

Webinar 26-27 November 2020, Thessaloniki, Greece

**From the Myths of Hercules to the reality of
climate change**

***Rainfall intensity in urban conditions and
climate change***



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IHP UNESCO National Committee for Serbia &
IRTCUD C2C under auspices of UNESCO



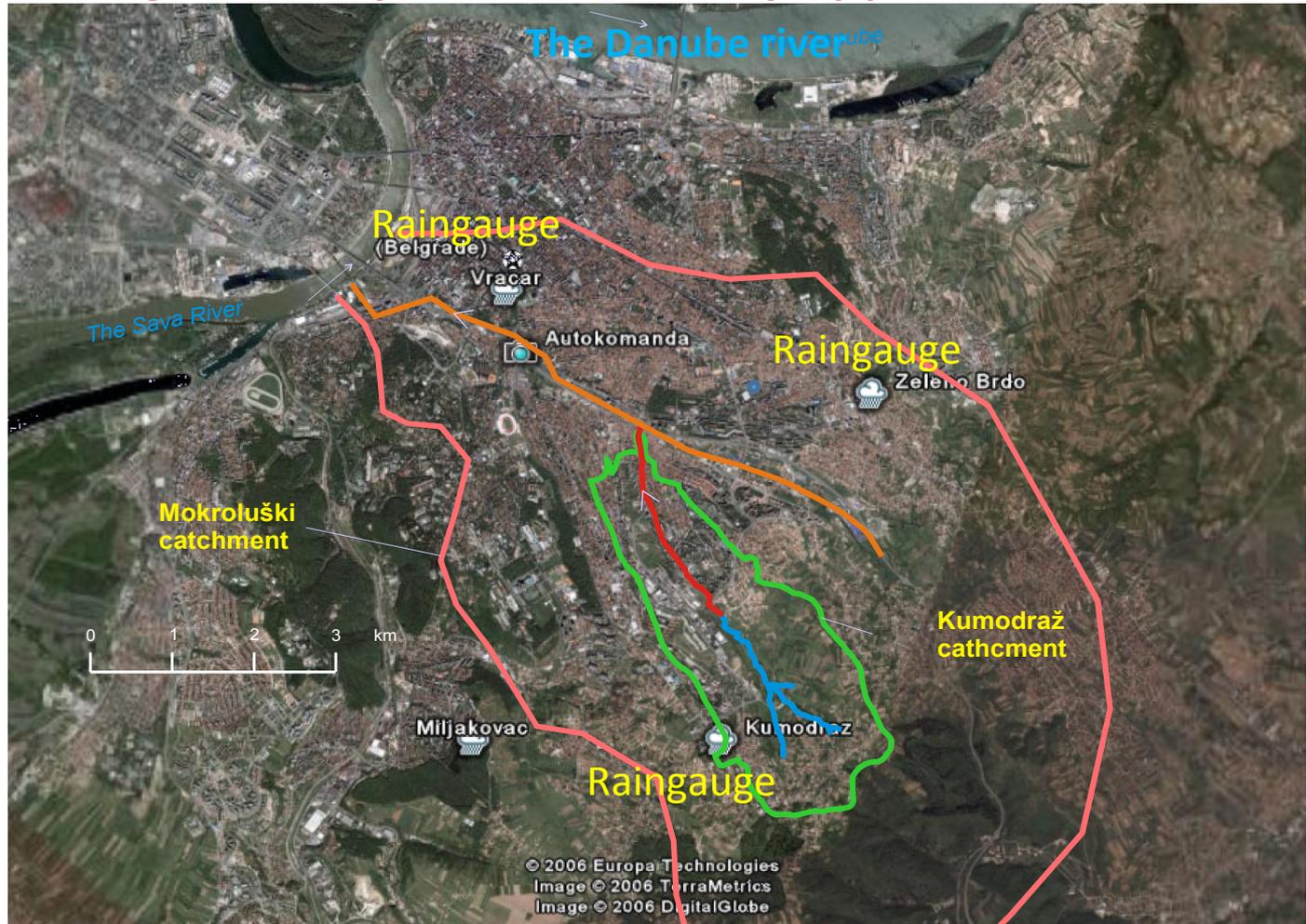
Rainfall intensity is a major driving force for inducing urban floods.

The most influenced urban zones are brook or streams narrow valleys “developed” in decades , even centuries, poorly planned !

Intensity – duration curves of various probability developed in last 100 years in Belgrade, have been developed for major projects !

Recorded rainfall intensities in recent decades are enormous, as could be seen at the next slides in the DDF/IDF graphs for Belgrade ...

