



## REVIEW

on the materials submitted for participation in a competition for the academic position of "Associate Professor" in professional field 6.5. Forestry, scientific specialty "Forest Reclamation, Forest Protection and Special Uses in Forests", announced by the Institute of Forestry - BAS in the State Gazette No. 18/17.02.2026

**Candidate for participation in the competition:** Dr. Eng. Todor Nikolov Stoyanov, Chief Assistant Professor at the National Research Center "Forest Ecology" of the Institute of Forestry at the Bulgarian Academy of Sciences

**Prepared by the review:** Prof. Dr. Ivan Petrov Paligorov – University of Forestry

### 1. Brief biographical data.

The candidate for the competition, Dr. Eng. Todor Nikolov Stoyanov, is a Master of Science in Geo-Ecology from the University of Mining and Geology "St. Ivan Rilski", majoring in Ecology and Environmental Protection since 2004. In 2010, he graduated from the University of National and World Economy, majoring in Business Administration, Master of Science in Economics. In 2020, he defended his dissertation for the Doctoral Degree at the University of Forestry on the topic: "Study of the Opportunities and Prospects for the Development of Credit Cooperatives in Bulgaria".

The candidate's professional career began in 1998 as an expert in Environmental Protection Control in the Department of Ecology and Cleanliness of the Sofia Municipality - Mladost District. Since 2003, he has been a junior expert in the Sofia Inspectorate - Department of "Special Unit and Internal Control". Since 2007, he has been an internal auditor at the State Fund "Agriculture". Since 2008, he has been a chief expert in the Directorate for Cohesion Policy for the Environment (Managing Authority of the Operational Programme "Environment" 2007-2013), Department "Monitoring and Reporting" of the Ministry of Environment and Water. Since 2013, he has been a consultant in the management of projects financed by the Structural and Cohesion Funds of the European Union in various companies. Since 2020, he has been an assistant, and since 2021, he has been a chief assistant at the National Research Center "Forest Ecology" of the Institute of Forestry at the Bulgarian Academy of Sciences.

It should be emphasized that the candidate meets the minimum national requirements for participation in the competition: he holds the ONS "Doctor", has held the academic position "Chief Assistant" for more than 2 years.

### 2. Compliance of the submitted documents and materials of the candidate with the minimum requirements, according to the Regulations for the acquisition of scientific degrees and holding academic positions at the Institute of Forestry of the Bulgarian Academy of Sciences.

The submitted documents and materials for the competition allow it to be convincingly stated that the candidate for the competition, Senior Assistant Professor Dr. Eng. Todor Nikolov Stoyanov, meets all minimum national requirements under the Law on Forestry and Forestry of the Bulgarian Academy of Sciences, the Regulations for its implementation, as well as the additional requirements of the Regulations for the acquisition of scientific degrees and holding academic positions at the Institute of Forestry of the Bulgarian Academy of Sciences for the professional field and scientific specialty of the announced competition. I would like to summarize the assessments by groups of indicators of the minimum requirements, as follows:

INDICATORS BY GROUP	Minimum requirements	PERFORMANCE
GROUP OF INDICATORS A	Minimum requirements - 50 points	50.00 points

