Brussels, 24 June 2022

Conference report

Wood will play a tremendous role in the New **European Bauhaus: Wood4Bauhaus featured** at the Vatican and the NEB Festival

Sustainable nature-based materials such as wood, and their significant role for tackling climate change within the New European Bauhaus and its global dimension was discussed at a conference in the Vatican on 9-10 June 2022. The event, which was organized by the Bauhaus Earth think tank and hosted by the Pontifical Academy of Science (PAS) brought together numerous eminent speakers from the Catholic church, European institutions, science, architecture and NGOs. The ambition was to address a global perspective of the major challenges ahead to decarbonise the built environment and foster a just and inclusive society.

The Wood4Bauhaus Alliance was represented by Prof Andreja Kutnar, who gave a speech on the importance of wood materials and products. The Alliance was also represented at the Festival of the New European Bauhaus with its own side event on 12-13 June 2022, which reflected on the outcomes of the Vatican conference and showcased the InnoRenew CoE demo building in Slovenia.



the Pontifical Academy of Sciences BAUHAUS • EARTH



- > Find here the PAS Conference Statement
- Read the Conference programme booklet (including participants list)
- NEB side event, Izola, Slovenia, 12 June 2022

Download this report: https://doi.org/10.5281/zenodo.6720633











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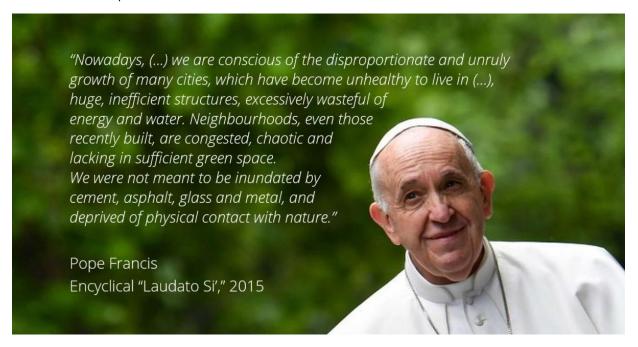




Insights from the PAS conference, Vatican, 9-10 June 2022

The conference put a spotlight on the state of the world's ecosystems and human environment, marked by excessive resource use, loss of nature, and unequal access to decent living conditions and education.

The Pontifical Academy of Sciences (PAS) often hosts events that address topics and issues of global concern, related to the imminent sustainability crisis of our civilization. The event has thus been inspired by the famous Encyclical "Laudato Si'," of 2015, in which **Pope Francis** addresses the "Care for Our Common Home", and where he points out that:



The main keynote speakers were **Ursula von der Leyen**, President of the European Commission, **Cardinal Peter K.A. Turkson**, Chancellor of the PAS, and **Prof Hans Joachim Schellnhuber** of the Potsdam Institute of Climate Impact Research and a key adviser to the New European Bauhaus. Notable other speakers addressing sustainable materials such as wood included the architects **Diébédo Francis Kéré**, **Alan Organschi**, **Bjarke Ingels** and **Shigeru Ban**.

Prof Andreja Kutnar, Director of InnoRenew CoE and Professor at the University of Primorska, and member of the Wood4Bauhaus Alliance, gave a "Critical Appraisal of Building Materials" in sustainable construction with a special focus on wood and wood products.



















Impressions from the PAS conference in the Vatican



(1) Conference chairs and keynote speakers: Bishop Marcelo Sanchez Sorondo, Prof Hans Joachim Schellnhuber, President Ursula von der Leyen, Prof. Joachim von Braun. Photo credits: Gabriella Clare Marino/PAS



(2) Speakers gallery at the conference featuring Wood4Bauhaus representative Prof Andreja Kutnar (front left). Photo credits: Gabriella Clare Marino/PAS





















(3) Group picture of PAS conference speakers. Photo credits: Gabriella Clare Marino/PAS

Key statements from the PAS conference



"Sustainably harvested timber can reduce a building's carbon emissions by up to 60%. Pope Francis is so right when he says that 'humans are not meant to be inundated by cement and steel'. Building more with natural elements, like wood, is both good for the planet, and good for the wellbeing of people."

