

TO: CHAIRMAN OF SCIENTIFIC JURY  
ON COMPETITION FOR ACADEMIC  
POSITION "ASSOCIATE PROFESSOR"  
AT SU "ST. KLIMENT OHRIDSKI", GGF  
PROF. DR. NELI HRISTOVA

## **R E V I E W**

by

Prof. Dr. Mariana Nikolova

National Institute of Geophysics, Geodesy and Geography at BAS, Department "Geography",  
section "Geographic Information Systems",

member of the jury in a competition for the occupation of the academic position "Professor",  
announced in the State Gazette. 13 by 03.02.2020 from the Sofia University "St. Kliment  
Ohridski" (SU) in the field of higher education 4. Natural sciences, mathematics and  
informatics, occupational strand 4.4 Earth sciences, Scientific specialty "Biogeography and  
geography of soils" for the needs of department "Landscape ecology and protection of the  
environment" with candidate Assoc. Prof. Dr. Assen Assenov.

The review was written in accordance with the Development of Academic Staff in the  
Republic of Bulgaria Act (DASRBA) and the Regulations for its implementation, Regulations  
on the Terms and Conditions for Acquiring of Academic Degrees and Occupation of  
Academic Positions at the Bulgarian Academy of Sciences, and the Regulations for the  
implementation of the DASRBA in SU, pursuant to a decision by a Scientific Jury appointed  
by Order No RD 38-177/30.04.2020 of the Rector of SU and Protocol No. 1 of the meeting of  
the Scientific Jury.

### **Information about the competition**

The competition for the position of professor at the Faculty of Geology and Geography  
(FGG) at Sofia University "St. Kliment Ohridski" was announced in SG Issue No.  
13/03/02/2020 and published on the university's website. The need to take up this position is  
stated by the Department of Landscape Ecology and Natural Environment Protection at the  
FGG. Associate Professor Dr. Asen Ivanov Asenov is the only candidate in the competition.  
The documents submitted by him fully comply with the conditions of the competition, as  
defined by Art. 29, item 1 and item 2 of the DASRBA, of Art. 60, item 1 and item 2 of the  
RIDASRBA and Art. 114 (1) item 5 and 6 of the Rules of Procedure for acquiring scientific  
degrees and holding academic positions of Sofia University "St. Kliment Ohridski".

### **Information about the candidate**

Assoc. Prof. Dr. Assen Assenov is a lecturer at Sofia University „St. Kliment Ohridski" from 01.02.1986, after his graduating from the FGG in 1985. During the period from 1986 to 2012 he was assistant professor and senior assistant professor at the same faculty. In 2011 he defends his PhD thesis in occupational strand 4.4. Earth Sciences (Biogeography and Soil Geography). From 13.03.2012 he holds the academic position "Associate Professor" in the Department of the Landscape and Protection of the Environment (LPE) in FGG. At present, Dr. Assenov is Head of the Department of Landscape Ecology and Nature Conservation (formerly LPE) and is editor-in-chief of the Yearbook of "St. Kliment Ohridski" University, book 2 – Geography. The candidate is fluent in Bulgarian, English, German and Russian. Assoc. Prof. Assenov is a member of the Union of Scientists in Bulgaria – Biology Section, the Association of Professional Geographers and Regionalists and the Bulgarian Geographical Society.

### **Science metrics and implementation of the national minimum requirements for the position of "Professor"**

The scientific works of Assoc. Prof. Assen Assenov are mainly in the field of biogeography, phytocenceology, soil geography, landscape ecology, sustainable development, biodiversity and natural capital. The candidate is the author of a total of 97 scientific publications, according to the presented list of all publications, of which four publications are under competition for the Doctor degree, 39 are in competition for the acquisition of the scientific title "Associate Professor" (including 2 university textbooks, two studies and 2 chapters of monographs) and with 54 publications the applicant participate in the current competition for the acquisition of the scientific title "Professor". Over the past 10 years he has participated with reports in 20 national and international scientific conferences.

He has participated in a total of 11 research and educational projects, distributed as follows: 2 international, 3 with funding under national programs, 4 under the FSI – SU and two educational projects funded under the program "Student Practices" – MES. He is also the author of three scientifically popular publications. Of the 54 publications with which the candidate appears in this competition, one has been accepted for publication in an electronic edition, with assurances attached to this by the publisher, 14 are independent and the rest are co-authored. No representations have been submitted for the distribution of the copyright participation in the articles, which is why we consider it equivalent.

The author's report on the fulfilment of the minimum national requirements for the academic position "Professor" shows that according to Indicator 3 of Group B a monographic work of the candidate on the topic of the competition, which is an edition of University Press, is presented. In Group B, the candidate has 100 points. The publications on the indicators of group "G" are distributed as follows: Indicator 7 - 12 scientific publications in publications that are referenced and indexed in the world databases of scientific information; Indicator 8 – 37 scientific publications in unreferenced journals with scientific review or in edited collective volumes and Indicator 9 – 3 published chapters of collective monographs. The

candidate has 591 points on group G. The author's report on citations on indicators 10-12 of Group D shows that 38 publications have a total of 80 citations. According to it, the quotes in referenced and indexed in world-famous databases of scientific information or in monographs and collective volumes are 22, and the cited works are 10. There are 16 citations in monographs and collective volumes with scientific review, and the cited publications are 11. There are 42 citations in unrefereed journals and 17 cited publications. In aggregate, according to group D indicators, the candidate has 242 points.