DISSERTATION THESIS FOR AWARDING THE EDUCATIONAL AND SCIENTIFIC DEGREE "DOCTOR" 50.00 points		
<b>GROUP OF INDICATORS B</b>	<b>Minimum requirements - 100 points</b>	<b>233.74 points</b>
HABILITATION THESIS - SCIENTIFIC PUBLICATIONS (NOT LESS THAN 10) IN EDITIONS THAT ARE REFERRED TO AND INDEXED IN WORLD-RENOWNED SCIENTIFIC INFORMATION DATABASES - 10 pcs. 233.74 points		
<b>GROUP OF INDICATORS D</b>	<b>Minimum requirements - 200 points</b>	<b>206.88 points</b>
PUBLISHED MONOGRAPH THAT IS NOT PRESENTED AS A MAIN HABILITATION THESIS 100.00		
ARTICLES AND REPORTS PUBLISHED IN SCIENTIFIC PUBLICATIONS, REFERENCED AND INDEXED IN WORLD-RENOWNED DATABASES WITH SCIENTIFIC INFORMATION 30.00		
ARTICLES AND REPORTS PUBLISHED IN NON-REFERENCED JOURNALS WITH SCIENTIFIC REVIEW OR PUBLISHED IN EDITED COLLECTIVE VOLUMES 55.00		
STUDIES PUBLISHED IN NON-REFERENCED JOURNALS WITH SCIENTIFIC REVIEW OR PUBLISHED IN EDITED COLLECTIVE VOLUMES 1.88		
PUBLISHED CHAPTER OF COLLECTIVE MONOGRAPH 20.00		
<b>GROUP OF INDICATORS E</b>	<b>Minimum requirements - 100 points</b>	<b>580.00</b>
CITATIONS OR REVIEWS IN REFERENCED JOURNALS WITH SCIENTIFIC REVIEW 37 pcs. 555.00		
CITATIONS IN MONOGRAPHS AND COLLECTIVE VOLUMES WITH SCIENTIFIC REVIEW 2 pcs. 20.00		
CITATIONS OR REVIEWS IN NON-REFERENCED JOURNALS WITH SCIENTIFIC REVIEW 1 pc. 5.00		
<b>GROUP OF INDICATORS E</b>	<b>Minimum requirements - 50 points</b>	<b>215.00</b>
PARTICIPATION IN A NATIONAL SCIENTIFIC OR EDUCATIONAL PROJECT 75.00		
PARTICIPATION IN AN INTERNATIONAL SCIENTIFIC OR EDUCATIONAL PROJECT 80.00		
MANAGEMENT OF A NATIONAL SCIENTIFIC OR EDUCATIONAL PROJECT 60.00		
ADDITIONAL INDICATORS OF THE FORESTRY INSTITUTE - BAS (Advantage) 5.00		
PEER WORK 5.00		
<b>TOTAL POINTS</b>	<b>Minimum requirements 500 points</b>	<b>1290.62 points.</b>

The data mentioned above shows that for participation in the competition, the candidate Dr. Eng. Todor Sroyanov presents 11 published scientific articles in refereed in world-renowned databases with scientific information, which exceeds twice the number of minimum required points. Additionally, he participates with another 11 publications - 1 monograph, 7 articles in peer-reviewed publications, 2 studies and 1 chapter of a collective monograph, which are also more than required. This naturally contributes to approximately 6 times more than the minimum required points of citations. It should also be emphasized that the candidate has active participation in scientific projects, both as a member of the working group and as the leader of two scientific projects, which is the basis for obtaining original scientific results, their publication in well-known databases and, accordingly, their citation by the scientific community.

In summary, the candidate for the competition presents for participation in the competition scientific production, which, assessed separately and in aggregate, covers and fulfills all minimum national requirements under the Law on Forestry and Forestry of the Republic of Bulgaria, the Regulations for its implementation, as well as the additional requirements of the Regulations for the acquisition of scientific degrees and holding academic positions at the Institute of Forestry of the Bulgarian Academy of Sciences for the professional field and scientific specialty of the announced competition. Out of the required minimum of 500 points, the candidate participates with production, which is assessed at 1290.62 points.

### **3. General description of the submitted materials (by type; by importance; place of publication; language in which they were published; number of co-authors, etc.)**

The candidate for the competition, Senior Asst. Prof. Dr. Eng. Todor Stoyanov, participates in the competition with a total of 22 published scientific works, 10 of which are independent, and the rest are co-authored. Of the total number, 11 have been published in publications, referenced and indexed in international databases and can be assessed as publications of a very high degree of importance. Additionally, 1 monograph, 7 articles in peer-reviewed publications, 2 studies and 1 chapter of a collective monograph are presented. It should be emphasized that the documents clearly indicate the publications related to the dissertation and those for obtaining the academic position of "chief assistant". This allows me to confidently state that the publications submitted for the competition do not repeat the publications for obtaining the ONS "Doctor", as well as those for

obtaining the academic position of "chief assistant". Only 3 of the published scientific publications are in Bulgarian, and the remaining 19 are in English.

#### **4. Main directions of the candidate's research work and the most important scientific contributions.**

The management and protection of forest resources in the conditions of climate change and the increasing frequency and unpredictability of extreme natural phenomena test the possibilities to ensure the reproduction of ecosystem functions, not only at the local, but also at the national and global levels. In the presented scientific production, it is relatively easy to distinguish several main thematic directions in the field of which the candidate's research activity is focused. I would like to indicate them as follows:

- 1. Management and assessment of the risk of forest fires;**
- 2. Impact of fires and silvicultural activities on soils, restoration of forest ecosystems and their sustainability;**
- 3. Economic aspects of forestry - circular economy, European and national forest policy, forest cooperatives and forest resources;**
- 4. Forest certification as a soft policy instrument for ensuring sustainable use and management of forest resources.**

If we need to present it in a more detailed way, naturally one of the most serious environmental risks for forest ecosystems is forest fires, which lead to significant ecological, economic and social consequences, which is what the candidate pays very serious attention to in his scientific research.

