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Abstract

Integration of Ecosystem Services and Green and Blue Infrastructures Concepts in the Land Use Planning Process: The Coimbra Case Study †

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Abstract: The Millennium Ecosystem Assessment (MA) initiated in 2001 aims to assess the impacts of human pressure on ecosystem services (ES) and human well-being. Since then, the ES have been a worldwide concern, namely regarding to biodiversity loss and land use management (MA, 2005). The EU 2010 Biodiversity Baseline Report stated that 65% of habitats of EU importance were in an unfavorable conservation status, mainly due to anthropic activities over time (EEA, 2010). As a consequence, in 2011, the EU adopted the Biodiversity Strategy to 2020, requiring all Member States to actively work towards stopping the loss of biodiversity and ecosystem services by 2020, and to restore ecosystems. ES are particularly relevant in urban areas, where most population is concentrated and expected to reach almost 70% of the total population by 2050 (UN-DESA, 2018). Strategically planned urban Green and Blue Infrastructures (GBI) can be designed and implemented in cities to effectively provide a wide range of ES, relevant to address urban sustainability and resilience to climate change, and thus effectively contribute to stop and revert ES deterioration and loss. However, the integration of ES and GBI concepts into national, regional and local policies and plans, and their effectiveness to implement the EU Biodiversity Strategy, is still a major challenge. This paper aims to analyze the horizontal and vertical integration of the ES and GBI concepts in the Portuguese policies and land use planning, at national, regional and local levels, focusing on the municipality of Coimbra. Among the 19 documents analyzed, most of them are defined at national level (12) and 6 of them are defined at local level. At the regional level, only one single plan is available, although it is still not officially approved and published, despite started being prepared in 1991. This regional situation mirrors the current status of the Portuguese administrative levels, which was triggered by the negative result of the 1998 referendum on the regionalization process. This referendum prevented necessary changes in the administrative divisions, so that current regional divisions do not reflect the economic, demographic and cultural realities of the country, having been emptied of administrative powers. The analysis shows a strong integration of the ES and GBI concepts at the national level, but the vertical coordination shows that plenty of work needs to be done to fully embrace the ES and GBI concepts. This research was performed in the UrbanGaia project, funded through the ERA-net BiodivERsA 3 2015 call under grants BRAIN-be BR/175/A1/URBANGAIA-BE (Belgium); 01LC1616A (Germany); S-BIODIVERSA-17-17-1 (Lithuania), and BIODIVERSA/0008/2015 (Portugal).

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