According to the report on scientific and applied activity under Indicators 14, 15, 16 and 20 of group E, the applicant has a total of 180 points. He was supervisor of two successfully defended PhD students. He participated in two national and two international research/educational projects and is the author of one university textbook.

On the basis of the submitted documentation of the competition, we can confirm that the minimal national requirements for the acquisition of the scientific title "Professor" (Art. 2b, para 2 and 3, respectively the requirements under Article 2b, para 5 of the DASRBA) are fulfilled by the applicant, with the required minimum of 600 points being significantly exceeded, despite some noted inaccuracies.

### **Main scientific and applied contributions**

The main contributions from the research and scientific and applied activities of the applicant, presented in the Author's Report on the original scientific contributions of Assoc. Prof. Assenov are well protected in the applied scientific papers of the candidate. They are related to the development and improvement of the principles and approaches for biogeographical regionalization, the application and improvement of methods for the valuation of ecosystem goods and services, the creation of landscape maps as a result of landscape and environmental studies in different territories, with studies on different elements of the hierarchical systems of biodiversity and in the development of an original model for comparability of protected areas of the NATURA 2000 ecological network in the border regions of Bulgaria.

*The candidate's contributions are expressed in the following:*

- The thesis that the regionalization of the biogeographical space is based on a biome principle is protected. Respectively, the determination of the provinces and their border, including in Bulgaria, is based on the phytocenological communities of the biomes presented in these provinces by parallel application of a homologo logic and analog approach. The role of biomes in preserving biodiversity is underlined. A stand alone biome of laurel forests and shrubs (Laurilignosa) is justified, outside the biome of sclerophilic forests and Durilignosa shrubs. (C – 3-1).
- Biogeographical regionalization of Bulgaria has been carried out with an assessment of the natural capital of each biogeographical region. The boundaries between the biogeographical regions of the Danube Plain and the Pre-Balkan, as well as the border between East Stara Planina and Tundzha biogeographical regions, have been specified. It is clarified that the forests of eastern beech in Strandzha do not have an inverse predisposition to the location of the oak forests there. Natural grass

communities in the mountainous regions of Western Bulgaria have been found to be spread only on carney fields, where many relict species are preserved. The ecosystem approach has been applied to analyses the real and potential nature of natural capital in each biogeographical region. It was found that the natural capital of the country is in very good condition ( E 20 – 1).

- Various elements of the hierarchical systems of biodiversity have been studied. New horological information is presented for 19 species and subspecies of higher plants from the floristic region of the Valley of the Mesta River (G7 – 01). The landscape biodiversity in Mala Planina (G8–18) has been studied. Interactions between deposits of invasive species and those of conservational significant taxon in the same region (G7-08) have been identified. It is expressed a view that efforts should be focused more on the conservation of existing species than on the hope of the revival of the Lazarus taxon (G8–35).
- There has been done a redefining of phytocenological taxon from the dominant principle to the syntax known in Bulgaria, which contributes to a better understanding of the horizontal and vertical zonation of the floristic communities in Bulgaria (E20–1).
- It is argued that the introduction of information on habitat types in the complex analysis of the landscape is necessary in order to develop landscape indicators to assess the degree of anthropogenic load and to plan land use (G8-22; G8 – 23; G8 – 32; G8 – 33).
- A method of conditional valuation of ecosystem/landscape goods and services has been improved in the context of the concept of natural capital (G7–03; G8 -01; G8-17; G8 -19; G8-26 and G8-27).
- The thesis that the balanced equality between innovative economy, social equality and ecology, while preserving the collision and quality of ecosystem services, is only possible by specification of the focal points of refraction of ecosystem/landscape goods and services (D7–02).
- Conflicts in land use and utilization of natural resources have been identified through landscape and environmental studies and the creation of landscape maps, with the hemerobity index integrated into the assessment of landscape anthropogenisation (D 7-03; G8–12; G8–13; G8-20).
- An analysis of the biogeographical component in the works of Acad. A. Ishirkov has been carried out (G8 –34). A study on new sub-disciplinary in the field of biogeography and their role in interdisciplinary biogeographical research has been presented(G8–29; G8–34).