Moreover, in order to establish the changes that occurred after afforestation of burned areas, on the main characteristics of the soils, forest litter and grass cover in the forest ecosystems of the territory of the Botevgrad State Forestry, experimental and control sites with different types of forest soils have been established for different periods of restoration (B.4.5.).

Key soil parameters were analyzed at different intensities of clear-cutting - thinning in beech (*Fagus sylvatica* L.) and spruce (*Picea abies* (L.) H.Karst.) stands compared to control plots without thinning, in six forest regions in the Central Stara Planina in Bulgaria, thereby enriching and making more comprehensive the understanding of how one of the most important activities in forests - clear-cutting and more specifically thinning, affects the accumulation of organic carbon in the soil (B4.2., B.4.4.).

The economic aspects of forestry, its inclusion in the circular economy is based on closed cycles (Jawahir & Bradley, 2016) and relies on the following: Reducing the consumption of natural resources; Increasing the use of renewable, recyclable resources; Reducing carbon emissions; Reducing material waste and minimizing losses; Maintaining the economic value of goods, materials and components (EUROPEAN ENVIRONMENT AGENCY, 2016). The principles underlying the circular economy already emphasize process and product design. The transition to a circular economy is a transformative challenge that has the potential to bring significant economic, environmental and societal benefits.

Marginalized mountain and forest areas are areas that face economic, social and demographic challenges due to their geographical and environmental characteristics. These regions often share many of the challenges associated with both mountain and forest areas (B.4.3.).

A study has been undertaken to assess the cost-effectiveness of forest certification since the introduction of the FSC certificate, which is important for forest operators as well as their financial donors. It is appreciated that there is literature assessing the costs and benefits of FSC certification for forest enterprises worldwide, it focuses on individual operators rather than on cross-sectoral analyses, as well as direct compliance costs and direct benefits obtained through market premiums. The operational and intangible benefits (and costs) associated with FSC certification in Bulgaria have

not been sufficiently studied (B.4.10.).

I would like to highlight even more important theoretical and methodological scientific contributions:

#### **Theoretical scientific contributions**

- For the first time, a comprehensive and systematic comparative analysis of Bulgarian and European legislation and policies related to forest fire management has been carried out, identifying structural deficits, contradictions and gaps limiting the effectiveness of the existing regulatory framework (Г.5.1.).

- The concept of considering forest fires as a systemic socio-ecological risk, determined by the interaction between climatic, ecological and anthropogenic factors, is substantiated, which requires a transition from reactive to preventive management (Г.10.1.).

- It has been proven that contemporary trends in Europe are characterized by an increase in the frequency and intensity of forest fires, which requires the integration of fire risk into sectoral policies (forestry, agriculture, regional development, climate adaptation) (Г.10.1.).

- The theoretical framework of the circular bioeconomy is expanded.

- The theoretical framework of the circular bioeconomy has been expanded by including non-timber forest products as an essential element for creating added value and sustainable development of rural areas (Г.8.5.).

- The concept of social enterprises in the forestry sector has been further developed, proving their role as a tool for integrating economic, social and environmental goals in the conditions of a circular economy (Г.8.3.).

- The role of cooperative structures as a mechanism for sustainable management of private forests and for socio-economic development of rural regions has been theoretically substantiated (Г.8.2., Г.8.7.).

#### **Methodological contributions**

- An original methodology for assessing the risk of forest fires at different territorial levels (protected areas, forestry units, departments and sub-departments) has been developed, based on a system of 29 indicators, grouped into five main categories, which increases the accuracy and objectivity of the assessment (Г.10.2.).

- An innovative risk register of factors for the occurrence of forest fires has been created, ensuring structured collection, processing and exchange of data in the context of inter-institutional cooperation (Г.10.2.).

- An integrated quantitative index for fire risk assessment ( $R_0$ ) has been developed, allowing standardized classification and comparability of results between different territorial units (Г.11.1.).

