



Characterization of the intensity of human activity on nature related to energy production and use

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The so-called environmental impact is the ensemble of consequences of the human activity on nature. Since the natural consequences of human activity are multi-dimensional, non-linear and may have unpredictably long-term effects, it is completely impossible to characterise the environmental impact. Instead, it is possible to quantify the intensity of human activity on nature. Since all forms of nature transformations are tied to the energy use of the modern society, the most significant nature-forming agent in the hands of the humanity is the energy. Therefore, as it is shown by the derived equations, the three components of the energy-related human activity on nature are as follows: (1) the by-products, i.e. the emitted pollution, including GHG emission, (2) the area, which is taken away from the nature for energy production, (3) the intensity of exploitation of natural energy resources, regardless of its fossil vs renewable origin. The most efficient way of reducing the intensity of human activity on nature, in order to minimize the environmental impact, is to reduce the total energy use (and -production), that is the energy demand.