...in Belgrade major watershed of app 30 km²

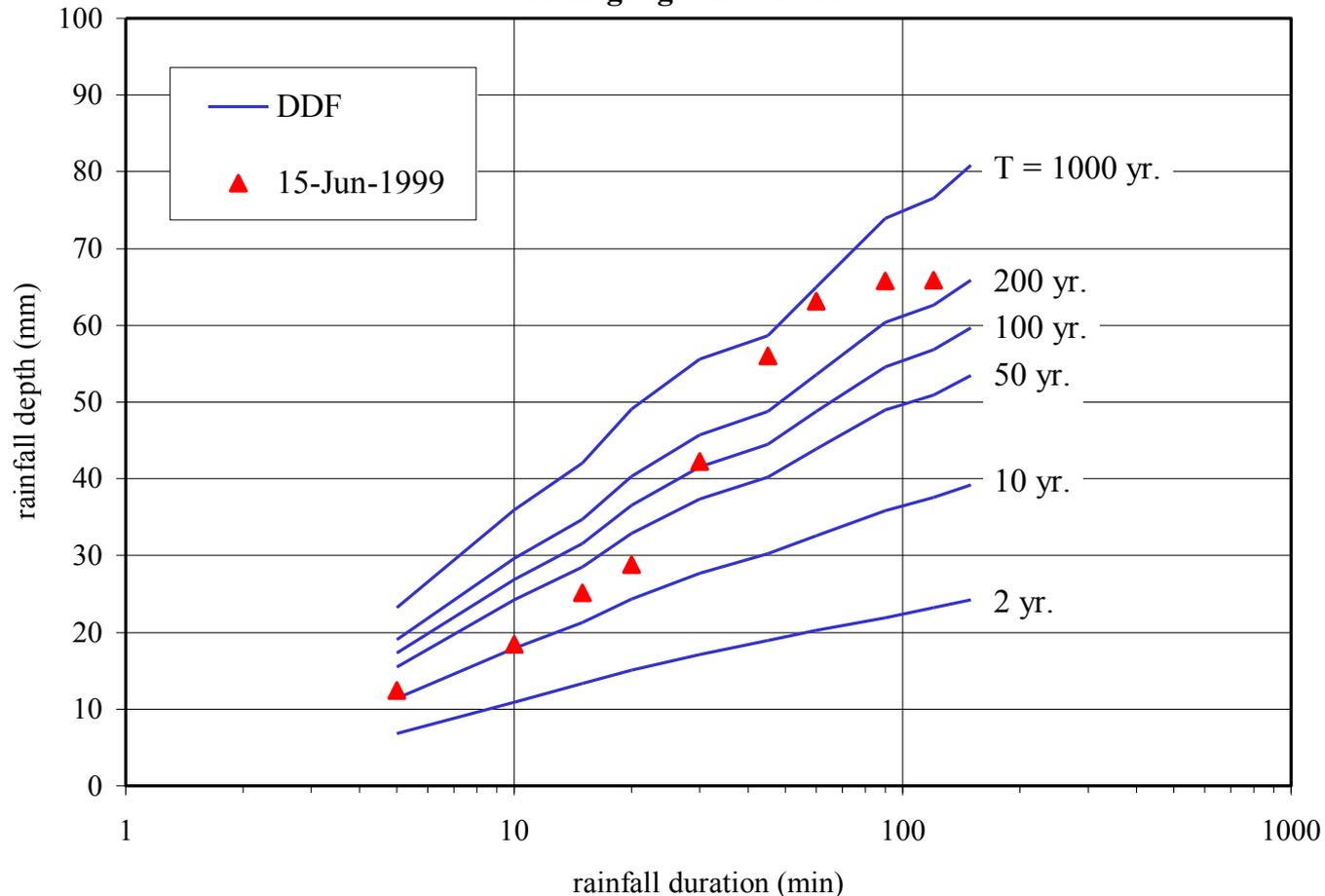


...could be noticed at the DDF curves and **real rainfall events**