- A standardized tool (questionnaire) for collecting primary data has been proposed, which facilitates field work and ensures reliability and comparability of results (Г.11.1.).

- A methodological approach has been developed for creating forest fire risk maps, applicable in management practice and supporting the decision-making process (Г.10.2.).

### **5. Most significant scientific and applied achievements and implementation activities.**

- The practical applicability of the developed methodologies has been proven through their implementation and testing in specific territories – Botevgrad Forestry and Forestry Service Area and Pirin National Park (Г.7.1., Г.8.1.).

- A significant discrepancy has been established between the results of the national risk assessment methodology and those used in the forest management plans, which proves the need to improve the existing approaches and indicators (Г.7.1., Г.8.1.).

- Practical guidelines have been developed to improve forest fire prevention, including by optimizing monitoring, early warning and fuel mass management (Г.5.1., Г.10.1.).

- Specific legislative and management measures have been proposed to increase the

effectiveness of the forest fire prevention and control system in Bulgaria (Г.5.1.).

- Weaknesses in institutional coordination in the forestry sector have been identified and recommendations for its improvement have been developed, including through a clear distinction of functions and strengthening of inter-institutional interaction (Г.5.1., Г.8.4.).

- A long-term decline in the yield and economic significance of non-timber forest products in Bulgaria has been established, and unused resources and opportunities for their sustainable inclusion in the bioeconomy have been identified (Г.8.5.).

- It has been proven that forestry cooperatives and social enterprises can function as an effective tool for employment creation, social inclusion and sustainable management of natural resources (Г.8.2., Г.8.3., Г.8.7.).

#### **6. Reflection of the candidate's scientific publications in the literature (citability).**

From the submitted documents and materials for the competition, it can be summarized that the presented scientific production is widely known to the scientific community and has made an impression with its content and qualities. In quantitative terms, it should be noted that a comprehensive list of the identified cited publications is presented – a total of 40 citations, 37 of which are in peer-reviewed journals referenced in world-renowned databases, which naturally accumulates a total of 555 points. Additionally, 2 more citations are indicated in monographs and collective volumes with peer-review and 1 in non-peer-reviewed journals with peer-review. In total, in this group of indicators with a minimum requirement of 100 points, the candidate has 580. Moreover, the large volume of cited publications are published in English and are cited abroad. Even with the omission of some of the citations, due to difficulties in understanding the language of some publications, it can be summarized that the scientific production presented by the candidate for the competition, Senior Assistant Professor Dr. Eng. Todor Stoyanov, is widely reflected in the specialized literature.

#### **7. Participation in scientific and applied projects.**

From the submitted documents and materials for the competition, it is clearly evident that the candidate for the competition is active in his scientific and research work. This is a basis for the development of large-scale research and development activity, which bears its fruits in high-quality and widely cited publications.

In terms of quantitative indicators, his participation in the period 2020-2025 is in 11 scientific and research projects, of which 6 with national and 5 with international financing. It is worth noting the projects financed by the National Scientific Research Fund, a total of 6, some of which have not been completed. The candidate for the competition is the leader of 2 projects.

From a content point of view, the topics of the projects are related to the main thematic areas in the research pursuits of the candidate for the competition. Namely, in a study of the impact of forestry activities of different intensity on basic soil indicators under different tree species; approaches to improving the conservation status of natural habitats 4070 and 5130 under the parameter "Future Perspectives" under procedure BG16M1OP002-3.021 Improving the conservation status of natural habitats, implemented with the financial support of the Operational Program "Environment", co-financed by the European Union through the ERDF and from the national budget of the Republic of Bulgaria - 2021-2023; Research on the circular economy in the forest sector of Bulgaria: Sustainable management and innovations in forestry and the forest industry.

In summary, it can be said that the candidate for the competition for the academic position "Associate Professor" - Ch. Asst. Prof. Dr. Eng. Todor Stoyanov is a well-established scientist and researcher, who, in addition to participating in scientific and research projects, has also established himself as a project manager, to which the experience gained over the past more than 5 years contributes.

#### **8. Teaching and teaching activities (supervisor/consultant of doctoral students, student training, etc.)**

I do not have documents, nor have the candidate submitted any references for teaching and teaching activities. However, the candidate in the competition was a doctoral student during the period 2017-2020 at the faculty, which I had the responsibility to manage as dean. A mandatory element of the individual curriculum of doctoral students was assigning classes to students. He has fulfilled his obligations under the individual curriculum and has led classes to students on the topic of the dissertation work. He actively participated in the work of the department as a reviewer of students' theses, as well as in discussing the completed obligations of doctoral students at the end of the respective reporting periods.

