The SBE21 Heritage Round Table: a discussion about the role of historic buildings in new European policies

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In the framework of the international conference SBE21 Sustainable Built Heritage, a round table was organised to discuss the role of historic buildings in the light of the new European policies recently launched. The European Commission highlighted in a communication related to the European Green Deal that the current renovation rate will need to at least double in order to achieve the EU’s energy efficiency and climate objectives. In order to address the enormous energy and resource consumption in the building sector, the Renovation Wave was also launched. When Ursula van der Leyen explained the idea of a New European Bauhaus (NEB), she clearly pointed out the need for a climate-neutral building sector not only as an environmental or economic project, but as a new cultural project for Europe. It is therefore all the more surprising that in all these initiatives the built cultural heritage has not been given any special attention. Reason enough to discuss possible strategies for anchoring the architectural heritage in the EU climate initiatives with the invited panellists of the SBE21 Heritage Round Table.

All of them know the current policy making in the framework of the Green Deal from a different perspective – from EU-Level to the local implementation, from research to practice. The invitation to the round table was accepted by:
- Erminia Sciacchitano, Officer in the Minister’s Cabinet of the Italian Minister of Cultural Heritage, Activities and Tourism and Chief Scientific Advisor for the European Year of Cultural Heritage 2018
- Roswitha Kaiser, head of the Directorate General for Cultural Heritage in Rheinland-Pfalz Germany
- Johanna Leissner, scientific representative of Fraunhofer-Gesellschaft at the European Union in Brussels and currently chairing the EU OMC Group Strengthening Cultural Heritage Resilience for Climate Change
- Jacqui Donnelly, senior Architect in the Built Heritage Policy section of Ireland’s Department of Housing, Local Government and Heritage.
- Lisanne Havinga, Assistant Professor at the Building Performance group at Eindhoven University of Technology in the Netherlands

1. Decarbonisation of the building stock

The first question addressed to the panellists was intended to show the different perspectives on what decarbonisation of the building stock means. The European policy within the Green Deal gives priority to the energy efficiency of buildings. While the reduction of buildings’ energy demand is supported by all participants, the priority should, however, be the carbon neutrality of the building stock. Especially in the heritage community, the issue of environmental impact is thoroughly discussed, as the preservation and refurbishment of historic buildings is seen as being of great benefit compared to demolition and new construction. A holistic approach is needed to take into account not only the operational phase of the buildings, although the parameters for such considerations have not been
precisely defined yet. In this respect, Sciacchitano, Leissner and Donelly pointed out the lack of research. More evidence-based data is urgently needed to better assess the climate neutrality of renovations.

Havinga briefly reported on a Dutch research project that deals with the climate neutrality of renovations. The example of a photovoltaic (PV) installation for single buildings was used to demonstrate the difference between carbon neutrality and zero energy in building operation. While PV produces more electricity in summer, the energy demand for the heating system is increased in winter, what would result over a whole year in zero energy. Furthermore, using the post-war district in the study, Havinga explained that according to her calculations new constructions would only be more sustainable than the renovation in approximately 60 years and only if taking into account today’s energy use. Considering that the energy production and distribution is becoming more carbon friendly, new constructions will not pay off in terms of carbon neutrality in the near future. Here she even goes one step further in stating, that also a less invasive renovation can win out in comparison to deep renovation packages in terms of the carbon optimal solution. And by talking about the enormous fine dust pollution during demolition work and the impact on the air quality in urban environment, Leissner brought up another argument in favour of refurbishment of existing buildings, which has not been discussed sufficiently before.

2. From building to urban level
The general consensus among the panellists was that the problem of a climate-neutral building stock can only be solved if broadening the view from the individual building to the urban level. This is all the more relevant if at the same time the historical values of the built environment are also to be preserved. It will not be possible to renovate every building to a zero-energy standard. Kaiser gave the example of the Town Hall in Mainz, a listed building from the 1970s by the architects Arne Jacobsen and Otto Weitling. For this significant building there are no technical solutions available to renovate it towards zero energy. In order not to subject the heritage values to inappropriate renovations, she sees potential in compensating the higher energy demand of single buildings and to obtain a carbon neutrality on a district level. To be able to assess the complex situation, she highlighted the existence of energy consultants in Germany specially trained with a reference to the issue.

