

The External Evaluation Report of a Doctoral Study Domain

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I. Introduction¹

In this chapter, the following shall be summarized:

- the context in which this external evaluation report was drafted (**the type of evaluation, the period of the evaluation visit, the composition of the Experts Committee** etc.);
- details about the doctoral school(s) of which the doctoral domain under review is part (number of doctoral advisors, number of students, institutional context, short history etc.);
- details about the doctoral study domain under review (number of students, institutional context, short history etc.).

1.1 The external evaluation of the Environmental Science doctoral field, within the Doctoral School of Ecology at IOSUD level - University of Bucharest (IOSUD-UB), took place between November 22-26, 2021.

The type of evaluation: Periodic evaluation of the Environmental Science doctoral field

The period of the evaluation visit: 22.11.2021 – 26.11.2021

Composition of the Experts Committee:

Coordinator, national expert: Prof. Univ. Dr. Laurențiu-Călin Baciu - Universitatea Babeș-Bolyai, Cluj-Napoca;

International Expert: Prof. Dr. Fedoriak Mariia - Yuriy Fedkovych Chernivtsi National University, Ukraine;

PhD Student: Ioniță Mădălina-Flavia - Universitatea din Petroșani.

The evaluation was carried out in a hybrid system, both through online and on-site meetings. The online meetings were scheduled on November 22, 23, and 24, 2021.

On November 25, 2021, the material, didactic and research resources were studied during the on-site visit, through face-to-face meetings, within the Faculty of Biology / UB with the Expert Coordinator Prof. Univ. Dr. Laurențiu-Călin Baciu. The contact person from University of Bucharest was Prof. Dr. Geta Rîșnoveanu – the director of the Doctoral School of Ecology - SSUDE.

¹ Each time when applicable the information shall be presented gender-wise.



1.2. The Doctoral School of Ecology – SSUDDE

Details about the Doctoral School / Doctoral Schools to which the doctoral study field belongs (number of PhD supervisors, number of students, institutional context, short history, etc.);

The Doctoral School of Ecology – SSUDDE operates within the Faculty of Biology. The doctoral field Environmental Science was assigned to the University of Bucharest as doctoral studies organizing institution (IOSUD) by Order of the Minister of Education and Research No. 4811/17 August 2005. The Doctoral School of Ecology trains human resources (PhD students) in the specialization Ecology. Within the Faculty of Biology there is a bachelor's program in Ecology and environmental protection and two master's programs in Integrated management of natural capital and Socio-ecological systems. Of the three professors who received the quality of doctoral supervisor in the field of Environmental Science (prof. Dr. Vădineanu Angheluță, prof. Dr. Teodorescu Irina and Prof. dr. Negrei Costel), two are currently retired (prof. Dr. Vădineanu Angheluță, prof. Dr. Teodorescu Irina) and one resigned (Prof. dr. Negrei Costel) in March 2021 to join the doctoral school of ASE, where he had the work contract. Professor Vădineanu is currently Professor Emeritus. Along the way, three other doctoral supervisors received the quality of doctoral supervisor in the field and joined SSUDDE: CS I dr. Sergiu Cristofor (currently retired, without contract with the University of Bucharest), Prof.dr. Geta Rîșnoveanu, Prof. Dr. Carmen Postolache, Prof. Dr. Cristian Iojă. Prof. Dr. Carmen Chifiriuc is affiliated with SSUDDE, but holds the position of PhD supervisor in the field of Biology. Currently, within SSUDDE, three leading doctoral supervisors (Prof. Dr. Geta Rîșnoveanu, Prof. Dr. Carmen Postolache, Prof. Dr. Cristian Iojă) and an emeritus professor hold management in the field of Environmental Science. The PhD offered in the field of Environmental Science is scientific. Following the finalizing of the doctoral studies, the graduates will obtain the diploma and the title of doctor in sciences, in the field of Environmental Science.

The institution organizing doctoral studies:

University of Bucharest (UB)

The Doctoral school evaluated:

The Doctoral School of Ecology

The field of doctoral studies:

Environmental Science

Number of doctoral fields in UB:

19

Number of doctoral schools in UB:

22

List of doctoral schools in UB:

Doctoral School of Biology

Doctoral School of Ecology

Doctoral School of Chemistry

Doctoral School of Law

Doctoral School of Physics

Doctoral School of Philosophy

"Simion Mehedinți - Nature and Sustainable Development" Doctoral School

Doctoral School of Geology

Doctoral School of History

Doctoral School of Communication Sciences

Doctoral School of Languages and Cultural Identities

Doctoral School of Literary and Cultural Studies

Doctoral School within the Faculty of Letters



Doctoral School "Space, Image, Text, Territory"
Doctoral School of Mathematics
Doctoral School of Informatics
Doctoral School in the fields of Psychology and Educational Sciences
Doctoral School of Sociology
Doctoral School of Political Science
"Dumitru Stăniloae" Doctoral School of the Faculty of Orthodox Theology
Doctoral School of Theology and Religious Studies
Interdisciplinary School of Doctoral Studies of the University of Bucharest

Number of students:

The number of the PhD students admitted to the Doctoral School of Ecology in the last 6 academic years is shown in the following table:

Academic year	2016	2017	2018	2019	2020	2021
No. of admitted PhD students - budgeted	2	2	4	3	3	3
No. of admitted PhD students - with fee	0	0	0	1	1	0

Number of the PhD supervisors:

Within the Doctoral School of Ecology, 4 supervisors are engaged in supervising of PhD students, three holders and one professor emeritus (as shown in the Self-Assessment Report, Annex 1, with previous clarifications).

