

LONG WAY FROM GOVERNMENT TO GOVERNANCE: META-ANALYSIS OF UKRAINIAN FORESTRY REFORMATION

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Abstract: *This study presents findings of meta-analysis on forest governance in Ukraine, based on a rigorous database of 26 academic studies published from 2011 to 2018. We focus on key factors of low effectiveness and slow reformation process of the forest governance, as well as major challenges it faces for future development. Nine key challenges have been identified and classified into three groups: institutional, economic and political/legal. The most critical challenges include distribution of governance functions between different authorities, development of public-private partnerships and improvement of the finance mechanisms. Historical, socio-cultural and professional factors have been identified as major ones in slowing down forest governance reformation process, while 40% of publications do not explicitly state any factor at all. Our major finding is that most studies focus on a narrow range of challenges and factors, ignoring the complexity of forest governance reformation process, which reveals an urgent need for a better scientific discussion on the topic.*

Key words: *forest policy, forest governance, Ukraine, meta-analysis, institutional reform.*

1. Introduction

Reforming of forest governance in Ukraine is an issue that has been thoroughly discussed by scientists in recent years [25-26], requiring rigorous decisions-making that takes into consideration national development priorities and the need to comply with international obligations. Within its European integration process, Ukraine has

obliged itself to comply with the non-discriminatory timber trade principle [8] and actively participates in the Ministerial Conferences on the Protection of Forests in Europe [30], recognizing important linkages between forest governance and sustainable development.

Ukraine ranks 9th in Europe in terms of forest area and 6th in terms of total wood stock. The total area of forest lands in Ukraine is 10.4 million ha, with 9.6 million

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ha covered by forest vegetation [16]. The peculiar features of Ukrainian forests include: (1) low level of forest cover (15,9%); (2) growth of forests in different natural zones, manifesting diversity of forest cover types, management approaches and forest uses; (3) primarily ecological functions of forests and high share of protected areas (16,1%); (4) distribution of forest use rights among multiple public agencies; (5) large areas of forests either requiring special management regime or occupying radioactively contaminated areas [30].

Forest governance in Ukraine has been constantly changing since 1991, mostly characterized as ineffective and non-transparent [31]. Deficiencies within the governance system are often considered as major obstacle to the development of forestry and adjacent sectors of economy, thus exploring peculiar features of state forest regulation and governance in Ukraine has been under focus of scientists [26]. Deliberation on the topic has been supported by the Forest Law Enforcement and Governance second program that has finished in 2017 and provided important contributions on improving forest policy and management, with special emphasis on combating illegal logging. It is also currently supported by the Deliberation on the topic is also supported by the "Facilitating forest sector reform in Ukraine" project implemented by the World Bank. At this point, a wide variety of opinions exists among scientists on how forest governance reform should be approached, and which direction it should head, without any single agreed vision or set of provisions shared among researchers. The article responds to this gap through meta-analysis of current research on topic, focusing on key factors

contributing to slow forest governance reformation process and challenges it faces.

2. Methodology

Meta-analysis was applied in this study through a comprehensive review of scientific literature based on strict selection criteria and use of relevant statistical tools to reveal patterns across a large body of research. Meta-analysis allows to aggregate and systematize previous findings, as well as to observe general knowledge gaps within research on development and reformation of forest governance in Ukraine. We further describe the selection criteria and process used for this article.

2.1. Criteria for Including Studies

A primary search on articles for meta-analysis on forest policy and governance reform in Ukraine has been conducted using *Web of Science*, *Scopus* and *Google Scholar* databases using following selection criteria:

1. The article search (by title and keywords) featured following keyword combinations and variations based on them (search was conducted in both in Ukrainian and English languages): forest governance, forest governance reform, forest sector development, forest policy, forest regulation, also "Ukraine" was added to each search for a proper focus. A broad keyword search was applied considering the need for a complex approach to forest governance reform and an interdisciplinary scientific effort, involving researchers on economy, environment, law, policy and others. A peculiar feature identified at this stage

was prevalence of focus on state governance within scientific articles, and on forest governance reform / institutional reform in public discourse.

