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A Framework for Society-Earth-Centric Narratives

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Anthropogenic change of natural environments caused concerns since the onset of the industrial revolution [1]. More recently, humankind's economic activity started to influence earth-system dynamics [2]. Given their impact on Earth's systems, modern people have to appraise their lifestyle, production and consumption patterns. Sound practices for human earth-systems intersections need both, the considerations of ethical, social and cultural implications of human activities and reliable expertise in science and engineering [3]. As the anthropologists researched, the human species is a storyteller by evolution and culture [4]. Throughout the history of mankind, narratives were meant to share insights and values, and to guide behaviour. To introduce geoscience matters into public debates, narratives should be helpful. This contribution outlines a framework for society-earth-centric narratives:

People like stories. Narratives are means to develop abstract mental concepts, to compare them with observations, to confront them with critical thoughts or creative ideas, to assess their cultural and social background, and to make value statements. People's narratives about the intersections of their activities with the geosphere have evolved throughout history. Although rooted in experiences, the traditional narratives of rural societies referred to the 'sacrum' to enforce sustainable behaviour. Today many opportunities exist for knowledge-based narratives that can be spun about people and the intersections of their activities with the geosphere. Understanding the intersections of human economic activity and the geosphere needs a mean that contextualises facts within the laypersons' ordinary value-loaded frame of reference. To get public awareness for narratives on intersections of people's activities and the geosphere a double bearing is needed. Narratives have to be both earth-centric and society-centric to weave well into the sphere of people-people intersections. Society-earth-centric narratives benefit from geoscience know-how that is relevant for both economy and value setting. Essential features of society-earth-centric narratives seem to be: (i) relevance for ordinary everyday matters and regular public presentation of the work undertaken, (ii) contributing to a broad range of value-related subjects (e.g. economic, usefulness, or ethical matters), and to embed the essence of the narrative (iii) addressing the urban citizens and their lifestyles.

Facing anthropogenic global change requires a public debate how human activities and geosphere intersect. To that end, society-earth-centric narratives can offer a wider range of perspectives than geoscience know-how. Such narratives couple the mainstream of people's concerns with their experiential connections with the geosphere, e.g. through: (i) referring to beauty or particularity of ordinary or unusual phenomena, (ii) evaluating hazards for or from mundane environments, (iii) sharing relevance for everyday matters, creating value, (iv) relating to people-people interactions, and (v) using arts and humanities.

Summarizing, it will be an enriching experience to capture the ethical, social and cultural implications of

mankind's intersections with the geosphere through narratives.

[1] Fressoz J (2012) *L'Apocalypse joyeuse - Une histoire du risque technologique*: Le Seuil, p.312.

[2] Lewis S and Maslin M (2015) *Nature* 519:171-180

[3] Wilson E (2014) *The Meaning of Human Existence*: W.W. Norton & Company, p.207.

[4] Pagel M 2012 *Wired for Culture*: W.W. Norton & Company, p. 423.