However, the first step should always be to optimise the building side, as Donelly emphasised. She observes that a lot of potential remains unused and many retrofit measures that would be possible even while preserving the sensitive historic structures are not undertaken. Niels Larson, one of the Organisers of the SBE Conference Series, also pointed out during his closing speech that these adaptation of existing buildings as a “heritage idea” is very much supported from the more general sustainable built environment movement.

Havinga also sees the municipalities in particular as having a responsibility here in terms of raising awareness of how renovation can have a negative impact on the characteristics of the building. Two points were important for her to be emphasised. Renovation strategies should not have the focus purely on reducing the energy demand of the building but also on other environmental impacts such as materials. Likewise, projects should not only be tackled for individual buildings, but also at the district level. After all, the aim is to replace fossil energies. If this is done by means of a local network, it entails different requirements for the renovation measures to result in a zero-energy building stock. The complex issues must also be made accessible to the building owners connected with specific retrofit advice but also making them aware of the building value.

From Leissner’s point of view, this is precisely the task since people living in the pre- and post-war environments often don’t consider their houses worth of preserving. The trend, especially in rural areas, is still towards newly built homes while buildings built between 1900 and 1940 are being abandoned. Thus, Leissner sees the municipalities as having a duty, to encourage owners to renovate the buildings and with that keep the character of the village, district and city.

3. Target of Investments
Targeted investments are necessary to steer the renovation of the building stock in the right direction. Everyone agreed that the reduction of CO₂ for the use phase of the building must not be the sole criterion
for the support of renovation measures. Sciaccitano explained that in recent years there have been large investments made in cultural heritage, for example through the ERDF fund. However, the panelists demanded better quality management for the funding programs. In future, aspects such as maintenance management or risk assessment should be given more recognition. In connection with public funding for the renovation of historic buildings, also Kaiser believes that the incentives are not yet properly in place. For example, individual manufacturing on site, which is more resource- and energy-efficient than the use of standardised imported products, is not promoted accordingly.

In the Netherlands, the corresponding funds are not linked to the persons/owner, but to the building. Having explained, that many private owners are hesitating to implement energy-saving measures due to the long payback periods, even with the state programmes. With the Dutch system the credits remain with the subsidisers/banks, meanwhile the tenants continue to pay their normal electricity bills.

Here, also the question was discussed how to prevent people from doing the wrong things by targeted funding. Leissner sees the absolute necessity of informing building owners early on about the possibilities of renovation, even before they make the first plans. The main part of the historic building stock is in private hands. If the building is not legally protected, there is no regulation that prevent the private owners for examples from exchanging old windows instead of repairing or to implement external insulation without thinking about alternatives. For Leisner the question is how we can ensure that these building owners get the right advise to ensure that the renovation wave will really be beneficial in preserving the characteristic villages and cities.

In this context, attention was given not only to the protected buildings, but to the entire historic building stock. The participants agreed that the protection of younger heritage, which is particularly difficult to deal with, must be a priority. Kaiser drew attention to the lack of technical solutions for this group of buildings in particular. Both funding programmes and advisory services must be more effective for these buildings that are often not listed. Best practice examples are therefore welcome for mediation.

When Donnelly demands that the historic buildings need to be mainstreamed in the Green Deal and in the Renovation Wave, she also has the owners and the occupants in mind, as they should not be denied access to appropriate funding. All building owners should be given the opportunity to make energy improvements, whether their building is protected or unprotected. A good tool to support in this direction should be the guidelines that are currently being developed in Ireland. Donnelly expressed once more her concerns about the preservation of cultural significance when adapting historic buildings to the requirements of Energy Performance of Buildings Directive, especially in the case of not listed buildings that are not protected by legislation but shape our cities and villages.