2. The articles were published from 2011 to 2018. The reason for provided timeframe was a change in subordination structure within central forest governance executive authority: State Forest Resource Agency become subordinated to the Ministry of Agrarian Policy and Food of Ukraine (it has previously been subordinated to the Ministry of Ecology and Natural Resources of Ukraine) [31].

3. The articles were published as full-length articles in a peer-reviewed journal, and for articles in Ukrainian scientific journals the criterion was inclusion into a list of specialized journals approved by the Ministry of Education and Science of Ukraine. Reports published by World Bank and PROFOR were not included into analysis, since they are a different type of publication, involving large number of authors and opinions, and are not comparable to scientific articles per se.

2.2. Constructing the Database

Based on the literature search and application of the criteria we selected 54 articles. The next step was to exclude articles that did not correspond to the aim of this study. Five article were excluded because of focusing solemnly on terminological issues, 7 articles were purely focused on statistical analysis of the forest resources use and provided no relevant contribution to the discussion, 9 more articles were excluded for focusing solemnly on single problematic issue (e.g. forest protection), without reference to the governance system in general. If a certain author had several publications on

the relevant topics, we chose the publication that best suited the aim of the analysis and provided the most comprehensive presentation of author's opinions. Inclusion of few publications by a single author into the analyses may have led to imbalanced representation of opinions. This eliminated 7 articles. Thus, the final list of articles selected for meta-analysis included 26 entries, including 8 articles on forest governance as such, 7 on forest policy, 7 on development of forest governance, 2 on reforming forest governance and 2 on regulation within forest governance.

3. Results

3.1. Forest Governance Reform Challenges

3.1.1. Institutional Challenges

A. Distribution of governance functions

The key challenges in reforming forest governance in Ukraine (Table 1) belong to the group of institutional challenges – 68% of researchers emphasize the need for organizational and functional transformation of the forest governance and forest management, 32% of publications emphasize the need for better distribution of governance functions between different authorities. Most crucial is the need better distribution of management and control governance functions [11, 17-18, 20, 32-33, 37], currently concentrated within one executive authority. State Forest Resources Agency, its regional subdivisions and state forest management enterprises combine functions of forest protection, safety, control of state of forest resources, performed by

representatives of the state forest guard, awarded with the status of law enforcement body. This leads to internal conflict of interests, since one body combines management and control function [26]. Institutional transformations in Ukraine's forestry have started, but the rules of the game and the arrangements have not changed substantially so far, neither administrative nor financial decentralization has been achieved [29].

Table 1
Challenges in reforming forest governance system in Ukraine, results of meta-analysis

Challenges	Number of publications, mentioning the challenge,%*
Institutional	68
Distribution of governance functions between different authorities	32
Change in the system of forest ownership	16
Decentralization of forest governance	8
Integration of environmental considerations (e.g. climate change)	12
Political/legal	12
Development of national forest policy	12
Absence of clear legislative definitions	8
Economic	64
Improvement of the finance mechanism	28
Development of public-private partnerships	32
Development of payment for ecosystem services mechanism	4

*31% of publications discuss two or more challenges

B. Change in the system of forest ownership

The Forest Code of Ukraine defines three forms of forest ownership – state, private and communal [34]. Unlike in most neighbouring Central European countries, property restitution was not considered in Ukraine during the process of reforming forestry in the years following the gaining independence. This was due to specific historical circumstances in the different regions of Ukraine and the public's fear that forest management would be unsustainable in privatized forests.

However, some authors support priority for state forest ownership in Ukraine, especially on strategically important forestlands [34], emphasizing their social and ecological functions [32] and almost completely lost skills of landowners in private forest management [33].

C. Decentralization

Decentralization of forest governance in Ukraine, emphasized by 8% of publications, is considered in the context of administrative decentralization reform in Ukraine in general [36], that started in

2014 and concerns primarily development of communal forest ownership, leaving incomes from wood and non-wood forest resources to newly created territorial communities [33], providing them with better control over forest management activities [26].