Recognition of the scientific expertise of PhD supervisors in the field of Environmental Science and international visibility are demonstrated by the large number of national research projects, but especially international (Annex 10 A, B, C, D, E to the Self-Assessment Report), scientific papers published (Annex 4A, B, C, D, E to the Self-Assessment Report). Papers appearing in databases such as ISI Web of Knowledge, Scopus, Google Scholar have good visibility; all doctoral supervisors have at least 5 WoS indexed papers (Annex 5 to the Self-Assessment Report), but also numerous participations as guest professors and members of the scientific / organizing committee of international scientific events (Annexes 6, 6A to the Self-Assessment Report).

II. Methods used

This chapter will contain the methods and tools used in the external evaluation process, before and during the evaluation visit, including at least:

- The analysis of the internal evaluation report of the doctoral study domain under review and its Annexes;
- The analysis of documents made available by the IOSUD, in physical format, during the evaluation visit (if such documents have been requested);
- The analysis of documents, data and information available on the IOSUD/Doctoral School(s) website, in electronic format;
- Visiting the buildings included in the institution's property, comprising (indicative and non-exhaustive list, which shall be changed according to the context):
 - classrooms;
 - laboratories;
 - the institution's library;
 - research centers;



- the Career Counselling and Guidance Center;
- lecture halls for students;
- the student residences;
- the student cafeteria;
- sports ground etc.;
- Meeting/Discussions with doctoral students in the doctoral study domain under review;
- Meeting/Discussions with the graduates of the doctoral study domain under review;
- Meeting/Discussions with employers of the graduates of the doctoral study domain under review;
- Meeting/Discussions with the school officials of the Doctoral School(s) in which the doctoral study domain under review is operating;
- Meeting/Discussions with the doctoral advisors in the doctoral study domain under review;
- Meeting/Discussions with the representatives of the various structures of the IOSUD/Doctoral School(s) in which the doctoral study domain under review is operating:
 - The Council of the Doctoral School, the University Senate, the Board of Directors, the Quality Assessment and Assurance Commission, the Quality Assurance Department, the Ethics Commission (including the student representatives of these structures);
 - the Career Counselling and Guidance Center;
 - student unions;
 - Application of questionnaires to doctoral students or academic staff in the doctoral study domain under review.

In the external evaluation process of the Environmental Science doctoral field, the following methods were used:

- The analysis of the internal evaluation Report (REI) and its annexes;
The internal Evaluation Report of the study in Environmental Science doctoral field and its annexes were available in electronic format before the start of the evaluation visit. These documents contained the information necessary to create an overview of the entire activity carried out within the evaluated field.
- The analysis of documents made available by the IOSUD - UB, in physical format, during the evaluation visit (when such documents have been requested);
During the visit made to the University of Bucharest, a series of documents in physical format were requested, in order to verify their existence and veracity: anti-plagiarism verification reports of the PhD theses; reports of the meetings of the Doctoral School Council; reports of the meetings for the defence of the PhD theses; grading registers; papers/publications of the PhD students, etc.
- The analysis of documents, data and information available on the IOSUD/Doctoral School(s) website, in electronic format;
The analysis of documents, data and information available on the IOSUD-UB/SSUDDE website in electronic format was made; the Institute for Doctoral Studies: <https://unibuc.ro/studii/programe-de-studii/doctorat/> and the Doctoral School of Ecology <https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie>
- Visiting the buildings included in the institution's property, comprising (indicative and non-exhaustive list, which shall be changed according to the context):
 - o classrooms;
 - o laboratories;
 - o the institution's library;
 - o research centres;
 - o the Career Counselling and Guidance Centre;



- o lecture halls for students;
- o the student residences;
- o the student cafeteria;
- o sports ground etc.;

On 25.11.2021, a visit was made to the buildings of University of Bucharest, the headquarters of IOSUD and SSUDDE, in order to analyse the administrative and patrimonial capacity. The following facilities were visited: classrooms, laboratories, research centres, the library of the institution, reading rooms for students, the student cafeteria.

During the visit, meetings and discussions with different categories of people involved in the teaching and research process were established.

