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## Exploring the horizon of geosciences through the lens of geoethics

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Geosciences play an indispensable role in the functioning of contemporary societies. Nevertheless, the technological aspects associated with the practical application of geoscientific knowledge, should not overshadow the fundamental contribution of geosciences to shaping human thought. Geosciences have not only influenced but continue to shape our perception of the world, its interrelationships, and evolution.

The ongoing ecological crisis, with its environmental, social, cultural, economic, and geopolitical implications, has stemmed from an imprudent trajectory in human development. Regrettably, there have been instances where geosciences have contributed to this irresponsible path. This oversight has led to an undervaluation of the social and cultural significance inherent in geological disciplines and the crucial role they can play in addressing current global challenges to support human societies.

Geoethics, as the ethics of responsibility towards the Earth system, is grounded in the comprehensive understanding provided by geoscientific knowledge of the complexity of reality. It stands out as the optimal tool for cultivating a new perspective on geosciences, recognizing them as fundamental disciplines crucial for addressing global environmental challenges. This recognition extends beyond technical considerations, emphasizing their cultural significance. By virtue of their epistemological foundations, the geosciences collectively represent an invaluable reservoir of knowledge for human civilization. They are indispensable for redefining the intricate relationship that binds us, as humans, to the Earth.

For this reason, geoethical thought should serve as a complementary element to knowledge in the education of geoscientists. It aims to furnish them with a principled framework and ethical values, offering guidance for any application of geoscientific knowledge to the natural environment and human communities. Additionally, geoethical thought is the ground on which to set a shared, global ethical foundation, facilitating the advancement of our interactions with nature. It seeks to actualize an ecological humanism that forms the basis for human well-being and a more sustainable development of socio-ecological systems. The geoethical perspective redefines the cultural significance and objectives of the geosciences. Geoeducation and communication emerge as fundamental tools for bridging the gap between geosciences and society. They play a crucial role in promoting geoscientific knowledge, highlighting not only its scientific value in providing technical solutions to the ecological crisis but also emphasizing the philosophical dimension of

geosciences, the geosophy of living consciously and responsibly within the Earth system.