D. Integration of environmental considerations

The major focus of publications mentioning integration of environmental considerations (12%) is on recognizing their impact on forest management [19, 38] and development of national policy for counteracting global environmental threats [32], however no detailed measures in this regards are suggested by the scientists. Ukrainian and international environmental NGOs (WWF, IUCN, Earthsight, Green Cross Society and others) are increasingly involved in investigations on environmental and social impacts of forestry activities, especially biodiversity degradation, illegal logging and corruption. But still one of the main challenges for environmental and social aspect of forest governance is to create effective institutional mechanisms for the involvement of all stakeholders in the forest management planning and decision-making.

3.1.2. Legal/Political Challenges

A. Development of national forest policy

At this point there is no single document that would provide long term vision and goals for the development of forest policy in Ukraine [32], while a comprehensive system of forest legislation is in place. Some authors do not differentiate between forest policy and strategy, ignoring their relationships with forest legislation [15],

while others emphasize the necessity for improving legislation without considering the need for developing a national forest policy [13].

B. Legal provisions

Absence of clear legal provisions and terminology in the field of forest management, including the problematic definition of the term “forest” and complexity of differentiation between forest governance and state forest governance [6] is another legal challenge to reforming forest governance in Ukraine (8% of publications). The definition of “forest” in Ukraine significantly differs by its substance from the term widely used in EU, since there no single agreed understanding of what is the object of forest policy – forest or land [2]. According to FAO definition forest is “land with tree crown cover (or equivalent stocking level) of more than 10 percent and area of more than 0.5 hectares (ha)” [9]. According to the Forest Code of Ukraine [34] forest is a “type of natural complexes (ecosystem), combining mainly forest and bush vegetation with appropriate soils, grass vegetation, animal world, microorganisms and other natural components, interdependent in their development and influencing each other and natural living environment”. As we can see Ukrainian definition ignores connected between land, forest and forest resources, as well as identification of forest as property. Ukrainian legislation also utilizes the term “forest users” (usually state enterprises, having the right to own harvested wood and income from its distribution) and not “forest owners”. Forests, as well as other natural resources is the property of Ukrainian nation.

3.1.3. Economic Challenges

A. Finance mechanism

Among economic challenges for reforming forest governance in Ukraine finance mechanism is the most widely mentioned (28% of publications). Two key aspects of the mechanism are considered as crucial: 1) creation of a specialized forest fund, which would be financed from income from wood and non-wood forest products [7, 33], as well as contributions from wood processing enterprises to support forest management activities [3-4], and 2) improvement of financial instruments of forest policy – introduction of innovations into forest management through tax exemptions [3], increasing deductions from fee for special use of forest resources to local authorities budgets to stimulate projects aimed at afforestation and forest resource regeneration on a regional level [14]. Development of the payments for ecosystem services mechanism has not achieved much attention from the scientists, with only one publication mentioning the issue [27].

B. Public-private partnerships

Active development of public-private partnerships within forest governance in Ukraine has been investigated by the 32% of the analyzed articles. Scientists emphasize the need for developing small entrepreneurship and involvement of private entities to forest management operations, which already takes place in certain parts of western Ukraine [7, 22]. Forest concession is considered by some authors as a prospective direction for public-private partnerships, facing legal limitations, since Ukrainian legislation forest management is not clearly defined

as separate sphere of economic activity, objects of which may be provided into concession [23]. It is also worth considering that Ukraine has lower forest cover compared to other countries who have successfully implemented forest concessions.

Forest clusters are actively considered in scientific articles on issues of institutional reform of forest governance in Ukraine [12, 21, 26]. A clear benefit of using them is deepening of collaboration between woodworking industry and forest management, as well as increase in volumes of production from wood forest resources. A critical limitation in this case is availability of wood within the region of cluster formation, which may increase economic inequality between better (Carpathians, Polissia) and less (Steppe, Forest steppe) forested regions of Ukraine.

3.2. Factors Slowing Down Forest Governance Reform

Institutional reforms within forest governance have been happening in Ukraine since it gained its independence. This period has witnessed several important organizational changes within the forest governance (Table 2), however a complex of problems persists, signifying a need for further reform: high level of societal dissatisfaction with the system of the forest governance, absence of state finance of forest management operations, lagging of the current governance system behind key trajectories – decentralization, marketization, stakeholder participation. Thus, our second question for the meta-analysis was "what are the main factors, slowing down reformation of forest governance in Ukraine?".

