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STATEMENT

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Member of the Scientific Jury appointed by Order No. 298/26.09.2025 of the Director of the Institute of Oceanology at the Bulgarian Academy of Sciences – Varna for conducting a competition for the academic position of "**ASSOCIATE PROFESSOR**" in the scientific specialty "**Oceanology**"; Scientific field: "Wave processes, coastal hydrodynamics and risk in the coastal zone", Professional field: 4.4. Earth Sciences, Field of higher education: 4. Natural Sciences, Mathematics and Informatics, announced in **the State Gazette, issue 63/01.08.2025** for the needs of the Coastal Zone Dynamics Department at the Institute of Oceanology of the Bulgarian Academy of Sciences

In the announced competition for the academic position of "**ASSOCIATE PROFESSOR**" in the scientific specialty "**Oceanology**", the only candidate is **Senior Assistant Professor Dr. Nataliya Kamenova Andreeva** from the Coastal Zone Dynamics Department at the Institute of Oceanology, Bulgarian Academy of Sciences.

1. General characteristics

The candidate, **Senior Assistant Professor Dr. Nataliya Kamenova Andreeva**, presents herself with a sufficient number and quality of publications for her participation in the competition, as well as with significant scientific and applied activity. All publications presented are within the thematic scope of the announced competition. I accept a total of 31 articles for evaluation in the competition, all of which are co-authored. Twenty-two of these are published in international journals with an impact factor or impact rank. Additional information about the candidate in global databases shows a high number of citations and Hirsch index, respectively. The table below summarises the candidate's main scientometric data:

Senior Assistant Professor Dr. Nataliya Kamenova Andreeva	Number
Publications submitted for participation in the competition	31
Articles in journals with impact factor/rank	22
Cited publications/sources	18/204
Reports at scientific forums	62
Articles in global databases:	34 Scopus, 23 WoS
Number of citations in global databases:	369 Scopus, 265 WoS
H-index	9 Scopus, 7 WoS
Participation and management of scientific projects	28 (1 leader)
• Funding from abroad	10
• Funding from Bulgaria	18

2. Opinion on the presence or absence of plagiarism in the publications submitted for evaluation

Upon review of the materials submitted for this competition, **no evidence of plagiarism was found.**

3. Main areas of the candidate's research work and most significant scientific contributions and scientific and applied achievements

The submitted self-assessment of scientific contributions **is considered sufficiently detailed, precisely structured and reliable.** The research activity of Senior Assistant Professor Dr. Nataliya Kamenova Andreeva is distinguished by a notable interest in **interdisciplinary approaches** and **diverse research methods**, and an ability to work on **issues** of practical importance **that are relevant to global oceanographic science.**

The candidate's main and most significant **scientific contributions** relate to her research on the wind-wave climate of the Black Sea, storm activity and the morphodynamics of sandy shores along the Bulgarian Black Sea coast, assessment of coastal risk from extreme storms, assessment of wave impact and vulnerability of the coastal zone, the influence of coastal protection hydraulic structures on the dynamics of coastal processes and the energy potential of sea waves in the Black Sea and along the Bulgarian coast. Among the contributions, the following stand out for their significance and scientific and practical value ***Original scientific contributions:***

✓ The first validation of the WAM Cycle 4 spectral wave model for the Black Sea for the period 1958-1998 by comparing the model results with *in situ* measurements from buoys and coastal wave gauges located in different areas of the basin, which proves the applicability of the model for regional studies. Clear seasonal and spatial differences in wind and wave regimes have been established – stronger winds and larger average waves in the western part of the Black Sea compared to the eastern part. Maximum wave heights and periods by region have been determined, as well as regional differences in the recurrence of storm events.

✓ The statistical parameters of wind waves measured with a hydroacoustic Doppler profilometer in the transitional waters of the Burgas Bay were analysed for the first time. Two consecutive autonomous measurement campaigns were conducted in the period 2021-2023 with an average duration of three months, and time series with hourly data were obtained for the significant wave height H_s , peak period T_p and average wave propagation direction D_m , from which statistical characteristics and frequencies of joint occurrence of parameters (H_s – T_p , H_s – D_m) were derived.

Confirmatory scientific contributions:

✓ The spatial and multi-year variability of wave exposure on the Bulgarian Black Sea coast was investigated based on numerical simulations of the wave climate for the period 1981–2016. For this purpose, the wave power indicator – equivalent to the wave energy transport parameter – was used

as a quantitative measure for assessing exposure. The study provides a basis for adaptation to climate change.

Scientifically applied contributions:

✓ For the first time for the conditions of the Bulgarian Black Sea coast and using the example of the Varna coast, the Coastal Risk Assessment Framework (CRAF) methodology has been applied to assess the threat of coastal flooding caused by extreme storm events with a recurrence interval of once every 100 years.

4. Significance of the results obtained

The analysis of the scientometric data from the scientific output submitted for review is **fully compliant** with *the Regulations on the conditions and procedures for acquiring educational and scientific degrees and for occupying academic positions at the Institute of Oceanology – Bulgarian Academy of Sciences*.