- Meeting/discussions with the PhD students of SSUDDE present in the visited research laboratories;
 - Meeting/discussions with the members of the management of IOSUD and SSUDDE;
 - Meeting/discussions with the PhD supervisors in the visited facilities;
 - Meeting/discussions with the representatives of the various structures of the IOSUD/Doctoral School(s):
- o Secretariat;

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

- *General description of domain analysis.*

The Doctoral School of Ecology is among the 22 doctoral schools operating within IOSUD-UB. This doctoral school is structured and operates according to the existing legislation. Within the Doctoral School of Ecology, doctoral studies are organized and carried out in the doctoral field of Environmental Science, which is subject to periodic evaluation. Within the institution organizing doctoral studies, IOSUD-UB, there are all the institutional, administrative and managerial structures and the financial resources, which are necessary for the proper functioning of this doctoral school. Thus, IOSUD-UB has implemented the efficient functioning mechanisms provided in the specific legislation regarding the organization of doctoral studies, by the existence of specific regulations and their application within the Doctoral School of Ecology and, implicitly, in the field of Environmental Science, having specific logistical resources, ensuring that the financial resources are optimally allocated and obtaining other sources of funding, besides the government funding, to support the activity of the PhD students (doctoral scholarships through institutional development programs and/or human resource development).

The quality of human resources within the Environmental Science doctoral field is ensured by qualified staff with the necessary experience to carry out the PhD program. A good international visibility of the scientific activity carried out by the PhD supervisors within the Environmental Science doctoral field is ensured.

Criterion A.1. The administrative, managerial institutional structures and the financial resources

*general description of the criterion analysis

The entire didactic, research, managerial and administrative-financial activity within UB is carried out in compliance with the national legislation in the field and the internal regulations approved by the UB Senate.



Standard A.1.1. The institution organizing doctoral studies (IOSUD) has implemented the effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies.

- general description of the standard analysis.

The institution organizing doctoral studies has specific regulations that are applied within IOSUD and within the doctoral schools. These include: the Institutional regulation regarding the organization and the carrying out of the doctoral studies (available online and presented in the attached documents), the Regulation regarding the organization and the carrying out of the doctoral studies – the Doctoral School of Ecology, the Methodology for the elections at the CSUD level and at the level of each doctoral school, the Methodology regarding the competition for the position of CSUD director, the Methodology regarding the organization and carrying out of the doctoral studies (including admission and completion of studies), the Methodology regarding the organization and carrying out the process of obtaining the habilitation certificate and the equivalence of the doctoral degree obtained in other countries, internal procedures for establishing the advanced academic training program. Within the IOSUD, regular meetings are organized when it is necessary to debate and adopt important decisions. This information emerges from the Self-Assessment Report, as well as from the assessment activities that were carried out, and through online meetings which took place between the committee of expert evaluators and the director of the Doctoral School of Ecology.

The Doctoral School of Ecology (SSUDDE) is organized and operates in accordance with a set of reference values: professionalism, vocation, integrity, dedication, social responsibility. SSUDDE stands out through an offer of diversified, dynamic and especially interdisciplinary doctoral research topics related to the latest approaches in the field.

Performance Indicator A.1.1.1. The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:

- (a) the internal regulations of the Doctoral School;*
- (b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;*
- (c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);*
- (d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;*
- (e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;*
- (f) the contract for doctoral studies;*
- (g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Within the Doctoral School of Ecology there are specific regulations regarding:

- a) The internal regulations of the Doctoral School
<https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/451-iii-legislatie>
- b) The Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct
 - The Methodology/regulation for conducting elections in doctoral schools



<https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/468-documente-alegeri>

c) the Methodologies for organizing and conducting doctoral studies

- Methodology for the admission of the PhD students:

<https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/450-ii-admitere>

- Methodology for finalizing the doctoral studies

<https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/452-iv-informatii-studenti-doctoranzi>

If it is impossible to defend the PhD theses in person, due to the pandemic context, the finalizing of the studies is regulated by UB Senate Decision:

https://bio.unibuc.ro/images/Procedura_UB_sustinere_doctorat_ONLINE_2021-02-17_Finala.pdf

d) The existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad

At University of Bucharest, the mechanisms for recognizing the position of PhD supervisor, the teaching positions, the doctoral degree and the title of doctor, obtained in accredited institutions from abroad are established through a specific procedure, described in the document: <https://doctorat.unibuc.ro/legislatie/>

e) Functional management structures

The management of the Doctoral School of Ecology is provided by the Doctoral School Council, which has the following structure (<https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/449-i-prezentare>):

Director of the Doctoral School of Ecology:

Prof. dr. Geta Rîșnoveanu - Faculty of Biology, University of Bucharest;

Members of the Doctoral School of Ecology Council:

Prof. Dr. Carmen Postolache - Faculty of Biology, University of Bucharest;

Dr. Marius Nistorescu – EPC environmental consulting;

PhD student Andreea Csolti - Faculty of Biology, University of Bucharest;

The Doctoral School Council meets periodically to discuss current issues of the Doctoral School. The decisions of the Doctoral School Council are recorded in the reports of the meetings. During the pandemic, some meetings were held online and the documents were distributed by email.

f) The contract for doctoral studies

After being admitted to the doctoral studies, each enrolled PhD student signs a contract of studies, the format of which is updated annually. The contract model, valid at the time of evaluation is available at: <https://doctorat.unibuc.ro/studii-universitare-de-doctorat/>

g) Internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs

The proposals regarding the training for doctoral study programs are discussed annually in the CSD meetings.

