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Dialogue between technique and administration in volcanic risk management; Data issues

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For years now, proliferation of technological tools has been taking hold, albeit with some resistance, in the public sector since, as reflected in the agendas and public policies of EU member states, digitalization is a non-deferrable need, a prerequisite for the implementation of further reforms. This report's purpose is to ascertain whether and how, data in AI can support administrations and stakeholders in coping with unforeseen events, such as earthquakes and volcanic eruptions. Among disaster protection risks, volcanic activity is often considered a foreseeable risk because it is thought that phenomena that presage rising magma to surface can be recognized and measured. These phenomena are called precursors although this is a simplification that does not take into account the complexity and extreme variability of volcanic phenomena and the difficulty in assessing and interpreting them. Precursor phenomena, as indicators of an ongoing process that if properly and adequately studied, analyzed and monitored, can give an idea of the state of volcano activity and its possible evolutions, allowing for the detection of possible anomalies. For this reason, data and processing by AIs can provide support and decrease errors in the calculation of phenomena even if only a quantitative reduction. Data and their processing can provide a reliable index to support prevention activities. Potential issues for the jurist involve ownership of database management, interoperability, errors in the management of the same knowledge. Assessment by AI and data has the advantage of being rapid and devoid of operator discretion. Machine learning, in fact, has a capacity of about 98 percent to correctly attribute a rock of unknown origin. Central to the discussion is to determine the ownership of data and the AI tools deputed to process them, whether to endow public facilities, or outsource this function to the private sector.