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# ACCOUNTING FOR THE REPRODUCTION OF FOREST RESOURCES OF UKRAINE DURING AND AFTER WARTIME

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**Purpose.** The purpose of the article is the formation of theoretical foundations for the development of accounting in forestry enterprises in response to the challenges of the concept of sustainable development, in terms of the development of accounting support for the reproduction of forest resources of Ukraine for the purpose of their preservation and restoration during and after the wartime.
**Results.** The accounting system in the forest industry needs a conceptual review, as it does not reflect the real economic essence of operations that take place with forest resources. The inconsistency of the methodical provision of accounting for operations with forest resources to national and international accounting standards was revealed, as the existing method overestimates the liquidity of the company's assets. Accounting support for the reproduction of forest resources is proposed, which is based on the identification and grouping of costs for the reproduction of forest crops and contributes to the formation of complete and reliable information about the structure of the company's assets and their liquidity. The proposals are aimed at increasing the efficiency of forest asset management based on accounting information at the stage of forest resource reproduction to accelerate their recovery during and after wartime.
**Scientific novelty.** For the management of forest resources based on the principles of sustainable development, it is necessary to form a new procedure for displaying information on forest use operations in the reporting of forestry enterprises. It was established that the reporting of Ukrainian enterprises in the part of forest utilization operations does not reflect the specifics of the activities of forestry enterprises and does not allow to estimate the costs of conservation, reproduction and use of forest resources.

**Practical value.** A procedure for disclosing information on forest use operations in reporting has been developed, which provides for the display of forest resources as part of long-term biological assets. And directions for expanding the indicators of the Notes to the annual financial statements and the information content of the Report on sustainable development in the part of forest use operations aimed at satisfying the informational interests of stakeholders of forestry enterprises are also proposed. Disclosure of information about the state and reproduction of forest resources will contribute to the reliable formation of indicators of the country's national wealth and will allow to increase the level of investment attractiveness of domestic enterprises in the forest industry to maintain and restore their economic condition during and after wartime.
**Key words:** environmental economics, sustainable development, sustainable forestry, accounting development, forestry.

**Introduction.** Considering the current military and political events in Ukraine, the problems and ways of overcoming the complex and systemic consequences of economic, ecological and social processes in the country are gaining special relevance. The approved and adopted Sustainable Development Goals of Ukraine for the period up to 2030 [1] within the framework of the UN Summit on Sustainable Development held in September 2015 in New York and the final document play an equally important role in the recovery and development of Ukraine which is "Transforming our world: the 2030 sustainable development agenda" [2]. However, already today, there is a clear necessity for their adaptation and strengthening of the established measures, taking into account the specifics of the further development of Ukraine.

Undoubtedly, the urgent necessity to change the man-made type of development through the integration of ecologization of the economy is due to the limitations that have developed and acquired new aspects in the economy of the state. Among them, environmental, economic and social ones stand out. Environmental restrictions are caused by the quantitative depletion and qualitative deterioration of natural resources, environmental pollution. Economic constraints are associated with the simultaneous lack of investment resources, the difficulty of attracting foreign investors, and the growing imbalance in the use and reproduction of natural resources. Other, resource-saving ways of forming effective management are needed, which will be based on taking into account environmental factors. Social limitations of sustainable development are determined by the global deterioration of the quality of life (health and well-being of the population, quality of food, drinking water, etc.), as well as migration processes caused by the pandemic, martial law in the country, and environmental degradation. There is a need for a new approach to nature management, which will be based on different from narrowly directed nature protection measures, on the strategy of conservation and restoration of natural resources.

During the period from 1990 to 2020, the absolute area of the world's forests decreased by 178 million ha, which caused a reduction in global wood reserves from 560 billion $m^3$ in 1990 to 557 billion $m^3$ in 2020 [3]. Ukraine has significant amounts of forest resources. The stock of wood in the forests is estimated at 2.1 billion $m^3$. On average, 35 million $m^3$ of wood grows in the forests of Ukraine per year. The average annual growth of wood per 1 ha in the forests of the State Forest Agency is 3.9 $m^3$ per

1 ha and ranges from 5.0 $m^3$ in the Carpathians to 2.5 $m^3$ in the Steppe zone. There is a gradual increase in the stock, which confirms the significant economic and environmental potential of Ukraine's forests. In the forests of the State Forest Agency, the reserve per ha is about 240 $m^3$ (7th place in Europe, in Poland – 219 $m^3$, in Sweden – 119 $m^3$) [4]. In Ukraine as a whole, this indicator is lower and makes 218 $m^3$ (9th place in Europe) due, first of all, to the forests of agricultural enterprises, which are thinned and in a difficult sanitary condition. At the same time, forest resources refer to slowly renewable natural resources that have important ecological, economic and social significance.