<https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/461-avizier> .

The curricula, for all the doctoral schools in UB, considering the fact that the PhD students have the possibility to choose subjects from different schools, can be consulted at:



<https://doctorat.unibuc.ro/noutati/>

<https://doctorat.unibuc.ro/2021/10/oferta-de-studii-universitare-avansate-pentru-doctoranzii-inmatriculati-la-01-10-2021-discipline-dedicate-competentelor-transversale-semesterul-i-anul-universitar-2021-2022/>

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The performance indicator regarding the existence of specific regulations and their application within the SSUDDE doctoral school, which serves the field of doctoral studies in Environmental Science, is fulfilled.

Recommendations: There are no recommendations.

The indicator is fulfilled

Performance Indicator A.1.1.2. The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The provisions of the National Education Law no. 1/2011 and the code of doctoral studies adopted by GD no. 681/2011, with subsequent completions are incorporated in an institutional regulation for the organization and operation of doctoral study programs, adopted by the Senate of the University of Bucharest in the meeting on June 20, 2012. Updated several times, last time by Senate approval of September 23, 2020, the Regulation of doctoral studies at the University of Bucharest provides a coherent framework for the development of doctoral studies at the University of Bucharest.

The Regulation of the Doctoral School of Ecology includes the following relevant provisions:

(1) The Regulation of the Doctoral School sets out the principles of organization and operation of the doctoral school (section II), describes the purpose and objectives of the doctoral school (section III) and describes the organizational structure of the doctoral school (section IV).

(2) The Regulation of the Doctoral School is elaborated by the doctoral school council, by consulting all the PhD supervisors, which are members of the respective school, in compliance with the Institutional Regulation regarding the organization and the carrying out of the doctoral studies programs at IOSUD level [Art 11, UB Regulation];

(3) The Regulation of the Doctoral School is approved by universal, direct, secret and equal vote of the absolute majority of the PhD supervisors, which are members of the respective school; when the conditions require, it is possible to hold meetings in the virtual space and make decisions by electronic vote [Art 5, 8, 10, UB Regulation];

(4) The Regulation of the Doctoral School is approved by CSUD [Art 6, UB Regulation];

(5) The Regulation of the Doctoral School establishes mandatory criteria, procedures and standards regarding at least the following aspects:

a) the acceptance of new PhD supervisor members, as well as regulations regarding the withdrawal of the membership of PhD supervisor [Annex 4, SSUDDE Regulation, section V, Art 15; Art 16];

b) the mechanisms based on which, the decisions regarding the opportunity, structure and content of the training program based on advanced academic studies are taken [section II,



art. 3];

- c) the procedures for replacing the PhD supervisor of a certain PhD student and the procedures for mediating conflicts [Annex 3, pt. 23, 4 of SSUDE Regulation, pts. 10-11; section V, art. 15, section 7, art. 18, pt. 11];
- d) the conditions in which the doctoral program can be interrupted [section VII, art. 18, points 7-10; art. 19, point 4)];
- e) methods to prevent the fraud in scientific research, including plagiarism; [section. II, art. 4, art.17];
- f) ensuring access to research resources; [section III (2); Regulation on access to research laboratories + Annex 17 to the self-assessment file];
- g) the attendance obligations of the PhD students [Annex 1 of the SSUDE regulation, points 4-5].

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The Regulation of the Doctoral School includes mandatory criteria, procedures and standards for the aspects specified in art. 17 para. (5) of the Government Decision no. 681/2011 on the approval of the Doctoral Studies Code, with subsequent amendments and completions.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Standard A.1.2. The IOSUD has the logistical resources necessary to carry out the doctoral studies' mission.

*- *general description of the standard analysis.*

The PhD students and their activity within the doctoral study program are recorded through personal files which are available also in electronic form. The storage of data regarding the doctoral program of the PhD students is performed by the Institute for Doctoral Studies.

- UB has one of the most efficient programs for verifying similarities at international level.

Performance Indicator A.1.2.1. The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

From the beginning of the 2018/2019 academic year, the University of Bucharest also implements at the level of the study cycle - Doctorate, the UMS program, for the management of doctoral students' schooling. This program includes both the admission to the doctorate and the management of the doctoral studies from their beginning to their completion (Order confirming the doctoral degree or expulsion). Within the UMS application, the standard functionalities are the following: Management of the subjects from TPAUS (Training Plan based on Advanced University Studies) as well as management of the scientific research program: reports, thesis submission, doctoral thesis.