Ursula von der Leyen, President of the European Commission

- Read the President's full speech at the PAS (europa.eu)
 - > Watch the recording of the President's speech





















"Can humanity build itself out of the climate crisis with a tree? Can our salvation from the climate crisis come out from a tree? (...) Our current building technology leaves a heavy carbon footprint, either for the production of cement, iron, steel, or aluminium. (...) A few months ago, I witnessed a lot of display from the German public, about how wood provides alternatives to the building culture that we have now, and how that can provide a solution. It is a search for building human habitats that leave hardly any carbon footprint. The project Bauhaus der Erde invites us along that path of discovery and search. (...) We are looking at a better

future, which will be signalled by the revolutionary and innovative use of wood."

Cardinal Peter K.A. Turkson,

Chancellor of the Pontifical Academy of Sciences (PAS)

Watch the recording of the Cardinal's opening address



"This is the motto: we have to reforest the planet and retimber the city. We have enough degraded land on this planet, about 1 billion hectares, which we could turn into vital ecosystems again, into managed forests and so on (...). To restore the climate, we need to, first, add and support 500 billion trees (that is 50 trees per every human being), and second, build 2 billion homes from harvested biomass. This is the nature-based solution. (...) Nature did a fantastic job of extracting CO_2 from the atmosphere: we need to replay this process, by turning cities into organic mass. To make the built environment sustainable, beautiful, inclusive, we need to bring together high-tech and no-tech."

Prof John Schellnhuber,

Founder of Potsdam Institute of Climate Impact Research (PIK) and Bauhaus Earth

Watch the recording of the inspiring presentation "Saving the World by Construction".





















"What is our epoch today, what are the challenges we are facing? The climate crisis is real. Building materials are limited, population growth is eminent, especially in the socalled Global South, and conflict will intensify, because of the few resources we have. This should concern every one of us. (...) It is not because you are rich, that you should waste energy, but you have to look for alternatives. It is about combining and engineering materials which are locally available to create structures. There is hope in the world if you use the material in a very smart way. (...) Africa loves Europe: if you do things right, we going to copy it, and if you

do things wrong, we going to copy it. Imagine if the growing population of Africa would behave the way the privileged have in the past, what will be the future of our planet?"

Diébédo Francis Kéré.

Founder of Kéré Architects, Pritzker Prize 2022

Watch the recording of the presentation on "Sustainable Architecture"



"Why wood? Because we are not only fulfilling the sustainability requirements, but we are also connecting people to nature. (...) Because true circularity can be achieved: with renewable materials, we can go in circles, and with proper management of the forest, we are not taking anything from nature. Today we often see that wood is just used for energy. I would say, let us encourage one another that we are not burning the wood but that we are enhancing its use in a cascade [to create more value and a much longer life cycle]."

Prof Andreja Kutnar.

InnoRenew CoE and Wood4Bauhaus Alliance

- Watch the recording of her talk on "Critical Appraisal of Building Materials"
 - Read the presentation slides





















"The Bauhaus Earth construct is that possibly forests working in synergy rather than in antagonism with cities could be a way to solve the planet's problems. (...) We should assess and perhaps monetize the value of that material stored in the built environment because it is significant, so that we can incentivize the afforestation and forest restoration. We can carry this idea of carbon measurement through the stem's succession, how the forest will re-grow, and we can re-build an entire urban morphology. Thus we can create durable carbon storage banks, thinking not about only one, but multiple lifecycles of buildings. (...) This is

not our grandparent's wood anymore; this is a new system. It requires a deep understanding of science, of design, and interdisciplinarity. We can make buildings that are uplifting, beautiful, inclusive, and also protect the planet."

Alan Organschi, Gray Organschi Architecture and Bauhaus Earth

Watch the recording of the speech "Re-Forming the Anthropocene"



"Most importantly, by using the tools that we have as architects and planners, and applying them at the scale of our planet, we can obtain a clarity and an overview that allows us to see the bigger picture. The absence of such a plan has catastrophic consequences, so we should actually dare together to give form to a plan for our planet. (...) If we could make the environmental performance of a building such a hard metric, which is not just part of their public relations, but of the hard-working performance of buildings, it would be much easier for others to follow. This is really where the New European Bauhaus can give everybody a

tool, because the industry is longing to be able to commit more to environmental performance, but they want to compete on equal terms - and the only way to do that is to come up with very comparable, accountable measures."

