

# Review of: "Responsible Geosciences, or Geoscience Literacy for Urbanites"

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This article contains one of the essential topics of science today, about our nature and the sustainability of nature. According to the author, geoscience literacy is one science responsibility for the urban environment. This is the concern of scientists and must also be the topic of global awareness for all, including educational institutions. However, how to begin with these issues is this paper's main emphasis, which I agree with.

The physical changes of the geosphere can be the direct consequence of the urban realm, which also describes the interaction between humans and nature. This is also closely connected with engineering activities which "change" the face of the geosphere in massive intensities in modern times. For this, sort of "risk management" can be the keyword that all must consider in all decisions and movements related to urban life development.

The proposed engineering concepts, including the cultural, social, economic and political processes, must also embrace education as a critical aspect of shaping the attitude of all persons involved in later times. Science education, starting with awareness of a small environment in a child's life, would be the pivotal decision towards their position later.

Science itself faces heavy duty in this modern time. Integrated science must be the critical choice in modern education since the beginning, while reflective thinking in each side of specific science must also be imposed. Chemistry, for example, a science close to the core of all materials, letting all know the properties of materials, enables technology to play a vital role in changing nature later (1,2). In turn, the chemist must be aware of all the consequences of chemistry science, especially in monitoring the environmental changes from the surface (3). From chemistry point of view, the changes in nature can be detected from some methods in analytical chemistry, something that might not be in the mind of a geoscience expert relating to an urban environment.

The other thing concerns energy, the basic need in human civilization, mostly taken from the earth (4,5). Energy cannot be separated from technology, from science, chemistry scale to technology scale, to the concepts of engineering proposed by the author. We are now in the same frame of thinking, the structure that most science and technology work together in an integrated way.

Talking about literacy, this also must be an essential point from the science education point of view. From literacy, ethics can be sharpened, and attitudes to be built by the young generation, the owner of the future. Ethics must come into the curriculum (6), and in every discussion about nature, about life from every point of view(7–9).

This paper is essential to readers from varieties of science, even though most of the content is similar to other publications from the author and his group, which are published in other specialized periodicals. This is an essential topic in modern society. In my opinion, one should express it in more general "language" so that most audiences understand gradually and relate it to their fields and contribute to the discussion from their perspectives.

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