During 2015–2020, a positive trend is observed regarding the ratio between the volumes of reproduction and harvesting of forest resources, that is, there is a gradual increase in the stock of wood at the root, which confirms the significant economic and environmental potential of Ukraine's forests. The highest rate of forest regeneration was recorded in 2009 – 60.4 thousand ha. However, since 2015, there has been a decrease in the amount of forest reproduction, so in 2020, 44.8 thousand ha of forest were created, which is 8.2 % less than in 2019, and 25.8 % less compared to 2015 [5].

In Ukraine, as well as in the world as a whole, there is an improvement in the use of areas set aside for forest plantations. Thus, the stock of wood per unit area is increasing in the world from 132 $m^3$/ha in 1990 to 137 $m^3$/ha in 2020 [3]. As for Ukraine, the volume of forest regeneration works is somewhat larger than the area of main-use felling, and there is also a steady trend to increase the area of forests in the country as a whole. Thus, the total area of felling in 2020 was 382 thousand ha, of which only 30.1 thousand ha were felled for main use, the remaining 351.9 thousand ha were felled for the formation and improvement of forests and other measures, with the simultaneous area of reproduction 42.5 thousand ha. That is, the amount of felling for main use is 12.5 thousand ha less than the area of forest restoration. Compared to 2015, the reproduction area is smaller by 15.6 thousand ha, and the area of felling for main use in 2020 is smaller by 3.5 thousand ha. However, it should be noted that since 2015, the volume of forest resource reproduction has decreased from 60.4 thousand ha to 44.8 thousand ha in 2020, the volume of new forest creation has decreased from 2.5 thousand ha in 2015 to 2.3 thousand ha in 2020. In 2020, forests were regenerated on an area of 42.5 thousand ha (2.3 thousand ha of new forests were created). In 2021, 44.6 thousand ha were regenerated (3.2 thousand ha of new forests were created), which is 4.94 % more than the similar indicator in 2020 (Figure 1). The increase in the amount of forest reproduction is associated with afforestation at the sites of large fires in 2020.

In addition, there are a number of problems related to the rational use of forests, which are primarily related to the lack of state support for afforestation works and the complex procedure of obtaining land for specified purposes. At the same time, forest fires are a significant factor in reducing the area of forests, as a result of which in 2020 the area of forest lands burned by fires amounted to 75 thousand ha, which is 60.3 thousand ha more compared to 2015 and 32.5 thousand ha more compared to the

area of reforestation in 2020. Insufficient control by law enforcement agencies over illegal felling of forest areas and corruption schemes regarding illegal felling within the boundaries of their species and theft of forest resources is also a complex problem.

