

REVIEW

by Prof. Dimiter Enchev Syrakov, member of the scientific jury in a competition for the academic position of "Associate Professor" in professional field 4.4 "Earth Sciences", scientific specialty "Meteorology", in the department "Meteorological experimental data", Department of Meteorology of NIMH

This review is prepared on the basis of the Order of the Director General of NIMH Nr. ND-04-21 from 23.08.2021 and the decision from the meeting of the scientific jury from 15.10.2021. It is in accordance with the requirements of the Law for the development of the academic staff in the Republic of Bulgaria (ZRASRB), the Regulations for its implementation (PPZRASRB) and the Regulations of NIMH under ZRASRB. The review consists of three parts and a conclusion.

I. Requirements to the candidate

under Art. 24 (1) and Art. 26 (1), (2) of ZRASRB, art. 53 (1) and Art. 54 (1) of PPZRASRB and Art. 53 (1) and Art. 54 (1) of the Regulations of NIMH under ZRASRB

Senior. Assistant Dr. Lilia Ivanova Bocheva was born in 1968. She graduated from the Faculty of Physics at Sofia University "St. Kliment Ohridski" in 1992 with a Master degree in Meteorology. She immediately started working at NIMH as a meteorological technician (1993-1997). From 1997 to 2001 she was a physicist, from 2001 to 2007 she was a research associate III degree, from 2007 until now she is a senior assistant. In 2019 she became the head of the Meteorological Experimental Data (MED) sector, and in 2020 - the director of the Meteorology Department, while at the same time she continued to head the MED sector.

In other words, Bocheva's entire work experience of just under 30 years has been spent at NIMH, and more than 20 of them are in the extremely important unit for the institute - the Database. I do not intend to describe the importance of this unit for the overall activities of the Institute - this is known to all colleagues. During all this time she has worked on processing and control of current and archival meteorological information and preservation of the integrity of the meteorological archive, to establish the importance of the institute as an essential part of the institutions serving the state and the society.

From the inspection of the submitted materials for the competition, deficiencies and violations in the procedure for eligibility of the candidate to the competition have not been established.

II. Requirements for the research and the applied research

under Art. 24 (1), item 1, item 3, item 4, item 5 and Art. 26 (1) of ZRASRB, art. 53 (1), item 1, item 3, item 4, item 5 and Art. 54 of PPZRASRB, art. 53, item 1, item 4, item 5, item 6, item 7 of the Regulations of NIMH under ZRASRB

In the list of her publications, Dr. Bocheva indicated which of her works were used in writing her doctoral dissertation. The evaluation of the other publications, citations, management and participation in projects is given in the submitted by the applicant

SUMMARY TABLE

FOR THE VOLUME AND TYPE OF SCIENTIFIC PRODUCTION
under Art. 1a (1) and (2) of PPZRASRB and Art. 2 (4) of the Regulations of NIMH under
ZRASRB for **Associated Professor**

Groups of indicators	Minimum requirements	Points of the candidate
A	50	50
Б	-	-
B	100	189.5
Г	200	204.3
Д	50	100
E	-	240

From the presented table it can be seen that in the assessment of the research and scientific-applied activity of the applicant the sum of the points in all groups of indicators is equal to or exceeds the minimum requirements.

I will continue my review following the groups of indicators.

Group A includes the doctoral dissertation defended by the candidate and the points are equal to the minimum required. It has already been mentioned that the applicant also submitted a list of her publications on her doctoral dissertation, which she did not use further.

Group Б is relevant only when choosing a full professor. There are no requirements for an associate professor, here.

The publications submitted for review are divided into 2 parts. In the first part (indicator group B) she took advantage of the opportunity offered by indicator 4 - to replace the habilitation work with at least 10 works published in refereed and indexed journals. The corresponding list is presented, with which she scores almost 190 points with a minimum number of 100 points. All presented publications are thematically related to assessments and analysis of dangerous meteorological phenomena and meteorological extremes. All papers are in English, 4 of them have been published in international journals and 1 - in Bulgarian Journal of Meteorology and Hydrology. The remaining 5 are reports at international conferences published in full text. I accept the indicators presented in this group of publications as satisfying the conditions of indicator 4.

In the Г group of indicators, indicator 7, 4 publications are presented, which are referenced and indexed in the world databases with scientific information. They are all in English. Indicator 8 - publications in non-refereed journals with scientific review - presents 16 papers, 3 of which are in Bulgarian. 11 of these works have been published in our journal Bulgarian Journal of Meteorology and Hydrology, which I find very commendable. The total number of points from group Г is 204 with a minimum requirement of 200 points. Along with these works, Bocheva presented a list of 16 published in full text or extended summaries of reports in conference proceedings or other publications, which she did not score, but which confirm her significant activity in international level. I accept the publications presented in group Г as satisfying the minimum requirements.

