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## Natural capital in economic models

The problem of economic sustainability primarily covers issues of intergenerational equity (i.e. the concern for the well-being of future generations), the preservation of the capacity of natural capital to provide benefits important for social welfare, as well as the possibility of substituting natural capital with other forms of capital [3]. The role of natural capital, as the factor of growth and economic development, unfortunately is not emphasized strong enough in the mainstream economics. Sustainability concerns make the role of natural capital in the process of creating the social welfare more vivid. Many of interdisciplinary research indicate the crucial role of biodiversity for the ability of ecosystems to provide the ecosystem services [1]. There exists a fundamental discrepancy on the theoretical and methodological level between the mainstream and ecological economics. The most important issue is the substitutability of natural capital by other forms of capital (e.g. manufactured, human, etc.)

In the area of sustainability economics a lot of research was done in both, theoretical and empirical aspects. However, still the main approach is to use the perspective of neoclassical economics. It seems reasonable to introduce some aspects of ecological economics to the mainstream economics, in particular — to the analysis of the growth in the long run.

The goal of our work is to make a critical analysis of selected growth models that use the notion of natural capital and construct the alternative model. In particular we treat the natural capital as a renewable resource and we use CES production function, weakening the assumption of substitutability of natural capital with other forms of capital. Therefore, our approach follows the main postulate of ecological economics, i.e. limited substitutability of natural resources.

### References

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