# THE COEFFICIENT OF CORRECTION OF EFFECTIVENESS WITH THE ACCOUNT OF NATURAL FACTORS

*Pavel Barna*

*Shostka Institute Sumy State University, Shostka, Ukraine*

The existing methods of determination of effectiveness don't give the opportunity to emphasize the factors to the full extent. By which we can achieve the effect: the level of development of technologies, exploitation of natural resources, i,e. the damage to the environment etc. The economic damage, caused to the environment as a result of exploitation of natural resources and ecological violations at the given moment, doesn't have a precise definition at the profound level.

To reveal the level of effectiveness by natural factors it is proposed to use the following coefficient:

$$K_{np} = \frac{\sum K_{_3} - \left(\sum T_{_3} + \sum \Pi_{np} + \sum III\right)}{\ni} \tag{1}$$

where $K_{np}$ - a coefficient of correction of effectiveness with the account of natural factors;

$\sum K_{_3}$ - a sum of capital expenses for protection of nature;

$\sum T_{_3}$ - a sum current for protection of nature;

$\sum \Pi_{np}$ - a sum of payment for exploitation of natural resources;

$\sum III$ - a sum of beices for contamination of the environment and overlimited exploitation of natural resources;

$\ni$ - an economic effect.

To explain the economic sense of the given coefficient $K_{np}$ we pay attention on his key and boundary meanings.

The multitude of meanings $K_{np}$ is $K_{np} = [-1, 1]$. The key meanings are -1, 0, 1. Zed's examine each of them.

1. $K_{np} = -1 \Rightarrow \sum K_{_3} = 0; \ni = \sum T_{_3} + \sum \Pi_{np} + \sum III$ i. s. a subject of economic activities doesn't bear any capital expenses for protection of nature and all the economic effect is spent on payment of natural resources used in the production process and on liquidation of penalty sanctions. In this situation the subject is busy with ecodestructive activities.

Effectiveness is bully achieved by natural factors.

2. $K_{np} = 0 \Rightarrow \sum K_{_3} = \sum T_{_3} + \sum \Pi_{np} + \sum III$ . The subject of economic activities devotes energies to resume the environment so being ecologically neutral. The given development can be characterized as deadlocked, exactly: having directed all the means on resuming the environment the subject can raise the quality of water resources, the atmosphere, bat by no means he can resume exhausted nonrenewable resources (gas, oil etc). Making calculations of effectiveness the given meaning is not used.

3. $K_{np} = 1 \Rightarrow \sum K_{_3} = \ni, \sum T_{_3} + \sum \Pi_{np} + \sum III = 0$ . The subject without doing any harm to the environment all received means directs to resuming the environment. Effectiveness is achieved by ecologically safe productions and technologies. An example of such subject can be the ecological fund.

For more detailed study of boundary meanings, characterizing a transition info phases of ecological crisis, ecological neutrality, observance of principles of steady development, we propose to use the method of the expert appraisal.
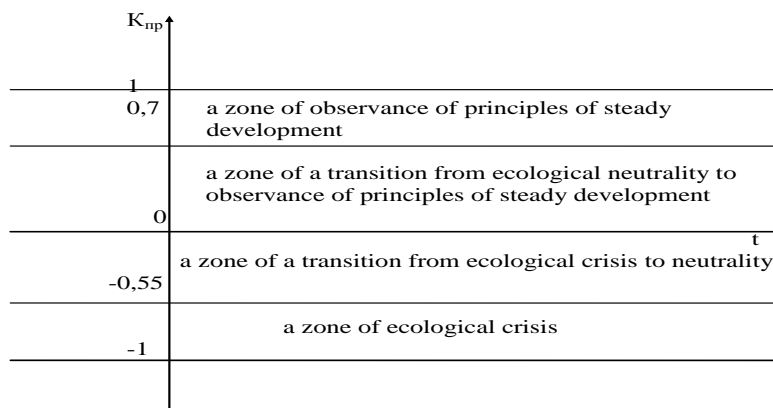
**Fig. 1 Phases of development of a subject depending on the meaning** $K_{np}$

To considering the factual meanings of $K_{np}$ taking info account forded and boundary meanings you can come to a conclusion about the level of effectiveness of exploitation of natural factors by an economic subject. Under the meanings of the coefficient [0,7; -0,55] it is proposed to conduct ecological – economic restructuring. And under the meanings [-0,55; -1] conducting restructuring must be obligatory.