

## C06-P04

### SUSTAINABLE ECONOMIC ACTIVITIES IN THE ARCTIC REGION

*Anastasia Kornilova (Lomonosov Moscow State University, faculty of economics, Russian Federation)*

terrartic@gmail.com

Nowadays when the need of energy resources is on the rise and the Arctic region is considered as a territory with high resource potential it is impossible to prevent any economic activities in the region. What is possible – to make these activities sustainable in order to save unique Arctic nature for future generations.

In this abstract the author offers several ways that can help make economic activities more sustainable and environmentally friendly.

Commonly, from the traditional economic point of view, Arctic territory as natural capital is regarded as full of resources that may be extracted and bring money. But **natural capital** has **three main functions** that must be economically evaluated before calculating economic efficiency of activities in the region:

1. Resource function (natural resources in the Arctic).
2. Ecosystem balance (fragile Arctic ecosystem that is highly important to preserve).
3. Cultural and esthetic function (place of living for indigenous peoples, beautiful landscapes).

The most important problem here is that it is difficult to calculate market price for last two functions. This happens because there is no strong market for ecosystem services and beautiful landscapes. Cultural and esthetic functions are viewed as public goods – they are free for use. Ecosystem and regulatory functions are currently underestimated. The solution here is to elaborate mechanisms that will enable scientists and analysts to give real prices to the natural capital.

There are certain means of calculating three main functions of natural capital:

- market valuation;
- rent;
- alternative cost;
- total economic value;
- subjective economic value;
- transport value method etc.

Another problem of economic activities in the Arctic is their **positive and negative externalities**. Externalities are external effects that are produced by companies on the society and environment and that are not taken into account by companies. For example, negative externalities – air and water pollution that is difficult to calculate, positive ones – educational programs for children of arctic indigenous peoples run by companies that operate in the Arctic. So, it is necessary to take into account external effects and internalize them by imposing Pigou taxes (for negative effects) or providing Pigou subsidies (for positive ones).

To sum up, it is becoming increasingly important to make economic operations in the Arctic sustainable and environmentally oriented so as to reach sustainable development in the region. The main instruments to achieve this goal are: economic evaluation of three main functions of the Arctic natural capital and internalization of externalities.