

NATURAL RESOURCES – A REAL OR HYPOTHETICAL OBJECT OF ACCOUNTING

Alexandru FRECAUTEANU, Angela CHISLARU

State Agrarian University of Moldova, 44 Mircesti Str., MD-2049, Chisinau, Republic of Moldova, Phone: 0 373 22 22 44 27, E-mail: angelachislaru@mail.ru

Corresponding author: angelachislaru@mail.ru

Abstract

Nowadays natural resources have a controversial accounting treatment which is caused, firstly, by neglecting their inherent properties and, secondly, by a free and one-sided interpretation of the legal framework. The definition of natural resources is bad too, which also creates additional difficulties in accounting of the operations connected with the preparation for natural resources usage and exploitation.

Key words: deposits, forests, natural resources, parcels, subject of bookkeeping

INTRODUCTION

Natural resources (including land parcels, deposits of useful minerals and forests) play a very important role in establishing new consumption values and ensuring ecological balance in the Republic of Moldova as well as in other countries of the world. From the point of view of the gross domestic product parcels are both the most significant and the most vulnerable type of natural resources. Parcels used for agricultural purposes comprise 59.2% (or approximately 2 million ha) [5] out of the total area of about 3.4 million ha. Forests occupy about 400,000 ha [7]. There are also 153 opencast mines and pits that are exploited [6]. Despite their unquestionable significance for the national economy and society on the whole, methodological aspects of natural resources account are insufficiently developed and focus mostly on some incorrect judgments. Artificial separation of parcels from other natural resources along with their reflection in a synthetically homonymous account [2] proves this fact as well as the highlighting of acquisition operations connected with natural resources as a priority direction of their inclusion in enterprise assets [4]. Therefore the method of natural resources account needs to be revised and mainly based on inevitable properties of these goods and legislation in power.

MATERIALS AND METHODS

Investigations were primarily concentrated on **the Law on natural resources** [1] and **the Plan of bookkeeping accounts of the economical and financial activity of enterprises** [2]. We have also taken into consideration specific properties of natural resources (their origin, controversial usage, prolonged capitalization, etc.), special legal regulations and the accounting experience of these goods at more than 20 enterprises in the Northern developing district. The monographic (descriptive) method was used to generalize facts and formulate conclusions as well as the selective application of observation procedures on the whole and for comparison.

RESULTS AND DISCUSSIONS

Depending on the way we study the notion of natural resources, the latter has many definitions and meanings that do not coincide conceptually (contradict one another) and grossly ignore some unanimously accepted principles or evident things.

Thus, according to the Article 1, **the Law on natural resources** №1102 of February 6, 1997, natural resources are "... subjects, phenomena, natural conditions and other factors useful for both direct and indirect

consumption in the past, present and future that are valuable for consumers and contribute to the development of material and spiritual goods". Further we specify that natural resources are used as means of work, sources of energy, raw materials and stuff, as objects of consumption and recreation, etc. Finally, the Appendix 1 of the above mentioned law contains the classification of natural resources which include 5 types of renewable resources. The following components of the environment belong to the renewable resources: land, forests, phreatic and ground water, rivers, lakes, reservoirs, canals, flora and fauna. There are two types of non-renewable resources: the first type is represented by oil, natural and condensed gases and the second one includes useful mineral substances. It should be also mentioned that one of the extremely important renewable natural resources is the air which is over the country's territory. Although the above mentioned appendix does not include this natural resource, its existence and importance explicitly result from Article 21 "*Objects of payment*".

