

Why to consider climate change during elaboration of plans, programmes and projects

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Who think this is normal?

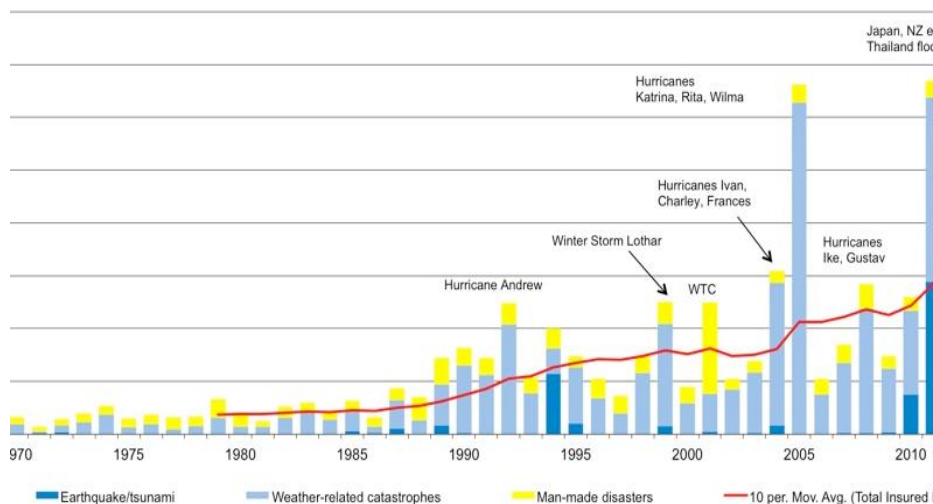


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Swiss RE (Sigma reporting)



Expected changes of climate in Croatia

- temperatures are already increasing, precipitation appears to be decreasing, and these trends will become more extreme
- Summers expected to get 3-3.5° warmer throughout Croatia in 2040-2070 – summer period will be longer
- Precipitation in Adriatic coast expected to decline by 10-20% (some scenarios 30%)
- sea level may rise 10-90 cm by 2100 - Neretva Delta, the Krka River, Vransko Lake particularly vulnerable



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Basic climate change phenomena in the Adriatic

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- Droughts (including decreased availability of recharge through rainfall and increased evapotranspiration) – forest fires, water supply
- Heat waves (including impact on human health, damage to crops, etc.) – urban systems, health system
- Sea level rise - coastal flooding, saline intrusion, erosion
- Storms and high wind (damage to infrastructure, coastal erosion, saline intrusion)



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Addition climate change events in mainland Croatia

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- Flood regimes and extreme rainfall events (flash floods)
- Storms and high wind (including damage to infrastructure, buildings, crops and forests)
- Groundwater drop
- Landslides
- Frost spells
- impacts on ecosystems – changing water temperatures and volumes, etc...



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Management examples from the region

- Water supply on island – CC will prolong warm season, expand tourism opportunities, increase demand for water, reduced supply
- Railway corridor – CC will worsen floods (heights, areas, velocity), there may be more flashfloods, increased slope instability, damage of traction by ice spells, etc.
- Strong winds may affect use of airports or marinas in windy locations



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Why to worry?

- Gradual changes – allow for adaptation in short-term investments – concern for long-term investments (water system)
- Extreme events: more severe and frequent (need to be considered)



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Key questions to be asked about proposed developments

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- Can they be significantly affected by climate change?
- Can they reduce resilience of ecosystem or society to any disturbances caused by the climate change?
- Can they affect the causes of climate change (GHG emissions)?



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Considering climate change in development planning

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- CC concerns should gradually become part of feasibility studies.
- SEA and EIA are currently the only formalized tool to consider how the proposed PPPs will interact with the climate and vice versa



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Evolving EC guidance

- Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment
- Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment
- DG Clima: Non-paper Guidelines for Project Managers: Making vulnerable investments climate resilient



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