original building is retained
- Three heaviest materials have a maximum primary raw material content of:
 - o 85%/70% for concrete and stone
 - o 85%/70% for brick, tile and ceramic
 - o 90%/80% for bio-based materials
 - 85%/70% for glass/mineral insulation
 - 75%/50% for non bio-based plastic
 - o 65%/30% for metals
 - o 83%/65% for gypsum
- Electronic tools used for Environmental Product Declarations

Do No Significant Harm

- At least 70% (by weight) of the non-hazardous construction and demolition waste (CDW) (excluding naturally occurring material) generated on the construction site is prepared for reuse, recycling and other material recovery.
- Operators limit waste generation in processes related to CDW and take into account best available techniques and use selective demolition to enable removal and safe handling of hazardous substances and facilitate reuse and high-quality recycling by selective removal of materials, using available sorting systems for CDW.
- Building designs and construction techniques support circularity and in particular demonstrate how they are designed to be more resource efficient, adaptable, flexible and dismantlable to enable reuse and recycling.

Construction Renovation

Circular Economy Criteria in the EU Taxonomy

Implementation challenges

There is very limited uptake of the Substantial Contribution to a circular economy in the built environment, due to a selection of implementation challenges.

Climate change mitigation criteria are significantly easier to reach

A Substantial Contribution to climate change mitigation is easier to achieve, making it simpler to reach high EU Taxonomy alignment percentage values by investing in new, energy-efficient buildings over the construction or renovation of buildings in line with the circularity criteria. As a result, it is taken as the default objective to meet and market actors do not consider the circular economy objective.

Unclear approach to demolition waste

For the renovation of buildings there is a requirement to retain 50% of the building. There is no such requirement for the construction of a new building, which is sensible under the assumption that the building is constructed on undeveloped land.

However, the legal text relating to new construction stipulates that "All generated construction and demolition waste is treated in accordance with Union waste legislation and with the full checklist of the EU Construction and Demolition Waste Management Protocol, in particular by setting sorting systems and pre-demolition audits", suggesting that these criteria may also be applied when constructing a new building on land with previous structures that are due to be demolished.

No circularity criteria for acquisition and ownership

The acquisition and ownership (A&O) of buildings currently only has Substantial Contribution criteria for climate mitigation or adaptation – this poses the risk that a Taxonomy-aligned building for a Substantial Contribution to a circular economy at construction or renovation stage cannot subsequently be acquired or owned/rented out as a Taxonomy-aligned building.

Further, financiers and owners of new buildings can omit the DNSH to a circular economy by reporting the construction or renovation of their buildings under A&O – which does not include DNSH criteria for circularity.

Backfilling is not always reported

Although backfilling is used extensively in the EU, it is not always clearly reported as such, which leads to difficulties around meeting the waste thresholds for a Substantial Contribution, which excludes backfilling. Even when sorted on site, there is often no guarantee nor traceability whether the construction and demolition waste is reused, recycled or backfilled when handed over to waste processors.



Recommendations

Integrate life cycle Global Warming Potential threshold to the climate change mitigation criteria

Carbon emitted during material production and construction phases represents a large portion of life cycle emissions and thus need to be tackled in economic activities with a Substantial Contribution to climate change mitigation. As such, the ambition levels between climate change mitigation and the transition to a circular economy would be rebalanced and the EU Taxonomy could enable investments into circular buildings.

Align criteria to the EU Waste Hierarchy and Level(s) framework

The Waste Hierarchy of the EU WFD and the Level(s) framework take a holistic approach to circularity by clearly prioritising material use prevention and incentivising reuse over recycling. Whilst the EU Taxonomy singles out specific Level(s) indicators, it should better align to the steps and approach of the Waste Hierarchy and Level(s) framework to increase consistency across the policy landscape.

Address structural issues between economic activities

This could include clarifying the role and use of the economic activity A&O, e.g. how the financing, construction and renovation of circular buildings links to A&O; clearly stipulating that the construction of a new building cannot include demolition of previous structures; or adding a new economic activity the "redevelopment" of buildings, as a means to consolidate the aims of circular construction and renovation.

About us

The World Green Building Council (WorldGBC) is the largest local-regional-global action network, leading the transformation to resilient and decarbonised built environments.

Together, with over 75 Green Building Councils and industry partners from all around the world, we are driving systemic changes to the sustainable built environment. WorldGBC's <u>Sustainable Finance Taskforce</u> aims to equip finance actors to deploy impactful capital and unlock finance flows into the transition towards a sustainable built environment.

The WorldGBC network enhances consensus and collective learning from across the value chain on key sustainable finance regulation, builds capacities amongst the industry and advocates for an ambitious yet practically implementable regulatory framework.

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