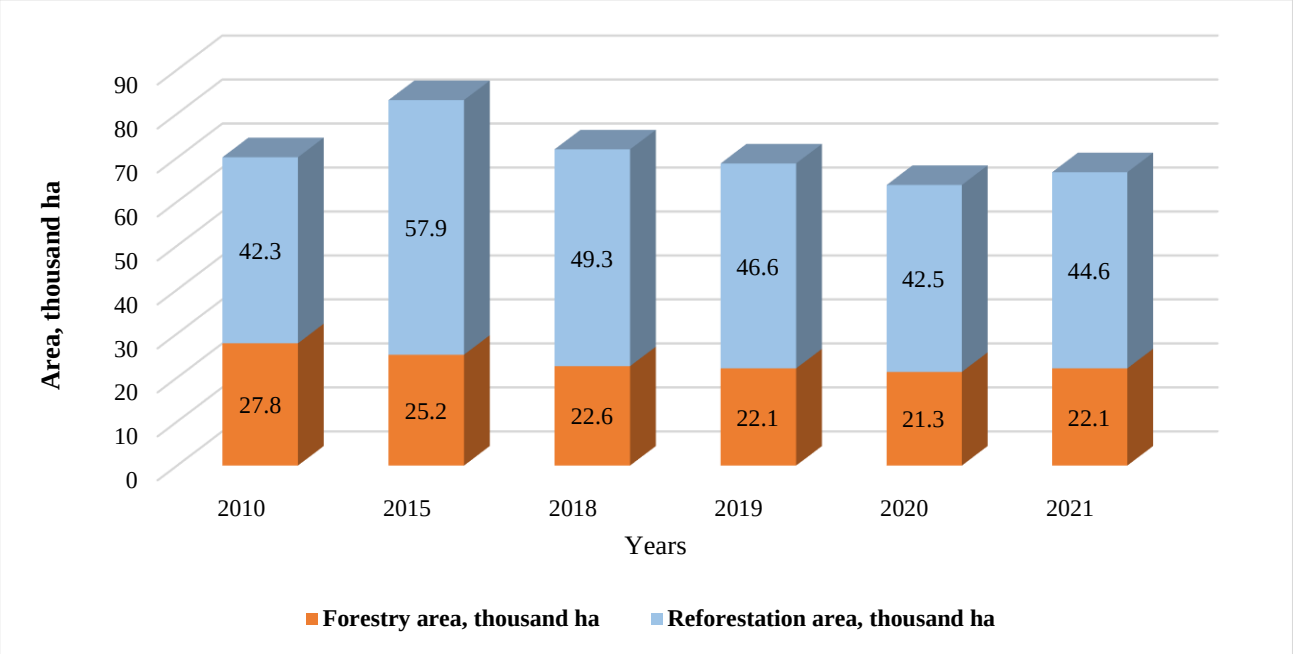


**Figure 1. Volumes of reproduction of forest resources for 2010–2020 in Ukraine**

*Source:* built by the authors on the basis [5].

A characteristic feature of the forests of Ukraine is that the largest specific weight in the plantations is occupied by medieval stands – 47.5 %. The average age of stands is more than 60 years, that is, there is a gradual aging of forests, which leads to the deterioration of their sanitary condition [6]. Therefore, the issue of preservation and reproduction of forest resources as an important ecological factor is an extremely urgent problem today. In this context, the importance of accounting as an information system of the enterprise and an effective tool for the reliable display of transactions with forest resources increases.

A glaring problem today is russia's full-scale invasion of Ukraine starting on February 24, 2022, which has already caused and continues to cause enormous damage to people and infrastructure in settlements where hostilities continue. But the war also affects wildlife and the state of the country's environment. Currently, it is not even possible to fully assess the impact of war on the environment due to the lack of accurate information. As a result of hostilities, forests and unique ecosystems are destroyed, which causes ecological threats, which in the long term can cause colossal damage to the ecosystem of the entire Eastern Europe. Part of the forests in Kyiv, Chernihiv, Sumy, Luhansk, Donetsk and Kherson regions were or are currently under the control of the occupiers. It is still impossible to assess the damage to property and forestry. There are already a large number of fallen missiles and unexploded ordnance in the forests. This will pose a potential danger to humans for many decades to come. Also, russian troops, destroying Ukrainian forests, use wood for building fortifications, laying infrastructure, heating and cooking, and there is a high risk of fires in ecosystems

as a result of shelling. Since February 2022, on the territory of Ukraine, according to NASA satellite systems, 36,154 ha of forests and 10,250 ha of grass ecosystems have been destroyed by fire, and forest fires in the exclusion zone can cause emissions of radionuclides into the atmosphere. The areas with the greatest concentration of fire-affected forests are Luhansk and Donetsk regions, as well as the north of Kyiv region [7].

It is important to start restoring natural resources, particularly forests, immediately. There is already support in this from the European Union, which is recorded in the Agreement on the accession of Ukraine to the LIFE program, signed on 24.06.2022. Therefore, the study of the issues of accounting for the reproduction of forest resources of Ukraine during and after the state of war is gaining relevance.

**Review of literature.** Problematic issues of methodical provision of accounting for the reproduction of forest resources are revealed in the works of a number of scientists. R. G. Dubas [8] studied the composition and structure of costs for reproduction of forest resources. Proposals for improving the accounting method of simple reproduction of forest resources were provided by T. I. Vovchuk [9], M. Yu. Chick [10]. Assessment of forest resources during their reproduction was investigated by P. F. Zholkivskyi [11], Ya. V. Koval [12], V. Bukur and L. Todorova [13]. The results of the study by O. Furdychko, O. Drebot, N. Palianychko, S. Dankevych, Y. Okabe are aimed at the theoretical and methodological substantiation of the completeness, availability and transparency of indicators of ecological and economic reporting of forestry enterprises [14].

