

EDUCATION FOR SUSTAINABLE DEVELOPMENT

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Knowledge - outlook - skills. This triad is the basis of any educational cycle, and determines a key framework of forms and methods of education. Each component of the triad contributes to the reproduction of two others. Finally, the triad mentioned is to realize three conditions of a human being: to know, want, and be able to do something. To know means to want, to want means to be able. Any skill reproduces needs for a new knowledge, and the cycle repeats on a new qualitative basis. When it deals with sustainable development (SD) the problem is that this cycle for each human of the Earth would be reproduced constantly. When a human being is getting older, this cycle should be realized automatically (in particular, due to human self-training processes).

Human – the biosphere - economy. Methodological complexity of SD concept understanding is amplified by the necessity to manage a systemic whole: human – nature – society. The homeostasis levels of three key systems cause this whole: human organism (in fact, billions of humans on the Earth), the biosphere (actually, trillions of species, that form planet's ecosystems) and economy (actually, millions of economic subjects providing world economic systems functioning). Due to its dynamics this task is of an extreme complexity. Any of its condition should be reproduced anew every moment and in each point of space. Characteristic features of the systems in question are that homeostasis levels of the first two systems may not be changed essentially. Any deviation of temperature, pressure, solar radiation and hundreds of other parameters of the environment, on which life conditions and human activity depend, will be fatal for it. To support Earth environment, the biosphere should keep homeostasis parameters, and consequently, quantitative structure of ecosystems as well as qualitative characteristics of the processes running inside. Hence, in conditions of constant population growth, the triad examined in order not to lose its stability, economy constantly should change the level of its homeostasis. The vector of such changes should be directed at the reduction of nature intensity of human life-supporting systems (input of materials per unit of product, energy intensity). The rate of this reduction should overrule population growth rate or at least meet them.

“Bio-”, “socio-” and “labour” of the human nature. To solve the objectives of SD ensuring mentioned above, crucial transformation of one more triad that exists in human is needed. It deals with personality (information) origin of the social human, which develops in his physical body. It also deals with the essence which unites the given two origins and forms of the human labour potential. This is a social human that determines the behaviour of the “labour” person (the economic person), acting as the determining factor of an industrial system. Both “socio” and “labour” persons are bound in a human body. Hence, ecological improvement of reproducing system (economy), that provides the realization of human existence functions on the Earth, is determined by the perfection of social human and common harmony of the human system's trinity.

Matter - information - synergy. Getting acquainted with basics of SD, human should study to comprehend the art of “tender” environmental management that does not destroy fundamental principles of natural reproduction phenomenon of systems. Human cannot fully comprehend the sacrament of natural essences. Each of such essence (a plant, an animal, an ecosystem, the biosphere) represents the unity of three natural origins (material basis, information and synergetic, uniting phenomenon), which is constantly reproduced by this natural essence in time and space. Human can learn only general contours of its reproduction mechanism, but may not fully penetrate into the depths of all processes of this reproduction realization. Hence, the person is not capable of controlling these processes completely. In this case it is only necessary to control conditions in which natural essence may reproduce itself. This is the way human operates, preserving territories with the certain mode of natural objects utilization: reserves, protected areas and natural parks.