Though, to our mind, the definition of natural resources written above is disputable, contains useless specifications and passes over in silence some fundamental properties of these goods. To be more precise, we should mention the following circumstances:

- First of all, the syntagma "*other factors*" with all adjacent explanations concerning their value, destination and a long period of use by human beings is too vague and depending on the study object or purpose can imply some goods that have no relation to the natural resources (for example, various palaces, castles and other historical buildings; certain pictures, sculptures and other works of art; literary heritage of famous writers and poets; the Panama and Suez Canals; botanical gardens, etc.), though it fully correlates with the requirements of their identification;

- Secondly, natural conditions (of a steppe, forest steppe or the subtropical zone) and the phenomena that take place in the nature (torrential rains, sand or dust storms, droughts, blizzards, hail, floods, alternation of

seasons, etc.) cannot be equated with natural resources (i.e. land, forest, water, air, etc. assets). It is rather an interaction result of various types of resources and climate factors influenced by irreversible global changes that occur on our planet because of both objective reasons and as a result of destructive economic activity of the human society;

- Thirdly, all natural resources are limited and there are no real possibilities to extend them. For instance, if the production of consumer commodities is constantly growing in the world, exploited natural resources, on the contrary, either decrease in an absolute progression or it is difficult to get them and they are of poorer quality, or their quantity is being reduced in comparison with the population of our planet and global economy, etc. The example of fresh water is very persuasive here. Though, it is a renewable resource, the nature's capacity to renew water resources is limited. Thus, the global volume of fresh water is about 200 thousand cubic kilometres. At first sight, it may seem this is an enormous reserve and nobody should worry about it. The reality, though, is not so bright. If we take into consideration that the population of our planet is actually about 7 billion people and the number of domestic animals has reached 150 billion, it is evident that the total ecological impact of these factors (increased meat consumption, enlarged capacities of bottled water production, etc.) will become a prime mover of the water crisis in the near future;

- Fourthly, the capacity of natural resources to be used by men or the degree of their usefulness doesn't have an absolute (universal) character and it is influenced by technical and scientific progress, vital necessities of the modern society as well as the substantial importance of some distinct types of resources or their conditions of existence. For example, sand soils that lack available water resources actually have no value for farmers. The same thing happens when deposits of mineral resources cannot be actively exploited in order to identify industrial reserves of useful materials because the state budget or economic agents lack

financing. Moreover, sometimes certain natural resources (for example, water) degenerate rapidly from a favourable factor into a destructive danger that leads to the destruction of fields, decay of residential buildings, loss of domestic animals and even to the death of people. Such unwelcome phenomena periodically occur in the Russian Federation, China, India and other countries of the world. In the Republic of Moldova bad floods of the Dniester and Prut Rivers were registered for the last time in summer 2010;

- Fifthly, as we know, natural resources were called in such a way not because they are found in nature's lap (which is often called "environment"), but, rather, because of their natural origin, that is they are formed and developed without the interference of human beings, as a consequence of some long physical, chemical and biological processes (transformations). For example, water power or recycling plants are also situated in nature's lap (at rivers or near deposits of useful mineral resources), but nobody dares to associate them with natural resources. Thus, we may conclude that if an economic agent establishes some objects for sustainable usage (for example, he or she settles a lake or plants a forest) on the owned or occupied territory which don't substantially differ (as to their external appearance and functionality) from traditional natural resources of the same type (that is, from a lake or forest that is managed by a silvicultural enterprise), then the given objects should be viewed as fixed assets rather than natural resources (that is, as a hydrotechnical construction or a plantation of perennial plants in our case). The above mentioned conclusion is also conditioned by the necessity to follow the principle that the contents prevails over the form. This principle states that any bookkeeping element (including the goods that pretend to be natural resources, but they are actually the result of human activity) must be reflected in records, first of all, in accordance with its real origin and primary economic relations, and after that we should take into consideration legal aspects that have been documentarily improved.

In some cases the classification of natural resources found in article 3-5 of the homonymous law may be useful to correctly organize the records. Thus, as it is mentioned above, natural resources are divided into renewable and non-renewable resources depending on their ability to regenerate during the period that is rational from the economic point of view. As non-renewable resources are mined from exploited deposits, their quantity is reduced every year and there appear ascending problems for future generations, because they can renew on their own. Therefore, mining of the mentioned resources should be strictly accompanied by the improvement of their use efficiency and their gradual substitution with alternative materials that are cheaper and ecological.