M. Gusti et al. [15], X. Zhang et al. [16], H. Moor et al. [17], G. C. S. Negi [18] investigated the consequences of large-scale implementation of alternative models of forest management and reproduction. Scientists also studied the ecological-and-economic aspect of certain factors to ensure the balanced use of forest lands [19], the trends and current state of forest resources in some regions, statistical assessment and analysis of the interaction of society with forest resources [20], the formation of the accounting and analytical support system adjusting the accounting forest complex to the current requirements [21]. At the same time, the issue of accounting for the reproduction of forest resources in Ukraine during the war and post-war time has become topical.

**Materials and methods.** The aim of the article is formation of theoretical foundations for the development of accounting in forestry enterprises in response to the challenges of the concept of sustainable development, in terms of the development of accounting support for the reproduction of forest resources of Ukraine for the purpose of their preservation and restoration during and after the state of war.

The research methods are based on dialectical and systematic approaches to the analysis of scientific works of scientists regarding the issues of implementing the provisions of the concept of sustainable development at the microeconomic level, theoretical foundations and features of accounting in forestry enterprises, in particular in the part of reproduction of forest resources.

The methods of analysis and synthesis, the method of analogies was used to assess the current state of accounting for the reproduction of forest resources in enterprises of Ukraine, to determine the peculiarities of the reproduction of forest resources and their influence on the organization and methodology of accounting in forestry enterprises. The abstract-logical method was used to outline the theoretical foundations of the development of accounting for the reproduction of forest resources in forestry enterprises.

**Results and discussion.** Reproduction of forest resources takes place in two ways – reforestation and afforestation. Reforestation (simple reproduction) involves the creation of forest plantations by natural, artificial and combined means within the boundaries of land plots set aside for forests. Reproduction of forest resources through afforestation takes place on lands specially allocated for the formation of forest resources, which are not covered with vegetation (ravines, gullies, sands, etc.), as well as on non-agricultural lands allocated for the creation of field protection forest strips and other protective plantings.

Statistical data show that reforestation is the main direction of reproduction of forest resources. However, in the period from 2010 to 2015, the volume of reproduction of forest resources in this way increased from 70.1 thousand ha to 83.1 thousand ha, which was 18.5 %. This is caused by an increase in the volume of reforestation from 42.3 thousand ha to 57.9 thousand ha, respectively. In the period from 2015 to 2020, the amount of reproduction decreased slightly, namely by 19.3 thousand ha. During this period, the main part of forest resources was created through reforestation, in particular: in 2015 – 57.9 thousand ha, in 2018 – 49.3 thousand ha, in 2019 – 46.6 thousand ha, and in 2020 year – 42.5 thousand ha [5].

While developing methodological support for accounting, it should be taken into account that for forestry enterprises, the operational cycle is specific and long-term (since the process of growing such assets lasts for 50–70 years) and includes the following economic processes: soil preparation for planting material, planting material, care and protection of established plantations, maintenance felling, extraction of wood from ripe wood resources, wood processing and sale of forest products. Therefore, the recognition of costs for the creation of forest resources as part of current production costs contradicts the principles of accounting, in particular: the predominance of substance over form and full disclosure, since these principles provide that financial statements must contain all information about the actual and potential consequences of economic operations and events. capable of influencing decisions made on its basis.

A feature of forest resources is their ability to undergo biological transformations, which involve the processes of growth, degeneration, and reproduction, which lead to qualitative and quantitative changes in these natural resources. In this regard, we believe that the main criterion for recognizing costs for the formation of forest resources is: the duration of the period of preparation for the intended use, which exceeds one growing season (year). Therefore, costs for the reproduction of forest resources should be reflected in the costs for the formation of long-term

biological assets.

The extended reproduction of forest resources is carried out with the aim of afforestation of territories unsuitable for use in agricultural activities. Afforestation consists of three main stages, while reforestation includes two stages (Figure 2).

