Eurocodes and their National Annexes in Montenegro

- **MSc Miodrag Perović, Director**, Institute for Standardization of Montenegro
- **Perica Turković, Deputy Director**, Institute for Standardization of Montenegro
- **Ljiljana Šoškić, Technical Secretary of ISME/TK 002**, Institute for Standardization of Montenegro
- **Prof. dr Duško Lučić, EC 3 and EC 9 Groups Leader**, Faculty of Civil Engineering
- **Doc. dr Željka Radovanović, EC 1 and EC 6 Groups Leader**, Chamber of Engineers
- **Prof. dr Zvonko Tomanović, EC 7 Group Leader**, Faculty of Civil Engineering
- **Doc. dr Biljana Šćepanović, EC 5 Group Leader**, Faculty of Civil Engineering
- **Doc. dr Srđa Aleksić, EC 4 Group Leader**, Faculty of Civil Engineering
Basic data on Montenegro

- Became independent in 2006
- State territory ~ 14,000 km²
- Population ~ 620,000
Responsible institutions

- **Ministry of Sustainable Development and Tourism** - responsible for regulations in sectors: spatial development, construction and urban planning;

- **Institute for Standardization of Montenegro (ISME)** - adoption of standards and related documents;

- **Institute of Hydro-meteorology and Seismology** (maps: wind, snow, isotherms and seismic hazards);

- **Geological Survey of Montenegro** - NDPs for EN 1997;

- **Faculty of Civil Engineering** – general education

- **Chamber of Engineers** – practical education of engineers
Existing relevant national regulations

- Law on spatial development and constructions (2008/2014);
- Some regulations inherited from ex Yugoslavia (SFRY, FRY and S&M), based on JUS standards;
- Law on Construction Products, partly transposed contents of EU regulation no. 305/2011;
- IPA twinning project on Eurocodes (2012-2013);
- Action plans for Eurocodes adoption and implementation (adopted by Government of Montenegro in January 2014)
Action Plan for Eurocodes adoption
approved by Government of Montenegro in January 2014

4-5 November 2014, Skopje
# Action Plan for Eurocodes implementation

approved by Government of Montenegro in January 2014

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**Building Capacities for Elaboration of NDPs and NAs of the Eurocodes in the Balkan Region**

4-5 November 2014, Skopje
Institutions involvement

Institute for Standardization of Montenegro

- April 2007 – Government established National Institute for Standardization (ISME), dealing with standardization issues at national level;

- For the purpose of Directive on construction products transposition (89/106/EEC) i.e. Regulation no.305/2011 into national legislation, ISME adopted harmonized standards following concerned regulation;

- In July 2011, ISME established Technical Committee ISME/TK 002: Eurocodes for managing adoption and implementation processes for Eurocodes and defining National Annexes

- In September 2012 Technical Committee established 8 working groups for all Eurocodes
Technical Committee ISME/TK 002: Eurocodes – Groups

EC 0 – EN 1990
EC 1 – EN 1991, EN 1996
EC 2 – EN 1992
EC 3 – EN 1993, EN 1999
EC 4 – EN 1994
EC 5 – EN 1995
EC 6 – EN 1998
EC 7 – EN 1997
ISME/TK 002: Eurocodes - activities

- EN 1990 - published as MEST EN 1990:2013 in Montenegrin
- Eurocodes parts EN 1991-1, EN 1991-3 and EN 1991-5, as well as their National Annexes, are prepared by Group for EC 1 and provided to ISME that is bound to realize technical text editing. Following it, TC meetings members shall discuss it and make the decision on its processing to Public Enquiry
• Text of the standard EN 1998-1 was translated into Montenegrin, technically processed, being in rnMEST EN 1998-1 stage

• TC made the decision on putting rnMEST EN 1998-1 to Public Enquiry, that is going to be carried out in recent time

• rnMEST EN 1998-1/NA – currently in preparatory stage and in the process of NDPs values determining

• Parameters defining critical periods on elastic spectral response diagram have not been yet defined.... institutions should jointly process relevant data using appropriate methodologies

• We expect the work on determining the values of these parameters to be finished by the end of the current year
EN1998-1 NDPs: responsible Institute for Hydro-meteorology and Seismology

Seismic hazard data
Spectral response data
Strong motion data base
Temperature data
Soil type characterization

Snow loads data
Wind loads data
Max & min shade air
Faculty of Civil Engineering related activities

- ECTS Catalogue adopted with new Eurocodes contents (implementation has started)


- Every two years Faculty organize Symposiums on constructions - From Theory to Practice, partly devoted to Eurocodes implementation

- During several last years, in more than 40 cases PhD and Master theses as well as final diploma works, were prepared with the subjects on Eurocodes.
Several seminars on Eurocodes organized by Montenegrin Chamber of engineers and Civil Engineering Faculty

- First informative seminar on Eurocodes implementation in Montenegro, 2009
- Round table EU standards: EC 0 and EC 1, 2010
- Several conferences on Eurocodes topics, 2010-2012
- Round table on Construction products and European regulations, 2013,
- Second informative seminar on Eurocodes implementation, 2013, etc.

Building capacities for elaboration of NDPs and NAs of the Eurocodes in the Balkan region
4-5 November 2014, Skopje
Seminars held in October 2013 covered the following topics

- Overview and comparison of Eurocodes and existing National rules
- Explanation of Eurocode EN 1990
- EN 1991-1-1: Densities, self-weight, imposed loads for buildings
- EN 1991-1-3: Snow loads
- EN 1991-1-4: Wind action
- EN 1991-1-5: Thermal action
- EN 1998: Earthquakes - basic rules
- EN 1998: Seismic actions and rules for buildings
- EN 1992: Design of concrete structures
- EN 1993: Design of steel structures
- EN 1996: Design of masonry structures
Expectations, specific problems and needs

• Based on Action plan we expect adoption and implementation of Eurocodes to be finished until the end of 2017, including period of coexistence with old regulations,

• As promised, we expect the Government of Montenegro, as the interested party, provide financial support for the implementation of the process of adoption and implementation of Eurocodes in Montenegro,

• Small industrial capacities and therefore less involvement of business entities,

• Relatively poor existing research databases - necessary for preparation of NDPs in National annexes – rise requirement for more research activities

• We underlay the need for better regional cooperation: a regional center for Eurocodes would be useful.
Thanks for your patience!