Table 2

Organizational transformation with forest governance authorities in Ukraine: major events since 1991 till now ([31] with changes)

Year	Event
1991	Ministry of Forestry of Ukraine is established as the result of Ukraine becoming an independent country
1997	Ministry of Forestry of Ukraine gets eliminated The State Committee on Forestry directly subordinated to the Cabinet of Ministers of Ukraine becomes a new authority
2005	State Committee of Forest Resources of Ukraine becomes subordinated to the Ministry of Environmental Protection of Ukraine
2010	State Agency of Forest Resource of Ukraine, a previous authority reframed, becomes subordinated to the Ministry of Agrarian Policy and Food of Ukraine

On the bases of the conducted meta-analysis we have identified that most publications (60%) only implicitly mention – authors do not consider them as their major research objectives, meanwhile other 40% of publications do not provide any analysis of factors. Within the publications, where those factors were mentioned we identified their three major groups: *historical* – such as absence of a proper legal framework for reform and market regulation in this sphere due to the heritage of the old command economic system and centralized forest governance model, *socio-cultural* – insufficient awareness of society about social and environmental functions of forests, benefits of multiple use forestry, and finally, *professional* – low level of application of modern technologies in production, IT support skills within training of young generation of professionals, absence of statistical data and analytical assessments on effectiveness of realization of previous forest governance strategies and programs (Figure 1).

4. Discussion

Based on the meta-analysis, we have identified that current scientific research on reforming forest governance system in Ukraine may be characterized by following features:

1. *Absence of holistic (systemic) approach to reforming the forest governance*

The contemporary stage of forest governance reformation is influenced by a series of key drivers, which may be classified into political/legal (inconsequent reforming process, weak political will, absence of interest from political leaders of the country in realization of international forest governance initiatives etc.), economic (state finance of forest management, marketization, financial compensations aimed at slowing down deforestation rates, absence of transparent rules for trading forest products etc.), social (the level of social concern over state of forest ecosystems, societal opinions on forest ownership

models, potential for including wider public into forest governance process etc.) and biophysical (climate change, forest fires, forest pests and diseases etc.) groups. Meanwhile, analyzed

articles mostly do not apply this or any other comprehensive and systematic approach (Figure 2) to reforming forest governance system in Ukraine and mainly focus on one or few aspects of reform.

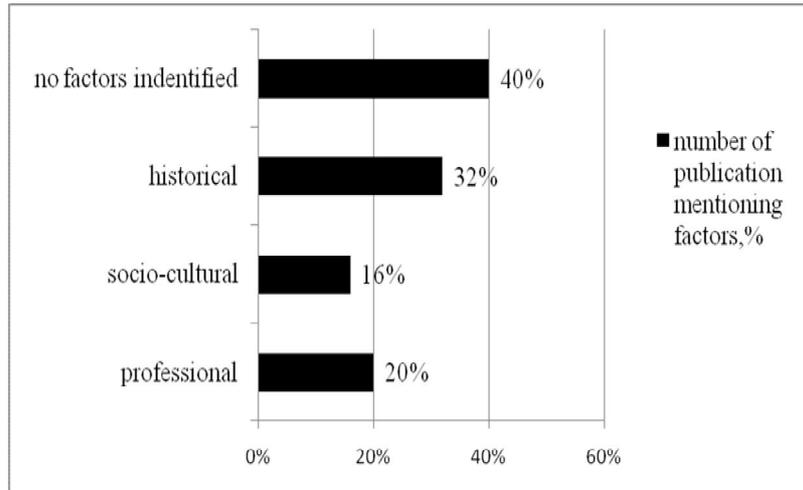


Fig. 1. Factors slowing down forest governance reform in Ukraine, results of meta-analysis