The informatic system for the record of doctoral students and their academic background fully complies with the provisions of the GDPR for the protection of personal data.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The IOSUD – UB has an adequate information system to record PhD students and their academic background. Also, the relevant information is registered in the Unique Matriculation Register, which operates at national level.

Recommendations: There are no recommendations.

The indicator is fulfilled.



Performance Indicator A.1.2.2. *The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The University of Bucharest verifies the percentage of similarity of doctoral theses since 2013. In addition to the verifications expressly requested by the doctoral supervisor, in 2014 a random verification of 10% of the doctoral theses that were to be defended publicly was implemented, and since 2016, according to the provisions of the national legislation, all doctoral theses are verified. Currently, at the level of the institution two computer programs certified by O.M 3485/2016 are used, Turnitin and SistemAntiplagiat.ro.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

As it results from the self-assessment file and from the discussions held during the visit, all academic staff have access to the Turnitin program and SistemAntiplagiat.ro. All theses are checked before the submission to the guidance committee.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Standard A.1.3. *The IOSUD makes sure that financial resources are used optimally, and the revenues obtained from doctoral studies are supplemented through additional funding besides governmental funding.*

**general description of the standard analysis.*

Within the SSUDDE, there is an increased interest for the optimal use of the financial resources. The budgetary resources were supplemented with revenues and contracts from human resources development grants, grants and research contracts, and most of the PhD students participated in research projects as team members. It is necessary to increase the financial resources used for the professional training of the PhD students.

Performance Indicator A.1.3.1. *Existence of at least one research or institutional / human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation, or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

At the time of submitting the self-assessment file, the PhD supervisors and PhD students of the School of Doctoral Studies in Ecology are involved in 6 research projects (5 international and one national) and one CEEPUS project (Central European Exchange Program for University Studies) Cooperation and Mobility in Central Europe (Annex 9, Self-Assessment Report). In the last 5 years, 41 research projects have been carried out within the Doctoral School, out of which 19 with international funding (Annex 10, Self-Assessment Report). Also, in the period 2014-2015, the POSDRU project "Doctoral and post-doctoral programs of excellence for the training of highly qualified human resources for research in the fields of Life, Environment and Earth Sciences" was implemented.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

A very good ability of the PhD supervisors to attract additional financial resources was



found, thus contributing to the good training of the PhD students.

Recommendations: There are no recommendations.

The indicator is fulfilled.

*Performance Indicator *A.1.3.2. The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional / human resources development grants is not less than 20%.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

According to the Self-Assessment Report, 7 out of 23 students benefited / currently benefit for a minimum of six months from sources other than government funding of 30.43%.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

A very good involvement of the PhD students in the research/innovation/consulting activities was found. A percentage of over 30% of the PhD students benefited from additional funding from contracts, for a period of at least 6 months.

Recommendations: There are no recommendations.

The indicator is fulfilled.

*Performance Indicator *A.1.3.3.² At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

During the evaluated period, the total amount spent for doctoral training activities, consisting of participation in conferences, publication of articles and other forms of dissemination of results was 135,000 lei, which is only 10% of total doctoral grants and amounts collected from tuition fees.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

During the evaluation period, 135,000 lei were spent for students' participation in professional training activities. The minimum threshold of 10% for the use of amounts from doctoral grants and tuition fees is not reached. Although PhD students participated in such forms of training, payments were made in many cases from research contracts of various types, rather than from doctoral grants.

Recommendations:

It is recommended to promote among the PhD students, the participation in training actions, using the resources available through doctoral grants.

The indicator is partially fulfilled.

² The indicators marked with an asterisk (*) hold a special status, referring exclusively to the evaluation of doctoral studies domains, as per Article 12 from the annex No.1 of the Order of the minister of education No. 3651/12.04.2021 approving the Methodology for evaluating university doctoral studies and the system of criteria, standards and performance indicators used in the evaluation. In case they are not met, the Agency extends a period of maximum 3 years to IOSUD to correct the respective deficiencies.



Criterion A.2. Research Infrastructure

general description of the criterion analysis.

Standard A.2.1. The IOSUD has a modern research infrastructure to support the conduct of doctoral studies' specific activities..

**general description of the standard analysis.*

In accordance with the existing documents in the Self-Assessment Report of the Environmental Science field and with the findings on the spot during the visit to the evaluated institution, it is concluded that the existing research infrastructure corresponds in terms of quality and it is able to support the activities that are specific to doctoral studies.