*The scientific and applied contributions of the applicant are:*

- Regional studies in connection with the creation of a Balkan plant database complement the descriptions of plant communities in Bulgaria (G7 –06; G7 – 12)
- Evaluation of regulating (assessment of organic carbon) and cultural ecosystem services has been carried out. (G7-05; G7 – 11; G8 – 31; G8 – 05; G8 –30; G8 –36; G9 – 02 and D9 – 03)

- New approaches have been applied for the valuation of natural capital resulting from the nature of a municipality, demonstrating the specific opportunities for sustainable development on the examples of the municipalities of Karlovo, Chepelare, Sofia, Ariltsi, etc. (D7-07; G7 -09; G7 -10; G8 - 01, G8 - 03; G8 - 04; D8 - 06; D8 - 08; D8 - 16; D8 - 17; D8 - 19; D8 - 27; G8 - 28, G9 -02). Landscape and environmental studies have been carried out in order to justify a entrance fee for three eco-trails in Bulgaria (G8 -11; G8 - 25).
- A model for comparability of NATURA 2000 protected areas in border regions of Bulgaria has been developed. A comparative analysis of the structure of the plant communities of habitat type 91MO mulgaria has been carried out. ( G8 - 04; G8 -06; G8 - 07; G8 - 09; G8 - 10; G8 - 14; G8 - 24; G8 - 01)
- The practical importance of the link between agriculture, biodiversity and landscapes has been proven ( G8 -21)

In our point of view, the scientific and applied contributions from the author's report are convincingly confirmed in the scientific publications and applied research of the applicant. In doing so, they are essential for optimization of environmental use, sustainable development, monitoring and environmental management.

### **Educational, teaching and expert work**

The whole scientific and teaching career of Asen Asenov is the result of his work at the FGG of Sofia University "St. Kliment Ohridski". Assoc. prof. Assenov teaches students from all forms of training in ten disciplines in the specialties "Geography", "Geography and Biology", "History and Geography", "Regional Development and Politics", as well as in the Master's program in "Landscape Ecology and Natural Capital".

For the period 2012-2019, Assoc. Prof. Assenov has an average audience occupancy of 537 hours. He is the author of three textbooks - "General Biogeography" (2001) (p. 297), "Biogeography of Bulgaria" (2006) (p. 543), and "Biogeography and Natural Capital of Bulgaria" (under seal) (p. 928), as well as 7 teaching aids and tools for the secondary school. The candidate is the scientific leader of seven successfully defended thesis, as well as two doctoral dissertations. He is the author of textbooks and teaching aids. He is a member of state exam boards.

The expertise of Assoc. Prof. Assen Assenov includes his participation in scientific juries for the award of scientific degrees and titles. He is Editor-in-Chief of the Yearbook of Sofia University „St. Kiment Ohridski", book 2 – Geography and of the edition "Biodiversity of NP Rila" (2015). He is a member of the editorial board of a collection of international scientific conferences (2015) as well as of four scientific committees of "Semiar on Ecolgia" with international parts in 2017, 2018, 2019 and 2020.

### **Comments and recommendations**

Some technical errors were noted in the documentation. The candidate's CV disagrees with the information in the other competition documents. For example, the number of scientific

juries of which the candidate was a member or chairman has not been updated. The date of acquisition of the "Doctor" degree is wrong. Instead of Diploma No SU 2011-16 from 19.12.2011, the date 19.12.2013 was written. This date is also incorrect in the Report on implementation of the national minimum requirements, where the date of issue of the document is 19.12.2001.

Given the overall research work and teaching experience of Dr. Assenov, we would recommend that he continue to work to strengthen the capacity of the department with specialists in the field of Biogeography and Geography of soils.

### **Conclusion**

From the review of the competition materials and the verification made, no violations of the procedure were found. The requirements of the DASRBA and rules of its application, as well as those of their application in Sofia University St, Kliment Ohridski have been complied.

The minimum requirements for the occupation of the academic position "Professor" in accordance with the Regulations for acquisition of scientific degrees and occupation of academic positions in Sofia University „St, Kliment Ohridski“, respectively of the requirements of art. 2b of the DASRBA had been fulfilled. According to the presented report for implementation of the minimum requirements and the inspection carried out, Dr. Assenov has exceeded the mandatory minimum for each of the groups of indicators B, G, D and E.

The presented scientific production for participation in the competition is in sufficient volume, at a high scientific level, contains scientific and applied contributions and does not include publications presenting the result of his doctoral thesis or other from the previous competition for the position “Associate Professor”. No evidence of plagiarism was noted.

In addition to sufficient research and educational activities, the applicant has management experience as a Head of Department, as well as essential expert activity - reviewer, compositional and editorial work, participation in exam committees, scientific committees in scientific forums and other public appearances.

**Based on these conclusions and the compliance of the competition documents with the requirements of the DASRBA, I give a positive assessment of the scientific works presented for the competition and I recommend the Scientific Jury to select Assoc. Prof. Dr. Assen Assenov for the academic position "Professor" in the field of higher education 4. Natural sciences, mathematics and informatics, occupational strand 4.4 Earth sciences, Scientific specialty "Biogeography and geography of soils" for the needs of section "Landscape ecology and protection of the environment" at the FGG, Sofia University “St. Kliment Ohridski”.**

30.08.2020.

Sofia

Compiled by:

Prof. Mariana Nikolova, PhD