4. Need for further research

Sciaccitano underlined the need for heritage specific research because decision-makers in Green Deal initiatives need well-prepared information for shaping not only the funding strategies but all the related policies also in terms of cultural heritage. There is an urgent need for more data to convince the policy makers. Even in Italy, with this large historic building stock, there are no figures and thus no reliable information available. Her claim was supported from Leisner, who underlines also the challenge to define these key figures out of research. These data, says Leisner, are necessary for bringing the historic building issue in the recovery and resilience plans on a member states level. Finally, Sciaccitano invited all the audience to share available data on European level, to know e.g. the share of historic buildings compared to the whole building stock and to have better information about building typologies and their specifications. Donnelly also agrees from an Irish perspective. A quantitative assessment of the existing building stock and a possible contribution to CO₂ mitigation is required and will be a much stronger argument for bringing the issue of historic buildings into the national policies. In Ireland, this research has already been initiated.

However, the need for research is not limited to quantitative analyses. As Leissner points out, in Germany there is practically no research looking at how to adapt our cultural heritage to climate change and become carbon neutral. Therefore another field of research is the development of technical solutions and planning tools. According to Leissner, a number of research projects were already performed in this direction on European level, but she sees still deficits in the dissemination of this knowledge. In this context, also Sciaccitano highlights the lack of research results transfer to practice so that new
developed solutions are available on the market. Often, a decision is made for a certain solution because of availability and economic reasons. Again, she calls for more Best Practices examples which can help in the dissemination.

5. New European Bauhaus: Chance or risk for cultural heritage?
At the end of the lively exchange of ideas, the question was raised whether the New European Bauhaus, and with it the proclaimed Renovation Wave, is also seen as an opportunity or as a threat for a sustainable and respectful treatment of architectural heritage.

Sciacchitano makes a strong case for mainstreaming interventions on cultural heritage in the Green Chapter of the Recovery and Resilience Facility Plan for Italy and urges this for other countries as well. This will only be possible with continuous awareness raising and providing key information to decision makers. She stresses the importance of adopting a holistic approach and thinking of sustainable development in all its dimensions. Cultural heritage interventions should be not the exception, but an enabling factor for sustainable development.

Also, Donnelly sees the need to place cultural heritage at the heart of all the programs like the New European Bauhaus and the Sustainable Development Goals. Historic buildings are preserved for their cultural heritage values but also as a source of material and their embodied carbon. Therefore it is important that historic buildings are given special consideration by the European Council when setting up the strategies for a Renovation Wave and all other policies.

Leissner referred here to experiences from the EU OMC expert group when reporting that only few countries have mentioned specifically Cultural Heritage in their National Sustainability Strategies. Looking to the upcoming research programs within the framework of the Green Deal or New European Bauhaus, it is still possible to submit project applications with this specific focus on cultural heritage even if it is not always explicitly mentioned in the calls. Leissner's attention is not only focused on the large monuments, but also on the broad range of anonymous historic architecture. Here, it is urgent to find ways of preservation that also guarantee a decarbonisation of the building stock.

For Kaiser, too, the funding options associated with the initiatives of the Green Deal must be made available for the cultural heritage sector. There is an urgent need for best practice case studies but also for programs to train professionals. The preservation of the cultural heritage and all buildings worth preserving provides the framework for our historical identification potential and also means the conservation of important resources, both cultural and material.

Havinga supports this broader scope of cultural heritage that does not only refer to protected monuments. She sees the whole building stock as a built heritage that needs to be considerate of. At the same time, Havinga reminds that about half of all buildings are built before 1970 - with high potential for energy saving. For Havinga, packages of measures should therefore be addressed in all programmes.

In concluding remarks, Alexandra Troi, one of the conference chairs, emphasised that the ambitious goals of preservation of cultural heritage as well as the decarbonisation of our historic building stock can only be achieved through an interdisciplinary dialogue. In doing so, she drew a connection to Ege Yildrim’s keynote on the first day of the conference, which highlighted the proactive role of the heritage community.

The organisers of the SBE21 Heritage conference were happy that the panellists emphasised the value of the event towards promoting such discussions. The large presence of young scientists in particular shows the interest of this generation in the topic of sustainability and the willingness to contribute to the research in the field.

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