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Session 5. Urban geology and applied geosciences related to city development

EuroGeoSurveys´ Urban Geology Expert Group brings geo-related knowledge to the decision makers

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The Urban Geology Expert Group (UGEG) is a part of the Geological Surveys of Europe (EGS) and specialises in geological disciplines related to urban challenges. The UGEG undertakes collaborative geoscience projects to inform European Union (EU) policy, as well as provide urban geoscience data, information and expertise to national and local authorities throughout Europe. The UGEG has more than 60 participating members across 26 European countries.

Urban subsurface space provides a valuable resource often forgotten in city planning – out of sight, out of mind. However, if we are to deliver sustainable cities (SDG 11), subsurface use must be planned, integrated, and managed as part of the urban planning process. We present three specific areas where the UGEG is embedding geological information in the urban planning and development life-cycle:

- 3D surface-subsurface digital twins: providing relevant and easily accessible geological data-models to the users at sufficient scale, to support planning, development, for resource extraction and to mitigate geological hazards.
- In the context of the geo-environmental setting, UGEG proposes a catchment-based approach for the urban environment to holistically understand the impacts of geology and climate on the anthropogenic pressure. This includes identifying priorities and nature-based solutions, e.g. to mitigate water related natural hazards including drought, flooding, landslides, sinkholes, saltwater intrusion, sea level rise and storm surges, seismic and volcanic hazards, etc. to underpin urban resilience. Moreover, in order to help city-to-city comparison and best practices exchange, and to cluster cities by a geological point of view, the so called “Urban Geo-climate Footprint” is evaluated for several European cities through a tool developed by the expert group members.
- Interdisciplinary collaboration and communication: The UGEG aims to bridge the knowledge gap between subsurface experts and city practitioners (urban planners, architects, and decision-makers) through the generation of mixed-media communication tools such as videos, webinars and fact sheets.

References

[Homepage - EuroGeoSurveys](#)

[Urban Geology - EuroGeoSurveys](#)

[Sub-Urban \(squarespace.com\)](#)