comparisons for a series of rainfall duration up to 2 hours

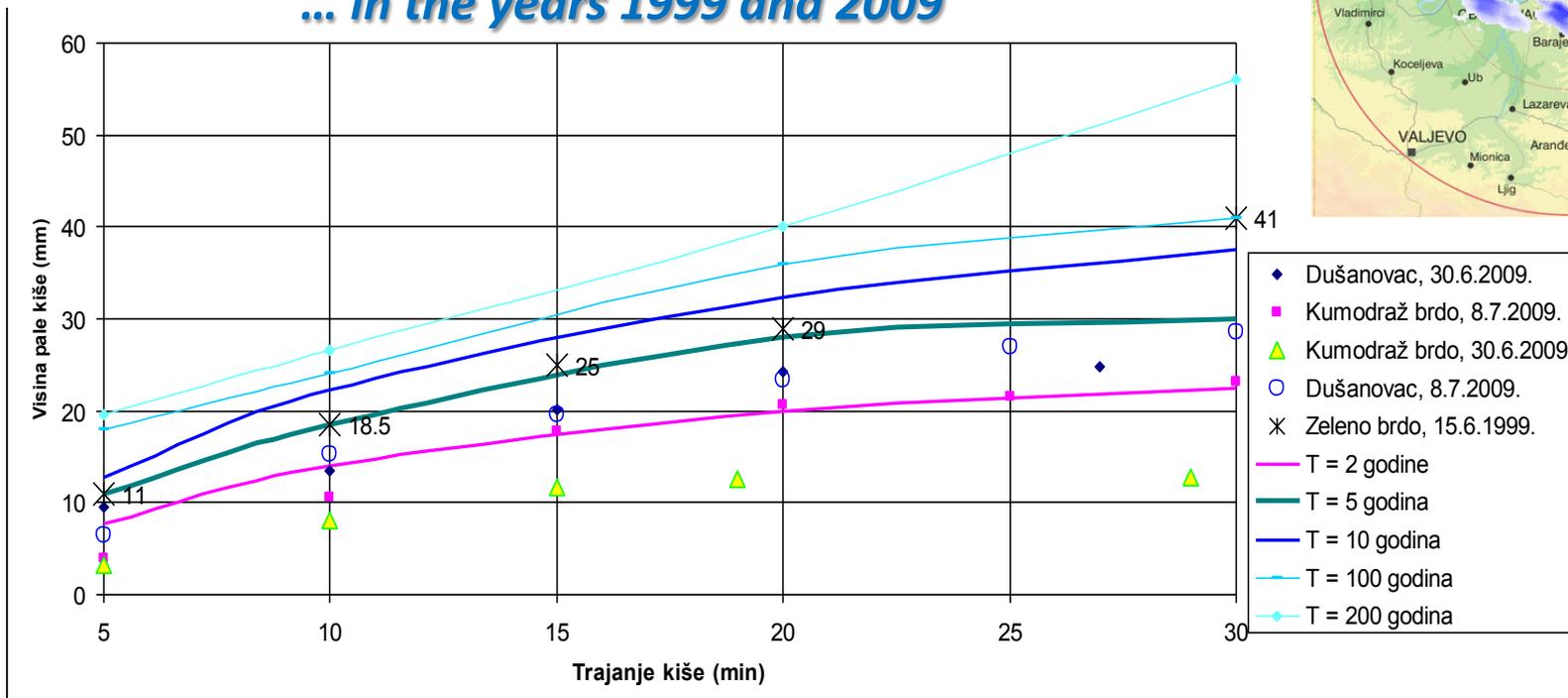
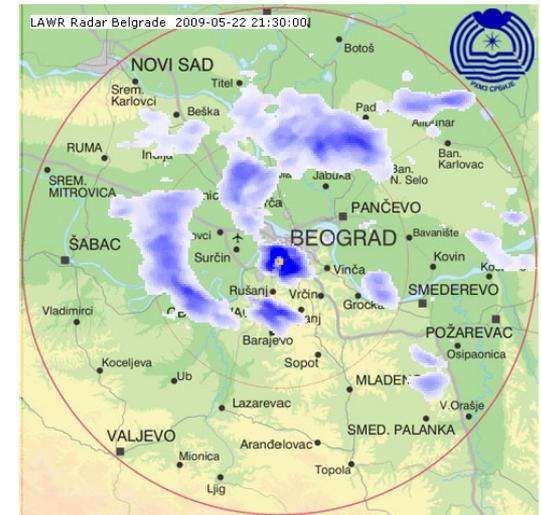
Rain gauge: Zeleno Brdo

