TRIQUETRA's Pathway for Cultural Heritage Policy Adoption

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SUMMARY

Cultural heritage (CH) sites face accelerating pressures from climate change and natural hazards. However, decision-makers often lack evidence-based tools to prioritise protection and investment, especially when they must compare sites with different exposure and value. The TRIQUETRA Horizon Europe project ("Toolbox for assessing and mitigating Climate Change risks and natural hazards threatening cultural heritage") addresses this gap by delivering a Knowledge Base Platform (KBP) with an operational Decision Support System (DSS) that brings together risk quantification and mitigation planning across both terrestrial and underwater CH sites. The KBP aggregates literature and site-specific evidence with WebGIS exploration, ensuring that all stakeholders can access a single, authoritative source of information. At the same time, the DSS integrates (i) a Risk Severity Quantification module that organises qualitative and quantitative indicators into transparent risk profiles and (ii) a Mitigation Measure Selection & Optimisation module that ranks alternative measures using multi-criteria decision analysis and user-defined priorities.

Our work synthesises cross-pilot insights into actionable guidance for authorities and CH managers, demonstrating how the same methodology can be applied to sites with very different environmental, administrative and heritage condition. We translate these findings into policy recommendations at three levels: at EU level, at national and regional level and at site level. For the FIG community, TRIQUETRA illustrates how geospatial practice, such as surveying-grade 3D documentation, inland, coastal and underwater mapping and Earth Observation workflows, can be operationalised in a policy-facing DSS to support climate-resilient planning. The approach is transferable, complements parallel EU efforts and is designed for sustained learning across projects and jurisdictions, reinforcing the role of geospatial professionals in risk-informed heritage management.
