

## SUSTAINABLE DEVELOPMENT AND NOOSPHERE

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The system approach to the analysis of the phenomena in nature and society have developed intensively for many decades. Usually in the theory of stability the difficult multidimensional system is understood as the system approach, and the scientific information can be integrated without distortion in relatively simple model that showing (sometimes using mathematical tools) origin and development of separate processes. We will select three main methods in constructing of models of steady development: resource, biosphere and integrative. All of them are based on single philosophical and natural-science foundation.

The works of V. Vernadskiy about a biosphere was the first stage of direct preparation of appearance of the sustainable development theory. New state of biosphere to which we will approach is noosphere.

In the noosphere concept humanity is not only as a component of earth biomass but as key factor of its change by the way of conscious, reasonable transformation of surrounding nature to modify life conditions. Such concept could appear only in 20<sup>th</sup> century, when the man-caused effects on nature grew intensively and changed the quality of this influence. Growth of scientific knowledge creates noosphere. V. Vernadskiy created conceptual bases of sustainable development as studies about noosphere which is such stage of evolution of biosphere of Earth, on which as a result of victory of collective human reason will begin concertedly to develop and man as personality, both incorporated human society and expediently regenerate people natural environment.

On the basis of sustainable development pictures is becoming of integral noosphere scientific paradigm of knowledge, which arises up as a result of wide synthesis of sciences about nature, society and man. The special mission here belongs to the modeling processes using hypothetical standards, descriptions, charts, connections between its elements and functions.