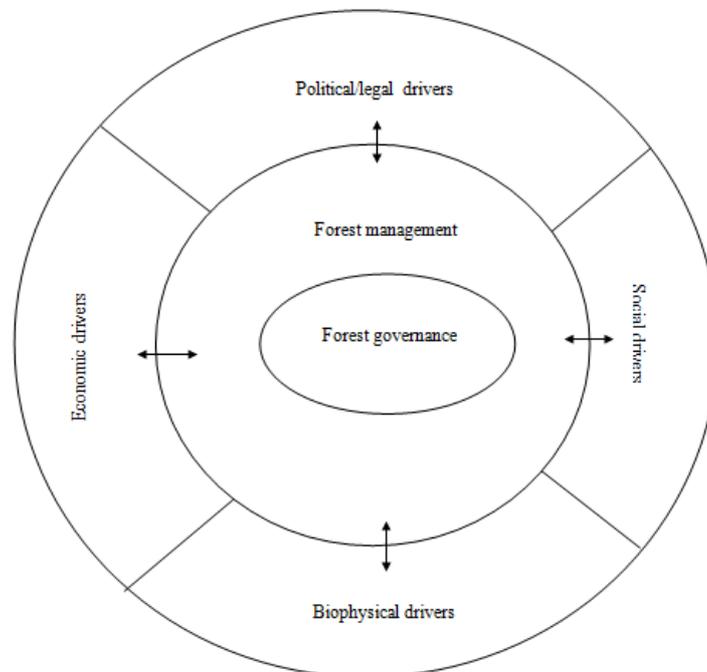


Fig. 2. Complex (systematic) approach to forest governance reformation in Ukraine considering different types of drivers

2. Recommendations on reforming forest governance provide little or no detail on relevant actions that need to be implemented.

Articles from the meta-analysis provide very limited insight into actual activities and measures that need to be taken, rather focusing on narrow theoretical fragments of the broader picture and not providing clear reference points for the necessary reform in the context of the challenges they describe. In most CEE countries, reforms more radically changed the institutional environment. These changes strengthened the role of the forest sector, opened new markets, and increased effectiveness of forest management, but forest resources in some countries at the beginnings of this transition found themselves in a risk [28].

3. Ignorance towards general trends within forest governances

Bas Arts (2014) identify decentralization, marketization and participation as key trends within improving of forest governance. Stakeholder participation within forest governance in Ukraine is partly realized, however it is usually limited to passive forms of participation (informing and consultation). Decentralization is studied mostly within the context of administrative reform, while marketization concerns with a limited number of activities – such as forest certification and payments for ecosystem services, with former achieving more attention than the latter, while scientific exploration of ecosystem services in Ukraine has been very marginal. It is worth noting, that The Law of Ukraine “On the Foundations (Strategy) of National Environmental Policy of

Ukraine Until 2020” [35] has mentioned the need for implementing an informational campaign on the value of ecosystem services taking Ukrainian ecosystems as an example, as well as establishment and further application of ecosystem services valuation mechanisms until 2015, however no analysis on implementation of these measures has been conducted.

4. Fragmented analysis of the current forest governance. The last decade has witnessed two prevailing systematic approaches to assessing forest governance: Analytical Framework for Assessing and Monitoring Forest Governance developed by World Bank and UN Food and Agriculture Organization (2011), and Forest Governance Initiative by the World Resource Institute and its partners [5]. Abovementioned methodologies to assessing forest governances comprise all necessary elements and using them for analysis may be a key starting point for analysis aimed to provide comprehensive recommendations on reforming forest governance. Good governance (stakeholder participation; cooperation and knowledge generation; cross-sectoral policy coordination; better policy coordination inside the forest sector, institutional arrangements, participatory policy, transparency), fair rent distribution that support local socioeconomic development, and SFM which takes into account the multifunctional value of forest landscape, potential of ecosystem services and defines the scale of forestry activities are core tools for forest resource decision making [29].

5. Conclusion

Forest governance reform has started more than 25 years ago and still continues. The period witnessed several key institutional and organizational changes in the system, however complexity of present challenges reveals necessity for further reformation.