Performance Indicator A.2.1.1. The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The educational spaces (Annex 11) are adequate for the training process of doctoral students, according to the norms of the Ministry of Education and Research: classrooms and laboratories providing a space of more than 1 m² / student in classrooms / seminars and laboratories being correlated with the size of the formations. Doctoral students enrolled in doctoral studies in the field of Environmental Science benefit from the existing research infrastructure from:

- Faculty of Biology, Department of Systemic Ecology and Sustainability (DESS) Splaiul Independenței 91-95, sector 5, Bucharest
- Research Platform in Systemic Biology and Ecology (PCBE), Splaiul Independenței 91-95, sector 5, Bucharest
- Research station of the University of Bucharest / Faculty of Biology from Brăila, Str. Ciprian Porumbescu, no. 4 - belongs to PCBE
- Research station of the University of Bucharest / Faculty of Biology of Sinaia, Str. Cumpătu, no.5 - belongs to PCBE (Self-Assessment Report, p. 23).

The Self-Assessment Report records, and the field visit confirms the existence of the spaces and the material endowment necessary for the development in good conditions of the doctoral studies. The material base consists of lecture halls, seminar rooms, laboratories, research centers, research stations. The teaching rooms have the necessary technical equipment for communication (video projector, computer, smart board, projection screen, video conferencing equipment, etc.). There is wireless internet access in the educational spaces. The didactic and research laboratories have useful equipment for the training of students at doctoral level. There are computer labs equipped with computer technology and specific software products.

The laboratories on the Research Platform in Systemic Biology and Ecology ensure the approach of strategic and specific research directions that address ecological complexity. Corresponding to the research directions, the activities are organized on four modules, located on the 1st floor of the platform, each module providing specific investigations: the module for investigating biogeochemical circuits; the module for studying biological diversity; GIS module; field monitoring module. The research stations of Brăila and Sinaia (regional headquarters of



PCBE) are intended for the investigation of ecosystems in the floodplain of the Danube and in mountainous areas. The research infrastructure complements that of the headquarters in Bucharest and includes modules for investigating biogeochemical circuits; modules for studying biological diversity; field monitoring modules and support components (collections).

PhD students have access to the Central University Library and its branches, based on the library card. The Environmental Science Library, as a branch of BCU, groups specific publications dedicated to the study of the environment.

PhD students have access to databases subscribed through the ANELIS + program, including: EBSCO, Springer, Science Direct, ProQuest, Thomson ISI, Scopus, etc.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The education and research facilities correspond in terms of quality, space, equipment, technical condition, volume, safety and hygienic-sanitary principles. The laboratories are equipped with high-performance equipment, which facilitates the experimental activity of the PhD students. The students have access and are included in the research teams of high-performance research structures (ICUB, Research Center in Systemic Ecology and Sustainability, Research Center for Environmental Protection and Waste Recovery - PROTMED), where they can perform the experimental part of their theses at a high level. The access to documentation is established through an extensive network of libraries and international databases, which provide current international materials.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

**general description of the criterion analysis.*

Standard A.3.1. At the level of each domain there are sufficient qualified staff to ensure the conduct of doctoral study program.

**general description of the standard analysis.*

The PhD supervisors within the doctoral field of Environmental Science have the necessary experience to carry out the doctoral study program. The disciplines in the training program are held by academic staff who have the position of PhD supervisor with proven expertise in the field of the taught subjects.

Performance Indicator A.3.1.1. Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than three) meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and mandatory for obtaining the enabling certification.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Within SSUDDE, 4 doctoral supervisors work. Of these, 2 meet the necessary and mandatory standards for obtaining the certificate of qualification and one partially meets these criteria. The scientific activity of the doctoral supervisors is presented in Annex 12 (A, B, C, D, E, F), including the degree of satisfaction of the criterion regarding the fulfillment of the CNATDCU minimum standards.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The degree of fulfilment of CNATDCU standards by the PhD supervisors from the Doctoral



School of Ecology is presented in the table below:

No.	PhD supervisor	Criterion 1			Criterion 2		Criterion 3		Fulfilled
		Art ISI	Cumulated AIS	Art BDI	H (ISI)	Index	Projects	Amount, lei	
	Cerințe		>3.5	3	>4	2	>100.000		
1	Prof. Geta Risnoveanu	8	4,26	7	10	6	>100.000	YES	
2	Prof. Cristian Joja	9	7,535	10	16	5	>100.000	YES	
3	Prof. Carmen Postolache	7	1,35	3	9	11	>100.000	Partially	
4	Prof. Angheluta Vadineanu	2		31	18	40	>100.000	Partially	

Out of the 4 active PhD supervisors, 2 meet the CNATDCU minimum standards for obtaining the habilitation certificate, and 2 partially meet the standards.

Recommendations: It is recommended to improve the publication record of the doctoral supervisors and to invite additional doctoral supervisors to join the doctoral programme.

The indicator is partially fulfilled.