I fully accept the evidence presented by Senior Assistant Professor Dr. Nataliya Kamenova Andreeva for meeting the national minimum requirements for the academic degree of "Associate Professor". A review of the information submitted by the participant in the competition for meeting the national minimum requirements and the requirements of the Regulations of the Institute of Oceanology at the Bulgarian Academy of Sciences for holding the academic position of "associate professor" in scientific field 4. "Natural Sciences, Mathematics and Informatics", Professional field: 4.4. Earth Sciences, shows **that the minimum required points have been exceeded**, as follows:

- Group of indicators "A" – 50 points (50 points required);
- Group of indicators "B" – 129 points (100 points required);
- Group of indicators "D" – 238 points (required 220 points);
- Group of indicators "E" – 905 points (60 points required).

The candidate has submitted a list of 38 publications, grouped according to the required criteria. Of these, seven are submitted for the acquisition of an educational and scientific degree "PhD" (1 dissertation and 6 scientific publications), and they are not subject to review in this competition, but are taken into account in the overall characterisation of the candidate. Thirty-one titles are submitted for this competition, of which 26 are part of the report on compliance with the minimum national requirements and those of the Bulgarian Academy of Sciences (Indicators B4 and G7). Nine publications are related to indicator B4. All nine publications are scientific publications in journals that are referenced and indexed in world-renowned scientific information databases (Web of Science and Scopus). One of them is in a Q1 quartile journal, two are in Q2, two are in Q4, and four are in SJR without Q. Regarding indicator G7. Scientific publications in journals that are referenced and

indexed in world-renowned scientific information databases (Web of Science and Scopus), outside of the habilitation thesis, 14 publications are presented, distributed by quartiles as follows: Q1– 2, Q2 – 2, Q3 – 1, Q4 – 1, without Q, but with SJR – 7. Additionally, five publications in journals that are not referenced or indexed in world-renowned scientific information databases (Web of Science and Scopus) but also contribute to the candidate's scientific activity are included. The publications submitted for the competition are in author teams, a significant part of which have international participation, an indicator of good scientific cooperation, which is extremely important when conducting multidisciplinary research. Dr Andreeva is the lead author in fifteen of the publications submitted for the competition (first author in seven and second author in eight).

The author's list of citations in scientific publications contains 204 citing sources, referenced and indexed in world-renowned scientific information databases (Web of Science and Scopus), for 18 cited publications. The high number of citations is an indicator of the relevance of her research and the quality of her scientific output.

5. Demonstrated skills or aptitude for leading scientific research

Dr Andreeva has participated in a large number of international (10) and national (18) scientific research projects (as leader of one of the projects), which testifies to her intensive scientific, organisational and expert activity and teamwork skills. Her participation in 62 national and international scientific forums contributes to the active promotion of the results of the research conducted.

6. Profile of scientific research work

The main research profile of Dr. Nataliya Kamenova Andreeva is in the field of wave processes, coastal hydrodynamics and coastal zone risk, with a focus on the wind-wave climate of the Black Sea, storm activity and the morphodynamics of sandy shores along the Bulgarian Black Sea coast, the impact of coastal protection hydraulic structures on the dynamics of coastal processes, and the assessment of the energy potential of sea waves in the Black Sea and along the Bulgarian coast. The results of these studies have been published in specialised and renowned international scientific journals, referenced and indexed in Web of Science/Scopus, such as Coastal Engineering, Geosciences, Geomorphology and others.

The research work of Senior Assistant Professor Dr. Nataliya Kamenova Andreeva reflects **contemporary scientific and applied scientific achievements** with original and confirmatory contributions, **skilful use** of interdisciplinary research methods and comparative approaches, and convincingly presents her as: an established **specialist with a clearly defined profile** in the field of

Earth Sciences: coastal zone dynamics; **a key expert** – oceanologist and **creator** – **a professional with recognised authority** at institutional, national and international level.

7. Critical comments and recommendations

Essentially, **I have no** critical comments on the candidate's scientific output. I find the presentation of the documents submitted for the competition to be **excellent**, combining **precision and high scientific style**. I recommend that Dr Andreeva expand her future scientific research work, primarily by supervising new scientific and applied projects and doctoral students in oceanology.

8. Conclusion

Senior Assistant Professor Dr. Nataliya Kamenova Andreeva is participating in the competition for the academic position of "ASSOCIATE PROFESSOR" with **sufficient volume and quality of scientific output**, defining the profile of her scientific field – Wave processes, coastal hydrodynamics and risk in the coastal zone. The materials submitted for review contain **diverse and detailed information** on the candidate's research interests, results and achievements, as well as on her academic and expert activities and professional biography of the candidate, in full compliance (**even exceeding**) with the conditions and national minimum criteria for holding the academic position of "ASSOCIATE PROFESSOR", formulated in the Law on the Development of Academic Staff in the Republic of Bulgaria, the Ordinance for the implementation of the Law and the internal academic regulations and criteria adopted by the Scientific Council of the Institute of Oceanology at the Bulgarian Academy of Sciences in Varna.

The above gives me a reason to strongly recommend to the honourable members of the Scientific Jury for this competition and the esteemed members of the Scientific Council of the Institute of Oceanology at BAS – Varna to vote "YES" for the selection of Senior Assistant Professor Dr. Nataliya Kamenova Andreeva in the competition for the academic position of "ASSOCIATE PROFESSOR" in the scientific specialty "Oceanology".

November 12, 2025

Varna