Afforestation begins with the preparation of a plot of land for planting of planting material. Costs for the improvement of forest land include costs for the implementation of hydromelioration measures that lead to qualitative changes in the soil cover.

| Forestry | Stages of the life cycle of a tree stand | Characteristics | Accounting | | Reforestation |
|---|---|---|---|---|---|
| | | | debit | credit | |
| | I. Carrying out hydrolyser improvement works | Drainage, irrigation and other capital improvement of the land plot | Capital costs for land improvement | Expense accounts | |
| | II. Germination period | Germination of planting material | Capital investments for the purchase, cultivation of long-term biological assets | Expense accounts | |
| | III. Post-germinal period | Obtaining sprouts | | | |
| | | Formation of young forests | | | |
| | | Formation of medieval forest resources | | | |
| | | Formation of exploitable (ripe) forest resources | | | |

**Figure 2. Accounting for the reproduction of forest resources**

*Source:* developed by the authors.

The cost of such works includes: direct labor costs for the workers who performed the relevant works, the cost of biochemicals, costs for the maintenance of vehicles used in the implementation of hydro-remedial works, etc. The cost of hydro-melioration works must be included in the initial cost of wood forest assets by calculating depreciation using the straight-line method.

We believe that the display of forest resources in accounting should be based on the stages of the life cycle of a stand, each of which should be taken into account when recognizing the costs of their reproduction, in particular:

1) the embryonic period (supposes the planting of planting material and lasts until its germination);

2) the post-germ period (characterized by the germination of forest crops and includes three stages: the formation of young forest plantations; the development of medieval forest plantations; the formation of mature stands).

At the first stage of the life cycle of forest plantations, the costs of their reproduction should be attributed to capital investments related to the acquisition (cultivation) of long-term biological assets, since they are assets of forest farms. In addition, forestry enterprises annually incur expenses for the care of established forest crops, which is carried out in order to ensure conditions for the growth and development of plantations after planting and continues until the crown is closed.

Expenses for the care of forest resources and their protection are divided into the following: expenses for planting forest crops, expenses for the care of forest resources, expenses for the protection of forest resources. The given list of costs should be the basis for the formation of analytical sections of costs for the care of forest resources and their protection in the working plan of accounts.

The post-germ period is characterized by a long period of growth of forest plantations (50–70 years) and the presence of different age groups of forest resources. In this regard, it is necessary to form accounting information for management.

At the second stage of the tree stand's life cycle, maintenance felling is carried out with the aim of forming stands of the desired composition and density, ensuring an even distribution of trees of the main species on the square. When carrying out work on the care of blocks of young forest resources, it is necessary to reflect in the accounting the wood obtained as a result of them, which does not have a significant value and is classified as underbrush as part of other materials in the group of current assets of the enterprise.

We believe that the costs of forming and maintaining young forest plantations should be reflected as part of capital investments for the acquisition and cultivation of long-term biological assets, since significant losses due to natural factors (drying, diseases) are a characteristic feature of this stage of development. When the plantations reach the young of the medieval group, it is recommended to show them in accounting as part of non-exploitable long-term biological assets. This is due to the ability of such resources to bring economic benefits in the form of forest products (primary – liquid wood, secondary – brushwood, secondary – tree sap, fuel wood, etc.), which forestry enterprises receive during maintenance felling.

The value of plantations of young forest resources is proposed to be determined according to the cost approach, in particular, the costs that form the initial cost include:

- direct material costs (the cost of planting material and means of protection of forest nurseries, the cost of fuel and lubricants arising from the transportation of planting material);
- direct costs for the wages of workers engaged in planting material;
- expenses for payment of works and services provided by contractors related to planting and maintenance of forest assets;
- maintenance costs for equipment used during landing;
- costs for the care of forest plantations (sanitary, clearing, intermediate felling, protection of plantations from pests and diseases);
- service production costs related to the establishment and maintenance of wood assets;
- allocated general production costs.

Ripe forest crops and field protection forest strips are included in the composition of exploitation, as they are a source of obtaining commercial wood and perform ecological and economic functions. Information about operational assets is proposed to be accumulated on the sub-account “Operational forest resources” to the account

"Long-term biological assets".

A feature of the natural reproduction of forest resources is the formation of natural stands. In this regard, when conducting an inventory in the quarter of forest resources 2 years after the continuous felling of the main use, it is necessary to reflect in the accounting of naturally created forest plantations, which is recommended to be fixed on the sub-account "Other capital", since the company receives these assets on a free basis, at the cost of similar forest plantations created artificially.