Bjarke Ingels, Founder of BIG Bjarke Ingels Group

> Watch the recording of "Climate-Smart Construction and Urbanization"





















"I am architect, but after practicing many years, I was very disappointed with my profession as architect, because we are mainly working for privileged people who have power and money. Because power and money are not visible, they hire us to make a monument to show off their power to the general public. But I also wanted to work for the society, that is why I started to work in disaster areas. I recognized, earthquake never kills people, but the collapse of buildings kills people. And when a city rebuilds, we get more projects as architects. But I found out that people are suffering with very poor living conditions in shelters and temporary houses.

So I believe it is our responsibility as architects to improve the conditions of people after such disasters. (...) I started using recyclable paper tubes, because I hate throwing things away. So I found out these paper tubes are much stronger than I expected, and they have enough strength to make buildings."

Shigeru Ban, Founder of Shigeru Ban Architects, Pritzker Prize 2014

> Watch the recording of his talk "Disaster Relief Projects in Architecture"

Note: Some of the quotes have been edited slightly for clarity.

Commenting on the PAS event, Prof Andreja Kutnar said:

"The Wood4Bauhaus Alliance was delighted to be part of this high-level event and to contribute to the agenda for research and innovation within the construction sector in Europe and beyond. Wood-based construction, as a method to capture and store carbon safely for decades, is finally receiving the highest level of recognition. Our Wood4Bauhaus Alliance is ready to engage in transforming the built environment into a carbon sink, thus supporting the President of the European Commission in this stated ambition, as well as to extend the New European Bauhaus to other regions of the world.

That the conference discussed and acknowledged the key role that wood can play in the decarbonisation of the built environment should be noted across the global construction industry. Collectively we should be in no doubt that when it comes to construction, a business-as-usual approach centred on concrete and steel should be replaced by the New European Bauhaus's quest for a sustainable, beautiful and affordable future for us all. The New European Bauhaus has rightly focused on nature-based materials such as wood, leading the way to a real paradigm shift in construction, precisely because in wood we can have hope."



















NEB side event, Izola, Slovenia, 12 June 2022

On the last day of the Festival of the New European Bauhaus, the InnoRenew CoE celebrated the week-long event's festivities in Izola with a Wood4Bauhaus event, connecting science with art (see the event programme).



Reflecting on the PAS event in Rome, the key message was

that the climate crisis affects everyone in the world, and that the decisions and actions taken in the Global North must take into account the needs of the Global South, which bears the biggest burden of climate change today. A decisive lever to solve the crisis will be education about sustainable materials, including wood, to lead the global transformation of the built environment.



"For me it was a big pleasure to be sitting at the conference in Vatican, listening to several speeches and in all of them the word wood was used. Five years ago, we could only dream about this, and now the whole word is talking about it. The New European Bauhaus is focusing strongly on the built environment, and on connecting all stakeholders from around the word and together discuss the needed changes for lowering the harmful emissions."

Prof Andreja Kutnar, Director of InnoRenew CoE



"We created the Wood4Bauhaus Alliance as a joint channel for dissemination to demonstrate the real solutions and innovations already existing in our sector and to communicate with everyone interested about the positive impacts that wood and engineered wood products do have on the environment."

Uwe Kies, Secretary General of InnovaWood



"When New European Bauhaus was presented, we saw the opportunity for the wood sector, and with the right circular approach, we can improve the built environment and turn it into a carbon sink. To complete the circularity in the bioeconomy, EPF is actively supporting the development of technologies to enable the recycling of fibreboard waste in the EU Horizon Europe project EcoReFibre."