Group D is dedicated to citations. 7 articles were cited, from which 2 articles published in Atmospheric Research have the largest number of citations. They are co-authored with Assoc. Prof. Dr. Petyo Simeonov, head of her doctoral studies. There is a small error in calculating the points from the citations - the points scored by Bocheva are 120 (24 citations by 5 points each), not 100, as she presented in the table above. I accept the citations presented in group D of indicators not only as satisfactory, but also as significantly exceeding the minimum requirements.

The last group of indicators E sets zero minimum requirements for the selection of an associate professor. However, in the Regulations of NIMH under the Law on Academic Affairs, Chapter III - conditions and procedure for holding academic positions, section four - conditions and procedure for holding the academic position "Associate Professor" in item 5 of Article 53 (1) clearly sets a requirement for managing successfully completed research projects with external funding. For me, this is only a minimum requirement - it is important not only management, but also participation in projects with external and internal funding. Externally funded projects are usually associated with solving problems of the contracting authority (except for NSF and European research programs) and lead to an increase in the institute's own funds, funds used to strengthen certain sectors and improve the work of the institute as a whole. Personally, I think that projects with internal funding are no less important - they are usually aimed at solving practical tasks of the institute, developing new ideas, new software products, new structures and new data processing systems, systems for forecasting phenomena, studying new characteristics of meteorological and hydrological processes. In addition to the management, participation in such projects is very important, because usually as participants are attracted people with enough experience to ensure the successful completion of the project.

In her documentation, the candidate reports on one successfully completed project with external funding and one project with internal funding led by her. The number of projects in which she is a participant is significant:

- European projects - 4
- Projects funded by the Research Fund - 2
- Externally funded projects (excluding NSF) - 15
- Projects with internal financing - 10

This large number of projects under the leadership or with the participation of Bocheva speaks of the high level of her experience, especially in the field of processing, evaluation and analysis of meteorological information and especially the climatic variations of extreme meteorological phenomena. This qualification was appreciated by the NIMH management body, which first appointed her head of the Meteorological Experimental Data sector and later director of the Meteorology Department, although she was only a senior assistant.

According to the various indicators of group E, L. Bocheva scores 240 points with zero minimum requirement.

Regarding the scientific and scientific-applied contributions of the candidate, in her report she summarizes part of her works in 4 scientific contributions related to determining the climatic and other characteristics of the Mediterranean cyclones, the potentially dangerous precipitation in Bulgaria, thunderstorms for the whole territory of the country and the related torrential rains, strong wind and destructive hail, and tornadoes in Bulgaria.

In her first scientific-applied contribution Bocheva defines herself as a main contractor in all activities related to the processing and input of meteorological information in the MED department - namely digitization and input into current and archival databases, development of procedures for standard and specialized data processing, quality control. Specialized tables have been created for entering the digitized information, special software products for data processing for atmospheric phenomena, which makes it possible to control the information and its use. Monthly tables and specialized procedures for assessment of dangerous meteorological phenomena have been created. All this is widely used in servicing ministries, government agencies, district and municipal structures, society, especially for the preparation of plans for risk assessment and prevention of dangerous meteorological phenomena, as well as municipal programs for air quality. Bocheva sees her second scientific-applied contribution in the management and organization of the activities for the creation of a digital archive of scanned images of the paper materials from the Meteorological Archive of NIMH in connection with the recommendations of the WMO for Climate Data Rescue. As can be seen, a large part of the developments is in fact the implementation of software products and other structures in the operational activities of the institute. Although not documented as implementations, these contributions and activities should be highly valued.

III. Opinions, recommendations and notes

From what has been said so far, it should be clear that I highly appreciate the scientific, scientific-applied and purely applied activity of the candidate. I have no remarks on the materials submitted for review.

Conclusion

The inspection of the submitted materials for the competition did not reveal any violations in the procedure. The requirements under Art. 24 (1), item 1, item 3, item 4, item 5, (2) and Art. 26 (1) of ZRASRB, art. 53 (1), item 1, item 3, item 4, item 5 and Art. 54 of PPZRASRB, art. 53, item 1, item 4, item 5, item 6, item 7 and Art. 54 of the Regulations of NIMH under ZRASRB are fulfilled.

Based on the acquaintance with the documents of the candidate for the competition and the evaluation, according to art. 27 (3), (4) of the ZRASRB of the publications presented by it, I confidently call on the members of the scientific jury in this competition to recommend to the Scientific Council of NIMH to award Senior Assistant Dr. Lilia Ivanova Bocheva the academic position of "Associate Professor".

Date:

REVIEWER:
/ prof. ~~Dimiter~~ Syrakov, NIMH /