



UNECE-FAO Impulse Lab: “Trees – Nature’s technology for climate-proof building”

Kursaal Congress Centre, San Marino (Hybrid)

5 October 2022 – 12:15-13:25 CEST

The UNECE/FAO impulse lab will reflect on a record-low carbon footprint building material: **Wood!**

In the near future, cities striving for carbon neutrality will have to significantly increase the share of wood in their portfolio of building materials.

Our Impulse Lab will give inspirational examples and experiences of how to best boost the application of this abundant and highly sustainable material to meet the various ambitious climate targets of cities and countries around the world.

Background:

Urbanization is one of the global demographic “megatrends” and the share of the world population in urban areas by 2050 is projected to increase from 55% today to 68% in 2050 ([UN DESA 2018](#)). This concentration also triggers a significant energy use and economic output. Cities are hotspots of the global carbon cycle, with considerable fossil fuel CO₂ emissions from electricity consumption, ground transportation, residential and commercial buildings (www.globalcarbonatlas.org).

In fact, global GHG emissions from buildings amount to the equivalent to 21% of the global GHG emissions. Of this, 57% are indirect emissions from the offsite generation of electricity and heat, 24% are direct emissions produced onsite and 18% are embodied emissions from the production of cement and steel used in buildings.

Globally, cement and steel used in buildings emitted 2.2 GtCO₂-eq, more than twice the amount that was reported for aviation (1.04 GtCO₂- eq) in 2018. Over the period 1990-2019, global CO₂ emissions from buildings increased by 50% ([IPCC 2021](#)).

Building-specific drivers of these increasing GHG emissions include the larger floor area per capita, driven by the rising size of dwellings while the size of households kept decreasing, especially in developed countries. In addition, the inefficiency of newly constructed buildings, particularly in developing countries, and the low renovation rates and low ambition level in developed countries when existing buildings are renovated exacerbate the problem ([IPCC 2021](#)).

The good news is cities can actually achieve net-zero emissions. But this can only happen if emissions are reduced within and outside of their administrative boundaries through supply chains, which will have beneficial cascading effects across other sectors ([IPCC 2021](#)).



Wood produced from forests in the UNECE region is highly sustainable. Member States in the UNECE region have a long track record of managing the forests sustainably for their ecological, economic and social function and regularly assess their forests based on existing criteria and indicators. **Cities can trust in wood from UNECE region to be truly sustainable** ([INForest](#)).

Did you know that forests in the UNECE region are in effect an abundant source of more than 60% of wood and wood products in the entire world? More than 40% of the world's forests are in the UNECE region and over 80% of the global forests that are assessed by independent organizations for the sustainability of their management (forest certification) are in the UNECE region.

Maximizing the sequestration of carbon in long lived wood products is one of the best ways to increase the carbon pool outside forests.

Our impulse message:

Cities of the future could become major carbon storehouses while still being the economic powerhouses if they take advantage of highly energy efficient building materials with low carbon footprint, such as wood.

The session will be jointly moderated by UNECE and FAO



UNECE



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VENUE TBC

Opening and welcome remarks by Ms. Paola Deda, Director, UNECE Forest Land and Housing Division

Keynote speeches

<u>“The New European Bauhaus – a creative and transdisciplinary movement in the making!”</u> (tbc)	<u>“Buildings can become a global CO2 sink if made out of wood instead of cement and steel”</u> (tbc)
Speaker 1 tbc.	Speaker 2 tbc.
Legislation and policies as driver for low climate impact materials	Using science to assess possible impacts.

Q & A

Roundtable discussion

Background	Title	Speaker
CITY: Bridge the gap between climate targets and current progress	<i>“Moving from systems thinking to systems action”</i> – Why the city of Glasgow actively reached out to the forests and forest products sector.	Representative from Glasgow City Region (tbc.)
Finance: The power of financial support schemes	<i>“Money can change the world for the better”</i> - Finance progressive entrepreneurs and influence the banking sector to become more transparent, diverse and sustainable.	Representative from a finance institution
Architect: Main obstacles for practitioners	What architects can bring to the table to accelerating low-carbon construction in cities.	Representative from an architectural firm (tbc.)
Legal framework for renovating exiting building stock	<u>Long-term energy renovation strategy for 2050 in Slovenia</u> (see p.85) or here <u>in Slovenian</u>	Representative from Slovenian State authorities (tbc.) Head Project Unit - Office for Energy Renovation of Buildings, Ministry of Infrastructure

Moderated roundtable discussion and Q&A

Closing rationale