The meta-analysis revealed that key challenges lie in the economic and institutional realms. As in regards to factors slowing down the reformation process – 40% of reviewed articles do not touch on the topic at all, 32% emphasize absence of appropriate legal basis and market regulations (*historical factors*), 16% - low social awareness about importance of forests (*socio-cultural factors*), while 20% focus on low level of professional development and insufficient information support within the field (*professional factors*). Meta-analysis also revealed low support towards certain principal measures, such as privatization of forests, meanwhile scientists emphasize positive potential of market regulation in regards to forest governance as well as development of public-private partnerships. More systematic and comprehensive studies on the issue of forest governance are required, as well as more focused studies on issues that have received only marginal attention – most of all integration of environmental considerations and payments for ecosystem services into the forest governance system.

References

1. Arts, B., 2014. Assessing forest governance from a 'Triple G' perspective: Government, governance, governmentality. In: Forest Policy and Economics, vol. 49, pp. 17-22.
2. Bobko, A.M., 2012. Silviculture and state policy on the use of forestry lands in Ukraine. In: Scientific Journal "Economy of Ukraine", no. 3, pp. 70-79.
3. Boyko, O.V., 2011. Mechanism of forming a strategy for innovative development of forest enterprises. In: Scientific Journal "Marketing and Management of Innovations", no. 2, pp. 119-123.
4. Boyko, Ya.M., 2011. Financial and economic mechanism of forestry development in the region. In: Scientific Bulletin of Uzhgorod University, no. 3, pp. 16-19.
5. Davis, C., Williams, L., Lupberger, S. et al., 2013. Assessing Forest Governance, the Governance of Forests Initiative Indicator Framework. World Recourse Institute, Washington, USA.
6. Drobko, E.V., Levkivskiy, V.M., 2013. Public Administration and State Forest Policy: The Theoretical Aspect Scientific Bulletin of the Academy of Municipal Governance. In: Management, no. 2, pp. 147-153.
7. Dyachyshyn, O.V., 2015. Forestry reform in Ukraine: consequences and problems. In: Scientific Bulletin of UNFU, vol. 25(7), pp. 48-53.
8. European Commission, 2014. The Ukraine–European Union Association Agreement. Available at: <https://trade.ec.europa.eu/>. Accessed on: October 1st, 2018.
9. Food and Agriculture Organization, 2000. On definitions of forest and forest change. Working paper. Rome, Italy.

10. Food and Agriculture Organization, 2011. Framework for assessing and monitoring forest governance. The Program on Forests (PROFOR), Rome, Italy.
11. Furdychko, O.I., Drebot, O.I., 2012. Forestry sector of Ukraine's economy: problems and prospects of development. In: Scientific Journal "Economy of Ukraine", no. 3, pp. 70-80.
12. Holyan, V.A., Demydiuk, S.M., Hordiychyk, A.I., 2012. Improving of economic and environmental legislation on regulation of forestry enterprises: domestic reality and possible implementation of foreign experience. In: Scientific Journal "Investments: Practice and Experience", vol. 12, pp. 26-28.
13. Hulyk, H.S., 2015. State ecological, economic and legal policy on implementation of sustainable forest management in Ukraine: theory and practice. In: Scientific Journal "Global and National Problems of Economics", no. 7, pp. 581-584.
14. Karpuk, A.I., Dziubenko, O.M., 2017. Financial and economic regulation of forest management as important prerequisite of investments increase in forest reproduction. In: Scientific Journal "AgroWorld", vol. 7, pp. 3-11.
15. Kichko, I.I., Harus, Yu.O., 2016. Prospects for forestry development in Ukraine. In: Scientific Journal "Global and National Problems of Economics", no. 11, pp. 128-133.
16. Krynytskyi, H.T., Lakyda, I.P., Marchuk, Yu.M. et al., 2017. Forests and Forestry in Ukraine. In: Scientific Bulletin of UNFU, vol. 27(8), pp. 10-15.
17. Leno, R.V., 2012. The perspective directions of the implementation of the foreign experience in the system of governance of the forest management in Ukraine. State Governance, vol. 2.
18. Marfina, N.V., 2012. Issues of organization of state forest management in Ukraine. In: Collection of papers "State and Law. Legal and political sciences" of Institute of State and Law of National Academy of Sciences of Ukraine, vol. 53, pp. 468-474.
19. Mazurenok, O.R., 2014. Economic Value Forests of Ukraine and Strategy their Effective Development. In: Scientific Bulletin of the Kherson State University, Economic Series, vol. 5, pp. 209-212.
20. Melnychenko, O.A., 2015. Forestry as Public Administration Object. In: Theory and Practice of State Governance, vol. 3(50), pp. 24-30.
21. Melnyk, T.D., 2012. Regional peculiarities of reproducing forest resource potential: an investment and institutional dimensions. In: Investments: Practice and Experience, vol. 12, pp. 29-32.
22. Mishenin, E.V., Mishenina, H.A., Yarova, I.E., 2012. Ecological, economic and social directions of forestry development on a business basis. In: Scientific Bulletin of Sumy National Agrarian University Journal, vol. 3(51), pp. 3-10.
23. Pechuliak, V.P., 2015. Concession agreement as a perspective method of state regulation in forestry in Ukraine. In: Scientific journal "Forum of rights", vol. 4, pp. 211-217.
24. Rohach, S., 2013. Trajectories for balancing institutional provisions of the forest sector development in Ukraine. In: Bulletin of the Sumy National