Kris Wijnendaele, Member of the Managing Board, European Panel Federation



















Demonstrations projects will also play a major role to make the benefits and advantages of engineered wood products in buildings more visible and accessible to architects, planners and companies in the construction sector. In the NEB side event in Izola, three demonstration projects were presented, which have been developed with the support of European research funding:

- The InnoRenew CoE building in Izola is the largest wooden building in Slovenia. Its design and the construction process were presented by Iztok Šušteršič, Research group leader at InnoRenew CoE. Find a presentation here: https://zenodo.org/record/6656936
- The *Basajaun demo building* in New Aquitaine, France, is a residential building for teachers as part of a larger public school construction project. It integrates several innovative wood-based materials and construction systems. Find out more here: basajaun-horizon.eu
- The *EcoReFibre* project demonstrates upscaling of waste recovery and recycling solutions in the wood-based panel industry, which also includes novel products for the building sector. See linkedin.com/company/ecorefibre

Impressions from the NEB side event in Slovenia

Watch the short clip about the event at InnoRenew CoE

























Presentation of the Wood4Bauhaus Alliance and the demonstration projects InnoRenew building, Basajaun and EcoReFibre. Picture credits: InnoRenew CoE.

In the second part of the NEB event, the participants could experience the demonstration of scientific equipment to measure the acoustic behaviour of wooden buildings as well as musical instruments made from wood.

- Dr. Rok Prislan, acoustics laboratory leader, presented several interesting experiments involving music and acoustics with wood materials.
- Furthermore, two special wooden instruments were presented: first, a wooden organ, created by the musician and student Matic Jančar and played by Aarne Niemelä of InnoRenew CoE, and second, a wooden wind harp, recovering traditional knowledge by creator Primož Oberžan.



























Acoustic experiments and musical interventions at the InnoRenew building. Picture credits: InnoRenew CoE.

Key documents and further information

- PAS conference programme booklet
- President Ursula von der Leyen's full speech (europa.eu)
- Prof Andreja Kutnar's PAS presentation
- PAS conference recording on YouTube
- NEB Festival side event at InnoRenew CoE (short video clip)

Follow Wood4Bauhaus on LinkedIn and Twitter!

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24 June 2022



















Background information

The European Commission's New European Bauhaus calls for a creative, interdisciplinary, novel movement embedded in society to imagine a **sustainable** future together and to engage on a transformative path towards **affordable** and **beautiful** living spaces in urban and rural environments. A key step is the transformation of the building sector into a circular model that can also counteract the escalating climate crisis. This transformation requires prioritised research in the use of organic materials in buildings.

The Wood4Bauhaus Alliance's main objective is to shape a better and sustainable future with beautiful, healthy and inclusive living, working, and learning spaces as part of a sustainable, low carbon-built environment. Our platform shall foster an open, long-term dialogue with all interested stakeholders and help share good practices related to the Circular Economy and Green Buildings. Our goal is to inspire as many actors as possible to co-create and develop contributions to the New European Bauhaus from European to regional and local level, all in the common interest to advance and exploit as much as possible nature-based materials, innovative building systems and smart solutions to mitigate climate harm and benefit European citizens. The Alliance will therefore:

- Encourage research and innovation for novel, innovative uses of wood in the built environment,
- Foster new collaborations and co-creation between different stakeholders across disciplines, sectors, and society, and
- Facilitate knowledge sharing and skills development towards future generations.

The Alliance behind the publication of this report comprises the following partners:

InnovaWood is the European network for wood science, research, innovation and education with 60+ member organisations in 28 countries, including RTOs, universities, VET centres and cluster organisations. The European Panel Federation (EPF) represents 100,000 direct jobs in wood-based panel manufacturing in 32 countries. The European Federation of Building and Woodworkers (EFBWW) is the European Trade Union Federation grouping 76 national free trade unions from 34 countries with members in the building, building materials, woodworking, forestry and allied industries and trades. InnoRenew CoE is a new research centre in Slovenia focused on sustainable construction with renewable materials. Bauhaus der Erde gGmbH is a non-profit think-tank with the objective to transform the built environment so that humans may live in harmony with the Earth's natural systems by reinventing the original Bauhaus concept to meet this pivotal historic challenge.

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