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multi-Risk sciEnce for resilienT commUnities undeR a changiNgcimate

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1. Technical references

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Task	T4.2.1 - Identification and mapping of source and scale of processes and sites critically relevant from exposure to chemical/physical/biological stressors, also considering climate change and extreme events, and their compound-occurrence and effects
Lead beneficiary	UNINA, Fabio Terribile, Nada Mzid
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* PU = Public

PP = Restricted to other programme participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

CO = Confidential, only for members of the consortium (including the Commission Services)



Document history

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2. ABSTRACT

Environmental degradation has been recognised as a threat to the European and global ecosystems with direct impacts on climate change adaptation, ecosystem conditions, food-security, and social assistance. A lot of scientific effort has been devoted to the concepts and approaches for the monitoring and assessment of environmental degradation and to the question of how the ecosystem resources could be directed towards sustainable use. In addition, within the broad concept of environmental degradation, there are very different processes ranging from air/water/soil contaminants to loss of ecosystem services.

In this regard, the aim of this deliverable is to analyse sources and scale of source of the most prominent environmental degradation processes.

In order to perform such task, we have proceeded in two steps: (i) a preliminary analysis of environmental degradation factors based on bibliometric analysis and (ii) a synoptic view of the outcoming results analysing sources and scale of land degradation.

For the bibliometric analysis, documents type, subject area, documents sources, high-frequency keywords, and the geographical distribution of publications were analysed. The study focused on a total of 19748 articles published from 2016 to 2023, collected through an automated process from the Scopus database and later analysed using techniques such as bibliometric indicators analysis on R and VOSviewer. To identify the sources of environmental degradation and assess the scale and the extent of their dispersion, diverse monitoring techniques have been discussed, highlighting the necessity of a global high spatio-temporal database derived at marine and land scales. Finally, a synoptic analysis has been produced in view of the RETURN project.