#### **9. Assessment of the candidate's personal contribution.**

The documents and materials submitted for the competition allow for a general assessment that the presented production and the received contributions are the candidate's personal work. In 10 of the publications, he is the sole author. From these publications it is evident that the candidate has his own creative role and is limited to the directions of his creative searches and the field of his specific research work. This allows his contribution to stand out easily in collective developments, and in these developments summarizing results from more countries, it can be argued that the inclusion of data for Bulgaria is exclusively his contribution.

#### **10. Critical notes and recommendations.**

In the thorough familiarization with the scientific production and documents submitted for the competition, no significant gaps or contradictions were found. Probably the general desire of the members of the scientific jury would be to find or develop additional or accompanying research and obtain more new scientific facts in some publications that are read with interest, with new connections or aspects of already clarified scientific achievements that complement scientific knowledge. However, this should be expected from the future development of scientific research and the work of the candidate in the competition. The scientific production presented has sufficiently indisputable independent scientific, methodological and applied scientific contributions that characterize the candidate in the competition as an established scientist and researcher.

#### **11. Personal impressions.**

I know the candidate in the competition professionally from the time of his doctoral studies at the faculty, which I had the responsibility to supervise. The doctoral student Eng. Todor Stoyanov actively participated in the organization and conduct of the International Scientific Conference of the Faculty of Management and Sustainable Development throughout all the years of his studies. Not only that, he made an impression with the concise and very well-structured presentation of the results of his scientific production, always being responsive, dialogical and striving to provide reasoned answers to the questions or additions posed.

Personally, I know the candidate from his school years, when he participated in our practices with students. I can also assess from this perspective his growth over all these years, as a disciplined, thorough and very responsible colleague, with whom we see each other not only at the beginning of the working day, but also late at night, when there are few colleagues left at the university who have classes or are finishing their work on some research, scientific or educational project.

#### **12. Conclusion.**

Evaluating the scientific production presented as a whole, as well as the other documentation, I definitely believe that the candidate for the competition Ch. Asst. Prof. Dr. Eng. Todor Nikolov

Stoyanov fulfills the necessary conditions for holding the academic position of "Associate Professor". He holds the ONS "Doctor", has been a "chief assistant" for more than 2 years, and has presented more than the required minimum scientific production – a total of 22 published scientific works, of which 11 are published in publications, referenced and indexed in international databases, 1 monograph, 7 articles in peer-reviewed publications, 2 studies and 1 chapter of a collective monograph. Only 3 of the published scientific publications are in Bulgarian, and the remaining 19 are in English. The presented scientific production contains original achievements with specific scientific, methodological and scientific-applied significance, and in terms of content they do not repeat those for receiving the ONS "Doctor" and the academic position of "chief assistant".

Taking into account the need to assess the fulfillment of the minimum national requirements in the submitted documents and materials for the competition, it can be convincingly stated that the candidate for the competition, Senior Assistant Professor, Ph.D. Eng. Todor Nikolov Stoyanov, fulfills all minimum national requirements under the Law on Forestry and Forestry of the Republic of Bulgaria, the Regulations for its implementation, as well as the additional requirements of the Regulations for the acquisition of scientific degrees and holding academic positions at the Institute of Forestry of the Bulgarian Academy of Sciences for holding the academic position of "associate professor", in professional field 6.5. Forestry, scientific specialty "Forest reclamation, forest protection and special uses in forests", announced by the Institute of Forestry - BAS in the State Gazette No. 18/17.02.2026.

In connection with the above, I will vote positively and I propose to the members of the scientific jury to also vote positively for **the candidate for the competition** for holding the academic position of "associate professor", in professional field 6.5. Forestry, scientific specialty "Forest Reclamation, Forest Protection and Special Uses in Forests", announced by the Forest Institute - BAS in the State Gazette No. 18/17.02.2026. to be proposed by the scientific jury and to be elected to occupy the academic position of "Associate Professor", in professional field 6.5. Forestry, scientific specialty "Forest Reclamation, Forest Protection and Special Uses in Forests", announced by the Forest Institute - BAS in the State Gazette No. 18/17.02.2026.

Sofia, 17.05. 2026.

Reviewer:

Prof. Dr. Ivan Paligorov