



## Geoscientist's views and practices on Geoscience Communication

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### Abstract

Geosciences have great difficulty in establishing themselves in the public space: the field has poor public visibility, deficient medialization, low impact in policymaking and little engagement with the average citizen. Public engagement with geoscience demands from geoscientific community better, more effective and targeted communication strategies.

The main barriers to science communication are common in different research fields and they are widely identified in literature. Studies focused on specific communities like astronomers, nanoscientists, geneticists, climate scientists, biologists and physicists framed science communication with the specificities of each area. Science topics with greater visibility and that attract more public and media interest, such as medicine and health or climate, give scientists more opportunities to engage with the public.

To understand the specific challenges of geoscience communication, we surveyed 179 geoscientists in Portugal, analysing behaviours and practices, as well as their motivations and perceptions. This study provided a snapshot of communication experiences, bringing relevant data about frequency, channels, strategies, contexts and scientific themes.

Results show that it is a relatively active community that recognizes the importance of communication. Despite the perceived confidence about their skills and competences to communicate, geoscientists are still very focused on unidirectional models and in communicating with their peers. Communication strategies are mainly designed and conducted based on empirical experience and considering the public's knowledge deficit. The analysis of perceptions show that geoscientists are motivated, most of them believe that their work is interesting to a non-specialist audience and they don't agree that the complexity of their work can be an obstacle. Results show a clear and understandable gap between geoscientists' practices and science communication research inputs.

The analysis of views and perceptions allow to predict the intentions of communicate geoscience and the factors that drive geoscientists to engage with non-expert audiences. This study is the first stage of this research and the results will support the development of a framework for geoscience communication in order to overcome the constraints and contribute to a more effective communication between scientists and society.

Earth sustainability, as also human life, well-being and safety benefit from geoscience research and geoscientists have to actively contribute to bring these topics for the public and media agendas.

**Key words:** geoscientists; geoscience communication; public engagement with science.

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