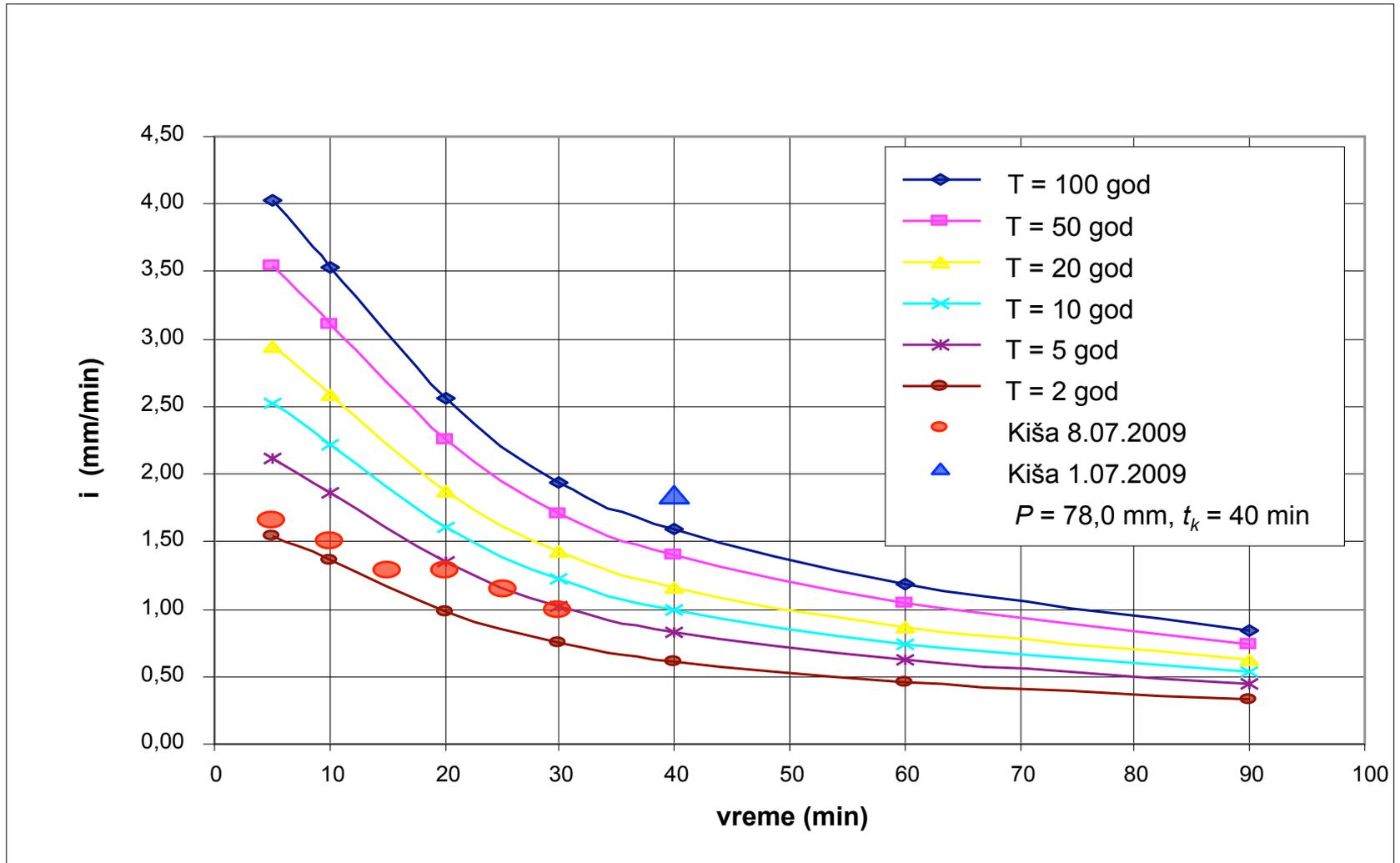


... and the radar image over Belgrade

...and a series of significant rainfall events

... in the years 1999 and 2009







... and three navigation channels instead two highway and service lines, on June 8, 2020!

AXIS 1

Mobilizing International cooperation to Improve knowledge and innovation to address water security challenges

WATER-RELATED DISASTERS AND HYDROLOGICAL CHANGE



GROUNDWATER IN A CHANGING ENVIRONMENT



ADDRESSING WATER SCARCITY AND WATER QUALITY



WATER AND HUMAN SETTLEMENTS OF THE FUTURE



ECOHYDROLOGY ENGINEERING HARMONY FOR A SUSTAINABLE WORLD



EDUCATION, KEY TO WATER SECURITY



WATER SECURITY, ADDRESSING LOCAL, REGIONAL AND GLOBAL CHALLENGES

AXIS 3

Developing institutional and human capacities for water security and sustainability

AXIS 2

Strengthening the Science-Policy interface to reach water security at local, national, regional, and global levels

IHP UNESCO Phases VIII

- Theme 4: Water and human settlements of the future.
- *Theme 6: Water education, key for water security , based on NETWORKING AND SUSTAINABILITY!!*
- *More science, research and NEW standards for design, maintenance and management !*

Just a reminder...

4.1 - Game changing approaches and technologies

4.2 - System wide changes for integrated management approaches

4.3 - Institution and leadership for beneficiation and integration

4.4 - Opportunities in emerging cities in developing countries

4.5 - Integrated development in urban / rural human settlement and watersheds !

Thank you for attention !