Costs for agrotechnical care of planted forest crops are spent annually in order to create conditions for their growth and development. Measures aimed at the care of forest crops and maintenance felling make it possible to form stands of the desired species composition, to achieve the maximum growth of wood in thickness and height. Such costs are proposed to be reflected on the sub-account "Costs for the care of forest resources" to the account "Capital investments for the acquisition and cultivation of long-term biological assets", since they are a component of the cost price of forest resources.

Taking into account the long period of reproduction of forest resources, their value during harvesting operations will not correspond to the real costs incurred by forestry enterprises for reproduction. Such inconsistency leads to distortion of financial reporting indicators. According to P(S)BO 22 "Effect of inflation" [22], the company can revalue assets if their value differs significantly from the fair value on the balance sheet date. Therefore, we consider it appropriate to carry out a revaluation of the entire group of forest plantations by quarters when transferring them to the medieval group, using the inflation index.

The revaluation of the value of medieval and mature forest resources is recommended to be carried out every year before the preparation of annual financial statements. The results of the revaluation are reflected in the financial statements in the period on which such revaluation was carried out on the balance sheet date.

The developed methodical support for the accounting of costs for the reproduction of forest resources will allow the formation of information for stakeholders, taking into account the age composition of tree plantations, which will contribute to increasing the effectiveness of the main activities of forestry enterprises and will allow a real assessment of the structure of the enterprise's resources and their liquidity.

The specificity of the activity of forestry enterprises affects the composition of reporting and the process of forming its indicators. Current forms of financial reporting do not provide users with reliable information about forest use operations, since the costs of reproducing and harvesting forest resources are identified as part of current assets. This leads to the distortion of financial reporting indicators and the impossibility of establishing control over these natural resources. Therefore, in order to increase analytical ability and the ability to meet the information needs of external users, it is necessary to find ways to improve reporting forms.

According to the results of the study of the financial reporting of Ukrainian forestry enterprises, it was found that information on forest use operations is displayed

in form No. 1 “Balance” (Report on financial condition) in the line “Work in progress”, where information is recorded on the total costs for the reproduction of forest resources, harvesting and processing of forest products. The existing methodical support for the accounting of forest use operations does not meet the requirements of P(S)BO 30 “Biological assets” and P(S)BO 16 “Expenses”, since the costs of reproducing and harvesting forest resources are of different economic nature. Consequently, financial reporting does not provide its users with reliable information about forest management operations. Thus, the content of the financial reporting forms themselves needs to be adjusted and improved in order to satisfy users’ information requests regarding the state and availability of forest resources as an element of national wealth. To solve this problem, it is proposed to display information about forest resources as enterprise assets in form No. 1 “Balance Sheet” (Financial Status Report), taking into account the stages of the life cycle of wood (Figure 3).

