

Workshop

Elaboration of maps for climatic and seismic actions for structural design in the Balkan region

27 and 28 October, 2015
Zagreb, Croatia

The Workshop on Elaboration of maps for climatic and seismic actions for structural design in the Balkan region was held on 27-28 October in Zagreb, Croatia. It was organised by Directorate General Joint Research Centre (DG JRC) of the European Commission with the support of the JRC Enlargement and Integration Action and the European Committee for Standardization, Technical Committee 250 (CEN/TC250). The workshop was hosted by the University of Zagreb and by the Croatian Standards Institute.

It builds upon the activities carried out at the two previous workshops:

1. Adoption of the Eurocodes in the Balkan region, held on 5-6 December 2013 in Milan and the JRC, Ispra, Italy
(http://eurocodes.jrc.ec.europa.eu/showpage.php?id=2013_12_WS_Balkan)
2. Building capacities for elaboration of Nationally Defined Parameters (NDPs) and National Annexes (NAs) of the Eurocodes in the Balkan Region held on 4-5 November 2014 in Skopje, the former Yugoslav Republic of Macedonia
(http://eurocodes.jrc.ec.europa.eu/showpage.php?id=2014_11_WS_Balkan)

The Workshop focused on strengthening the capacities of stakeholders from non-European Union (EU) countries in the Balkan region for the elaboration of climatic and seismic actions maps for structural design with the Eurocodes and for facilitating regional cooperation and networking among non-EU countries in the Balkan region toward successful implementation of the Eurocodes. Twenty-four representatives of the National Standardization Bodies, Academia and Chambers of Engineers from non-EU countries in the Balkan region and ten representatives from Croatia as local host participated, as well as twelve invited experts from CEN/TC250, EU Member States, Seismic Hazard Harmonization in Europe (SHARE) and NATO Science for Peace (SfP) projects. The JRC participated with four staff from the European Laboratory for Structural Assessment. The total number of participants was 50.

After two-days of presentations and discussions the main results can be summarised as follows:

1. State of progress
 - National Standardisation Institutions from most of the non - EU countries from the Balkan region have adopted the Eurocodes as standards, in parallel with existing national codes that are part of National regulation. Eurocodes can be used as long as National regulations are respected.
 - There is good progress on Eurocodes translations since the first workshop held in Milan 2013. The former Yugoslav Republic of Macedonia and Moldova

completed translation and the process is almost finished in Albania (95% translated).

- Most of the non-EU countries in the Balkan region (except Turkey) have started with the definition of NDPs. The former Yugoslav Republic of Macedonia is most advanced, with all NDPs already defined (excluding the maps for climatic and seismic actions), followed by Albania and Serbia with around 60% of NDPs already defined. The percentage of acceptance of the recommended values (for already defined NDPs) is more than 80%. However, in most of the countries there is a lack of relevant institutional support for this process.
- A very good example which summarises the effect of the JRC support in the process of adoption of the Eurocodes in non-EU countries from the Balkan region is the case of Bosnia and Herzegovina. While having almost no progress before the first JRC workshop, now Bosnia and Herzegovina is actively working on the translation of the standards (36% already translated) and on the National Annexes in cooperation with the Czech Standardization Institute.
- Concerning the elaboration of maps for climatic and seismic actions, Albania and Serbia are the most advanced with all maps elaborated. It was also observed that in most of the countries the seismic hazard maps are already elaborated, except in Bosnia and Herzegovina and the former Yugoslav Republic of Macedonia, in the latter being planned for the end of 2015. Compared with the seismic hazard maps, the elaboration of maps for climatic actions is lagging behind mainly due to insufficient data.
- The process of publication of NAs to the EN parts which are relevant to the objectives of the Workshop is in its initial phase in all countries, except in the former Yugoslav Republic of Macedonia where all NAs are already published (the maps will be included by the end of 2015). Montenegro is in an advanced stage also, with already elaborated NA to EN1998-1 and NAs to EN1991-1-3, EN1991-1-4 and EN1991-1-5 foreseen for the end of 2015.
- In the first half of 2016 the JRC will publish a report on basic principles and national experience in the elaboration of maps for climatic and seismic actions consisting of written material prepared by the experts invited to the Workshop.

2. Views on the way ahead

- There is a need for creating a regional platform to boost regional collaboration for cross-border convergence of NDPs, in particular for harmonisation of seismic hazard, snow, wind and thermal actions maps.
- It is proposed to launch bilateral (twinning) projects for building national capacities and for the transfer of knowledge for the elaboration on maps for climatic and seismic actions (positive example – collaboration between Bosnia and Herzegovina and Czech Standardization Institute).

- It is recommended to bring in the experience from different projects (i.e. Global Seismic Hazard Assessment Program (GSHAP), Harmonization of Seismic Hazard Maps for the Western Balkan Countries (BSHAP), SHARE in the field of seismic hazard) and to use the methodologies and tools developed within them in synergy with national expertise, in order to facilitate the process of elaboration of climatic and seismic hazard maps.
- It is recommended to intensify communication between experts on elaboration of maps for climatic and seismic actions, the National Authorities responsible for enforcement of standards and regulations, and the engineering community, in order to make all involved stakeholders aware of the implications of these actions on design issues.
- Most countries suggested that regional cooperation should be promoted for elaboration of maps for climatic and seismic actions and to facilitate further the implementation of the Eurocodes, by setting up itinerant regional conferences/meetings/seminars/workshops/training hosted by each of the countries in the Balkan region. The National Standardisation Body of Moldova kindly offered to be next host of such event(s).
- As a result of the brainstorming, different issues were addressed as possible topics of the next event being: (1) The importance of the implementation of the Eurocodes for the extension of the EU economic area; (2) The levels of reliability achieved with the choice of the NDPs to the Eurocodes; (3) Implications of climate change on the elaboration of maps for climatic actions. There was joint understanding that the topic of the next event should have a much broader prospective.
- It is recommended to intensify the communication between National Standardisation Bodies and national stakeholders in the CEN Member countries for nomination of relevant experts in the CEN/TC250 working groups, in order to receive on time information and to have impact on the decisions regarding the second generation of the Eurocodes.