Depending on their importance, natural resources are divided into national and local ones. The former are relevant for the entire society, the latter – only for a certain area. Nowadays, according to Appendix 2 of the homonymous law, the absolute majority of natural resources belong to the category of national natural resources, which indirectly means their limited volume and alarming status. Local natural resources comprise groundwater and largely spread solid minerals, such as clay, sand, gravel and limestone in case they are mined only for a single rural area, their annual volume doesn't exceed 500 cubic metres and they are extracted at the depth of no more than 2.5 metres.

Depending on their participation in the economic cycle, natural resources are divided into useful or exploited resources (those that are used in the production process or other types of activity), reserve resources (which will be used in the economic activity in the nearest future) and protected resources (which will never be used in the economic cycle, because this may lead to the ecological imbalance).

In order to correctly keep records of the operations associated with natural resources, it is important to follow some precautions of the homonymous law, such as:

- national resources are publicly owned by the state;
- local resources are publicly owned by local administrative and territory units;
- the resources that are owned publicly can be only used for a certain period of time (occupation, concession) for an established sum of money. One has no right to sell or gage them;
- natural resources can be owned privately. However, the number of such resources should be limited: it is allowed only in the situations stated by relevant laws with a limited sphere of application.

The problem of natural resources structure is tangentially mentioned in **the Law on the environmental protection** [2]. Thus, article 4, paragraph (1) states that natural resources combine five constitutive elements: the soil, underground, water, flora and fauna, the air over the country's territory. As we see, the given classification of natural resources significantly differs from the classification provided in Appendix 1 of the homonymous law, though legal documents in both cases have been adopted by the Parliament of the Republic of Moldova with an interval of less than 4 years. We consider that the existing difference proves not so much the complexity of the problem (though one should not exclude it either) as the rush in which some laws are adopted, the superficial character of their examination by specialized committees or plenary sessions of the legislative body, etc. However, regardless the causes of the omitted inconsistency, the presence of such gaps influences negatively the accounting treatment of this type of assets.

Useful information regarding the structure, particularities and regulation method of the relations connected with the use of some distinct types of natural resources may be found in other niche laws (**Land Code, Forest Code, Underground Code**, etc). The generalization of fundamental principles of the six legal documents mentioned or examined above allows us to state the following:

- natural resources are all the goods and organisms whose appearance and evolution

are not connected with people's activity. Therefore, they originally have neither the price nor the entry value;

- in the Republic of Moldova land is the principal and the most valuable natural resource that acts as a basic means of work for agricultural enterprises and an essential source of existence for the rural population;
- each of the other types of natural resources (water, forests, underground, etc.) also plays a special role for the national economy and the maintenance of ecological balance, each of them cannot be replaced with any other, it is exclusively owned by the society and its owners can do nothing but use it;
- the degree natural resources are prepared for being used varies depending on their type, location, beneficiaries' technical equipment, etc. Some natural resources (for example, soil and surface water) can be used as they are; no additional preparation procedures are needed. Other natural resources, on the contrary, cannot be used in their original state (for example, deposits of useful mineral resources). In this case, enterprises have to previously perform certain activities (geological research, construction of access paths, mining, transportation and storage of fertile soil, etc.) and, therefore, suffer significant expenses;
- the objects of long use created by men, that is as a result of economic activity of enterprises or citizens (for example, lakes, botanical gardens, forest belts to protect fields, forests planted on the private property, etc.). These objects do have their authentic price (value of entry) and, as a rule, are considered to be fixed assets.

Thus, we can state to what degree the actual accounting treatment of natural resources correlates with their economic essence, what drawbacks are observed and how they can be liquidated.

So, Paragraph 6 of **the National Accounting Standards 16** [2] specifies that natural resources are a natural part of material assets for a long run which have a certain natural deposit form of oil, gases, stones, wooden material, etc., mined (exploited) during a long period of time. Though, to our mind, this

definition is not good and this can be easily proved with the help of the following arguments:

a) Land parcels were illegally excluded from the structure of natural resources; we speak about the most important and valuable part of natural resources for the Republic of Moldova. The isolation of land parcels in a special (particular) type of real estate with its reflection in a synthetic distinct homonymous account (we are referring to **Account 122 "Parcels"**) has an artificial character; it is absolutely detached from reality and is not based on the professional reasoning. Moreover, the definition of parcels stated in this act of statements is not complete either, because it doesn't specify that these resources (as well as the other resources of the natural origin) are not the result of the human activity;