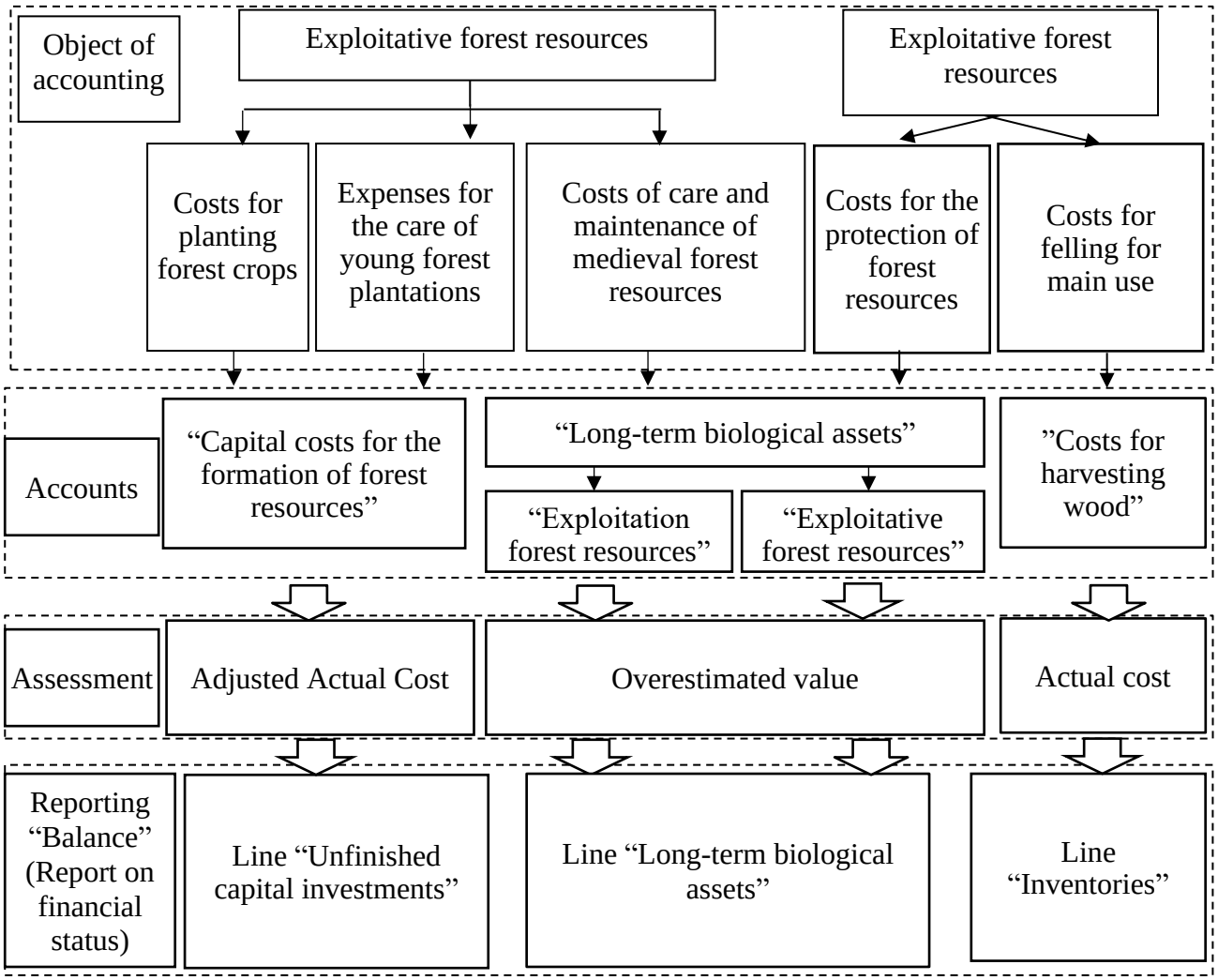


**Figure 3. Recommendations for displaying information about forest resources in the Balance Sheet (Financial Status Report)**

*Source:* developed by the authors.

Therefore, in the line “Long-term biological assets” of the Balance Sheet (Statement of Financial Status) it is proposed to reflect the accumulated value of mature

forest crops that can be used in economic activity for the main purpose and the value of medieval forest crops that cannot be used in economic activity for the main purpose destination, but forestry receives forest products from them), and in the line "Unfinished capital investments" – the initial value of created and young forest resources, consisting of costs for reproduction, care and protection, is accumulated.

The display of forest resources in the Balance Sheet (Statement of Financial Status) contributes to the formation of information about the available resources of the enterprise according to their liquidity, and also allows for the assessment and forecasting of changes in natural resources that the enterprise is likely to control in the future.

In addition to the Balance Sheet (Statement of Financial Status), information on forest management operations is reflected in the Notes to the Annual Financial Statements, which provide detailed information on financial statement indicators. Analyzing the content of the Notes of the Forestry of Ukraine, it should be noted that they do not satisfy the informational needs of users of financial statements regarding forest use operations, as they do not have a section adapted to the specifics of the activities of forest enterprises.

In order to detail the information provided in form No. 1 "Balance" (Report on the financial position), it is proposed to disclose the following information in the Notes to the annual financial statements in the "Biological assets" section:

- expenses for reproduction of forest resources;
- unexploited forest resources (medieval forest areas) of woody origin;
- non-exploitable forest resources of non-wood origin;
- exploitation forest resources of wood origin;
- exploitable non-timber forest resources;
- initial value of non-timber forest resources;
- accumulated depreciation on non-timber forest resources.

Disclosure in the Notes to the annual financial statements of information on forest resources, taking into account the stages of their life cycle and origin, will provide internal and external users with real and reliable information on forest use operations.

