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Assessing human-induced pressures on coastal areas with publicly available data

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ABSTRACT

The assessment of human-induced pressures on the coastal area is essential to target management plans effectively, and moreover is required by the EU Water Framework Directive. A simple and cost-effective assessment of human-induced pressures on the coastal zone is applied using two methodologies: a qualitative visual assessment which uses satellite images; and a quantitative assessment based on governmental census data. These methods are applied to defined areas (23 areas) of four Italian regions: Liguria, Tuscany, Latium and Sardinia. The results show a high agreement (83%) between these two methods, in which only four of the 23 areas are classified differently. These differences may mainly be ascribed to the qualitative or quantitative properties of the methods, and to the different geographical units adopted. These characteristics however provide complementary information, which suggests that the application of both proposed methods confirms reliability and allows fine-tuning of the assessment. The pressure assessment proposed is simple, time and cost-effective, and repeatable over time and space. It therefore can be applied in different contexts to respond to legislative requirements or to target management plans and remedial actions effectively.

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