Performance Indicator *A.3.1.2. *At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Out of the 4 active PhD supervisors, 3 have permanent contracts with UB: Prof. dr. Geta Rîșnoveanu, Prof. dr. Carmen Postolache, Prof. dr. Ioja Cristian. Prof. Dr. Angheluță Vădineanu is Professor Emeritus of UB.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Following the examination of the Self-Assessment Report, it is found that 3 out of 4 active PhD supervisors (representing 75%) have permanent employment contracts with UB.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator A.3.1.3. *The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The disciplines in the training program based on advanced university studies related to the field are supported by teachers or researchers who have the quality of doctoral / qualified supervisor, professor / CS I or associate professor / CS II with proven expertise in the field of taught disciplines or other specialists who meet the standards established by the institution and the strategic expectations specific to the field, respectively: Prof. Dr. Angheluță Vădineanu, Prof.



Dr. Carmen Postolache, Prof. Dr. Costel Negrei, Prof. Dr. Geta Rîșnoveanu, Prof. Dr. Mihaela Badea, Prof. Dr. Elena Druica. The course holders are recognized specialists in their fields of reference.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The disciplines in the training program based on advanced doctoral studies are held by specialists recognized in their area of competence, having the academic degree of Professor.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator *A.3.1.4. *The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs³ does not exceed 20%.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

According to the Self-Assessment Report, within SSUDDE, at the time of the internal evaluation report, the doctoral supervisors coordinate at the same time a maximum of 8 doctoral students during the doctoral studies. According to Annex 14 - Self-Assessment Report, Prof. Dr. Geta Rîșnoveanu who coordinates 11 students, but 6 of them have interrupted their studies for a period of 1 year, or are in the period of prorogation or postponement of public defence (art. 12) (7, 8, 9) of the UB Doctoral Regulations - <https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/451-iii-legislatie>). As a result, the share of coordinators who meet this criterion is 100%.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Within the Doctoral School of Ecology, there is no PhD supervisor who coordinates more than 8 PhD students which are within the 3-year stage and in extension periods.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Standard A.3.2. *The Doctoral advisors within the domain are carrying out a scientific activity visible at international level.*

**general description of the standard analysis.*

Performance Indicator A.3.2.1. *At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science- or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defense commissions at universities abroad or co-leading with universities abroad. For Arts and Sports and Physical Education Sciences, doctoral thesis advisors shall prove their international visibility within the past five years by their membership on the boards of professional associations,*

³ 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No.1/2011 with subsequent amendments and additions, with additional extension periods approved as per Article 39, paragraph (3) of the Code of doctoral studies approved by the GD No. 681/2011 with subsequent amendments and additions.



membership in organizing committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

SSUDE affiliated PhD supervisors carry out research activities disseminated through publications, and the works are inventoried in Annex 5 of the Self-Assessment Report. All 4 PhD supervisors have at least 5 Web of Science indexed publications. Publications are visible in Publons, ResearchGate, Google Scholar accounts. The number and type of papers published by the PhD supervisors, according to the lists of papers (Self-Assessment Report Annex 4) are presented in the table on page 30 - Self-Assessment Report.

PhD supervisors are members of prestigious professional associations in the country and abroad and members of editorial teams or referees of journals in the main stream of publications.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

According to the Self-Assessment Report and its annexes, it is found that all 4 PhD supervisors affiliated to the Doctoral School of Ecology have at least 5 WoS indexed publications and have obtained international recognition for their scientific activity.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator *A.3.2.2. *At least 50% of the doctoral thesis advisors in a specific doctoral study domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

According to the documents presented in the Self-Assessment Report, out of the total of 4 active PhD supervisors, 3 have achieved in the last 5 years at least 25% of the score required by the CNATDCU minimum standards. Detailed data are included in Annex 12 A, B, C.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The PhD supervisors affiliated to the Doctoral School of Ecology are carrying out active research, 3 out of the total of 4 have achieved at least 25% of the minimum qualification standards in the period subject to evaluation.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS

*- *general description of domain analysis.*

Criterion B.1. The number, quality and diversity of candidates enrolled for the admission contest

**general description of the criterion analysis.*

Standard B.1.1. The institution organizing doctoral studies has the capacity to attract candidates



from outside the higher education institution or a number of candidates exceeding the number of seats available.

**general description of the standard analysis.*

The Environmental Science doctoral domain has the capacity to attract candidates from outside IOSUD-UB. It also has the capacity to attract more PhD students than the number of places financed from the state budget.

Performance Indicator *B.1.1.1. *The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1,2.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

According to the information in the Self-Assessment Report, the ratio between the number of master's graduates from other higher education units in the country and abroad, who entered the competition for admission to doctoral studies in the evaluated period and the number of places financed from the budget state competition, was as follows: 2016 - 0.2; 2017 - 0.25; 2018 - 0.5; 2019 - 0.66; 2020 - 0.33. The overall ratio for the study period results from the number of external candidates (7), compared to the total number of places (19) and is 0.36. The ratio between the number of candidates (17) and the number of places (19) is 0.9 (Evaluation report, page 32).

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

It is found that within the doctoral school there is the capacity to attract graduate candidates from other higher education institutions, being exceeded the value of 0.2 external candidates compared to the number of positions.