For business entities operating on the basis of sustainable development, the development of sustainable development reporting is relevant to satisfy stakeholders' information requests regarding economic, social and environmental activities. We believe that the Report on sustainable development in the part of operations on forest use should contain the following indicators (Table 1).

Disclosure of information on forest use operations in the specified sections will allow users of the report to be provided with complete and reliable information on the economic and ecological condition of enterprises in the forest complex. The formation of the Sustainable Development Report by domestic forestry enterprises contributes to ensuring competitive advantages in the process of economic activity by creating a positive business image and increasing the trust of domestic and foreign buyers in the company's products.

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*Table 1*

**Information content of the Sustainable Development Report in terms of forest management operations**

| No. | Indicator | Value |
|---|---|---|
| 1 | Total area of the forest fund, ha | |
| 2 | Area of contaminated forest resources, ha | |
| 3 | Number of forestry, units<br>Workshop districts, unit | |
| 4 | Total area of certified forest resources, ha | |
| 5 | Species composition of forest resources, %:<br>- conifers<br>- hardwoods<br>- soft-leaved | |
| 6 | Total stock of plantations, thousand $m^3$<br>in particular, exploitative forest resources | |
| 7 | Age structure, ha:<br>- young<br>- medieval<br>- arriving<br>- ripe and stagnant | |
| 8 | Volumes of reproduction of forest resources, ha:<br>- naturally<br>- artificially | |
| 9 | Volumes of harvested products, works and services of forestry | |
| 9.1 | in particular, volumes of logging products | |
| 10 | Harvesting of wood, total, $m^3$ | |
| 10.1 | in particular: log cabins for main use, $m^3$ | |
| 10.2 | logging related to forestry management, $m^3$ | |
| 10.3 | other cuttings, $m^3$ | |
| 11 | Out of the total amount of harvested wood, round timber is in total, $m^3$ | |
| 11.1 | in particular, for the production of lumber and their blanks: | |
| 11.2 | - conifers | |
| 11.3 | - oak | |
| 11.4 | - beechy | |
| 11.5 | for the production of glued plywood and veneer from them: | |
| 11.6 | - oak | |
| 11.7 | - beechy | |
| 12 | Wood for technological needs, $m^3$ | |
| 13 | Firewood, $m^3$ | |
| 14 | Lumber waste, $m^3$ | |
| 15 | Volumes of harvesting of non-timber forest products, $m^3$ | |
| 16 | Losses of forest resources, UAH<br>- forest fires<br>- diseases<br>- damage by pests<br>- unfavorable natural conditions<br>- arbitrary logging<br>- others | |

*Source:* developed by the authors.

**Conclusions.** The accounting system in the forest industry needs a conceptual review, as it does not reflect the real economic essence of operations that take place with forest resources. The inconsistency of the methodical provision of accounting for operations with forest resources to national and international accounting standards was revealed, as the existing method overestimates the liquidity of the company's assets. Taking into account the specifics of the forest industry, it is incorrect to account for costs for the reproduction of forest resources as part of current costs in the "Production" account, since the process of growing such assets continues for 50–70 years.

The accounting support for the reproduction of forest resources is proposed, which is based on the identification and grouping of costs for the reproduction of forest crops and contributes to the formation of complete and reliable information about the structure of the company's assets and their liquidity. The proposals are aimed at increasing the efficiency of forest asset management based on accounting information at the stage of forest resource reproduction to accelerate their recovery during and after martial law.

For the management of forest resources based on the principles of sustainable development, it is necessary to form a new procedure for displaying information on forest use operations in the reporting of forestry enterprises. It was established that the reporting of Ukrainian enterprises in the part of forest utilization operations does not reflect the specifics of the activities of forestry enterprises and does not allow to estimate the costs of conservation, reproduction and use of forest resources.

A procedure for disclosing information on forest use operations in reporting has been developed, which provides for the display of forest resources as part of long-term biological assets. And directions for expanding the indicators of the Notes to the annual financial statements and the information content of the Report on sustainable development in the part of forest use operations aimed at satisfying the informational interests of stakeholders of forestry enterprises are also proposed. Disclosure of information about the state and reproduction of forest resources will contribute to the reliable formation of indicators of the country's national wealth and will allow to increase the level of investment attractiveness of domestic enterprises in the forest industry to maintain and restore their economic condition during and after martial law.

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