b) The word "*natural*" is repeated twice in the explanation of the given definition, though this insistence doesn't contribute to the more profound perception of the notion of natural resources. Rather, the abuse of this word only leads to the appearance of some additional uncertainties and confusions, most of all by inexperienced accountants. Therefore, we consider that the first word "*natural*" should be simply excluded, but in the second case the syntagma "*have a natural form*" should be substituted with the syntagma "*doesn't result from the working activity*". We should also take into consideration that when we develop and establish any definition, the corresponding notion (in this case we refer to the notion of natural resources) can never be explained by its own;

c) The enumeration of actual manifestation forms of natural resources is also pointless, because, firstly, we do not meet it in many other adjacent definitions (for example, fixed assets, material assets of long use, etc.), secondly, a part of provided examples is not characteristic to our country (for example, oil and gases) and, thirdly, the assignment of wood to the category of reserves which comprises forests is not correct and it neglects the fact that in reality (also according to **the Forest Code**) domestic forests represent

mainly a community of trees and shrubs which are exclusively intended for the environmental protection and no way for the mass forest cutting that is later used for further activities or fire (as, for example, it happens in the Russian Federation, Brazil, Canada and other countries with huge territories of forest plantations). The syntagma "*during a long period of time*" that is used at the end of the definition is also useless. At the beginning of this definition one clearly reads that the given resources are some material assets of long use, and the latter, as it is indicated in the same paragraph 6 of the National Accounting Standards 16, have a service life of more than one year (that is during a long period of time);

d) The word "*mined*", which succeeds examples of nominated reserves in the given definition, makes us think that these reserves may be classified as natural resources only if they are in the process of mining (exploitation). In reality, though (also according to the Law on natural resources), there are reserved natural resources, that is the resources that have been found and evaluated qualitatively and quantitatively during some geologic researches, but they are not included in the economic cycle for a variety of reasons yet. Therefore, it would be more reasonable to add the following syntagma "*or that will be mined*" to the word "*mined*". At the same time one should take into account the fact that the verb "*to mine*" naturally correlates with such nouns as "*oil*", "*stone*", etc. and is no way associated with the noun "*wooden material*". As it is known, wood is not taken from forests in the process of forest management; it is harvested by regeneration, conservation, bush nursing, hygiene cuttings, etc. Therefore, the word "*mined*" from the definition of natural resources should be either substituted with another word (for example, "*exploited*") – with a broader meaning and able to correlate with all provided nouns, or supplied with an alternative verb which will refer to the noun "*wooden material*";

e) The same word "*mined*" from the definition of natural resources is followed by the word "*exploited*" that is written in

brackets. In this case brackets mean that the second word has the meaning similar to the previous words that is the two words are synonymous. It is not so in reality and the mentioned words have different meanings. The verb “*to mine*” in combination with the syntagma “*deposits of oil, gases, stones*” means to get some useful minerals from underground, to take them to the land surface in a mining excavation. While the verb “*to exploit*” has quite a different meaning which lies in the research of discovered deposits, identification of industrial deposits of useful minerals, selection of the best methods to extract them, etc. Besides, if it is necessary, one can perform an experimental limited extraction of underground wealth.

CONCLUSIONS

The actual definition of natural resources provided in Paragraph 6 of the National Accounting Standards 16 does not take into consideration inherent properties of these goods; it is based on the wrong professional reasoning and neglects the actual legal framework. In reality it leads to numerous uncertainties and errors, mitigation of the cognitive value of financial reports.

Forest plantations and aquatic objects established by economic agents on their own

land parcels should be considered as fixed assets rather than natural resources, because they are the goods created by men.

Land parcels are the most important and the most valuable part of natural resources in the Republic of Moldova. Therefore, the decision to settle them in a synthetic homonymous account is not effective. They should be registered in some additional open accounts within the asset account **125 “Natural resources”**.

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