- Agrarian University. Volume Finance and Credit, pp. 213-218.
25. Shershun, M.H., 2013. Directions of reformation of organizational-economic structure of forest governance. In: Scientific Journal "Balanced Nature Use", vol. 1, pp. 5-12.
 26. Shubaliy, O.M., 2014. Transformation of forest management system on the principles of decentralization and division of authority. In: Scientific journal "Economist", no. 8, pp. 27-32.
 27. Soloviy, I.P., 2016. Concept of Payments for Ecosystem Services: Global Experiences and Prospects of its Implementation in Forest Sector. In: Scientific Papers of the Forest Sciences Academy, vol. 14, pp. 252-258.
 28. Soloviy, I.P., Nijnik, M., Deyneka, A.M. et al., 2017. Reimagining forest policy, institutions and Instruments through concepts of ecosystem services and social innovations: Ukraine in the focus. In: Scientific Bulletin of UNFU, vol. 27(8), pp. 82-87.
 29. Soloviy, I., Poliakova, L., Lakyda, P. et al., 2012. Towards modern governance in forestry and forest policy development in Ukraine. Assessing Forest Governance in a Context of Change. In: Proceedings of abstracts from the IUFRO Seminar Assessing Forest Governance in a Context of Change Sarajevo, Bosnia-Herzegovina, pp. 53-55.
 30. State Forest Resource Agency of Ukraine, 2016. Available at: <http://dklg.kmu.gov.ua/>. Accessed on: October 1st, 2018.
 31. Storozhuk, V.F., 2016. Overall assessment of forest governance in Ukraine. Report within program on improving forest law enforcement and governance in the European Neighborhood Policy East Countries and Russia.
 32. Synyakevych, I.M., 2012. National forest policy in the context of global environmental threats. In: Scientific Journal "Economy of Ukraine", no. 3, pp. 61-68.
 33. Tkach, V.P., Torosov, A.S., 2015. Improvement of forest relations and forest management in Ukraine. In: Scientific journal of the Forestry Academy of Sciences of Ukraine, vol. 13, pp. 24-31.
 34. Verkhovna Rada of Ukraine, 2006. Forest Code of Ukraine. In: Official Bulletin of Verkhovna Rada of Ukraine, no. 11.
 35. Verkhovna Rada of Ukraine, 2011. The Law of Ukraine "On the Basic Principles (Strategy) of the State Environmental Policy of Ukraine for the Period until 2020" Official Bulletin of Verkhovna Rada of Ukraine, no. 26.
 36. Yanchevskyy, R.V., Fedotov, I.R., 2011. Improvement of Public Administration in Forestry within the Administrative Reform in Ukraine. In: Scientific Bulletin of the Academy of Municipal Management. Series: Management, vol. 4, pp. 172-177.
 37. Yegorova, T.P., 2015. European Forest Law as an Innovative Element for National Forest Policy. In: Adaptation Ukraine's regulations to EU legal requirements in the contemporary context, pp. 86-94.
 38. Zamula, K., 2013. Current Status of Forestry in Ukraine. In: Agrosvit, vol. 19, pp. 54-59.