(3) **Recommendations:** There are no recommendations.

(4) **The indicator is fulfilled.**

Standard B.1.2 *Candidates admitted to doctoral studies demonstrate academic, research and professional performance.*

**general description of the standard analysis.*

According to the information recorded in the Self-Assessment Report and the discussions that took place during the visit, the students enrolled in doctoral studies demonstrate academic performance throughout the doctoral studies period.

Performance Indicator *B.1.2.1. *Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Admission to the doctorate is made in accordance with the Admission Methodology, updated annually at the IOSUD level. The exam consists of an oral test, which includes the presentation of a scientific article from the thematic area of the doctoral project selected by the candidate that must fall within the subfields of activity of the doctoral school and the presentation of the doctoral project.



The scientific concerns and previous achievements of the candidates, their skills, are analyzed on the basis of the file submitted by the candidate.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The admission to doctoral studies tests the academic, research and professional performance of the candidates, the scientific activities of the candidate, the previous achievements and the theme proposed for the doctoral thesis.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator B.1.2.2. *The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission⁴ does not exceed 30%.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

In the years 2016-2020, the total number of doctoral students who dropped out of doctoral studies was zero. Also, during this time, no student was expelled 3 or 4 years after admission.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The expulsion/dropout rate of the PhD students is under 20%, the criterion being met.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Criterion B.2. The content of doctoral programs

**general description of the criterion analysis.*

Standard B.2.1. *The training program based on advanced university studies is appropriate to improve doctoral students' research skills and to strengthen ethical behavior in science.*

**general description of the standard analysis.*

The training program based on advanced doctoral studies has the role to enrich the PhD student's scientific perspective and to provide them with additional support for the individual research they are carrying out during the doctoral studies. The PhD students in agreement with the PhD supervisor, have the possibility to opt both for the courses offered by the Doctoral School of Ecology, and for a very wide range of disciplines offered by other doctoral schools within IOSUD.

Performance Indicator B.2.1.1. *The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The training program based on advanced university studies includes 3 disciplines relevant for the theoretical training of doctoral students in the field of Environmental Science (Socio-natural

⁴ 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No. 1/2011 with subsequent amendments and additions.



ecological complexes and the peculiarities of postmodern scientific research, Natural capital, Support system and decision cycle), 2 disciplines for in-depth study of the methodology of research and / or statistical data processing (Statistical analysis of experimental data in ecology, Documentation and elaboration of scientific papers in the field of ecology), as well as a discipline dedicated to ethics in scientific research and intellectual property (Ethics and academic deontology) (Annex 15 - Self-Assessment Report). Within IOSUD, students benefit from a wide range of optional courses, dedicated to transversal skills (<https://doctorat.unibuc.ro/noutati/>)

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The Doctoral School of Ecology, together with the other doctoral schools within the IOSUD-UB offers a wide range of courses that contribute to the professional training of the PhD students and provides support for the individual research program of each PhD student. Disciplines Statistical analysis of experimental data in ecology, Documentation and elaboration of scientific papers in the field of ecology include the fundamental elements of research methodology and elaboration of scientific papers, with applicability in the field of environment.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator B.2.1.2. *At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

In 2017, taking advantage of the inclusion of the ethical dimension as a possibility in one of the funding directions through the Institutional Development Fund, the University of Bucharest implemented the CNFIS-FDI-2017-0245 project "Promoting academic ethics and deontology at the University of Bucharest", dedicated first year students in master's and doctoral cycles. Specifically, this meant organizing 6 academic series of courses for a total of 429 doctoral students in the first year. It is noteworthy that this pioneering initiative of the University of Bucharest, which reflects the role of moral leader of the institution in the efforts to ensure the quality of doctoral studies in Romania, has been acquired by national decision makers through OMEN no.3.131 of January 30, 2018 on the inclusion in the curricula, for all university study programs organized in higher education institutions in the national education system, of ethics and academic integrity courses. Consequently, starting with the 2018/2019 academic year, the discipline of Ethics and academic integrity has a mandatory status in all doctoral curricula.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Starting with the 2018/2019 academic year, the discipline Ethics and academic integrity has a mandatory status in the curriculum of the doctoral program in the field of Environmental Science.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator B.2.1.3. *The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities⁵.*

⁵ Or by what the graduate should know, understand and to be able to do, according to the provisions of the Methodology of 17 March 2017 regarding inscription and registration of higher education qualifications in the National Register of Qualifications in



- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Within the IOSUD-UB and the Doctoral School of Ecology, there are mechanisms to ensure that the training program based on advanced academic studies aims at learning outcomes. The syllabi make specific references to the knowledge, skills and competences acquired by the PhD students after completing the training program.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The training program comprises 6 disciplines (30 ECTS credits), syllabi of which are available on the university website both in English and Romanian languages. Each discipline syllabus from the curriculum of the training program based on advanced academic studies details the competencies, skills and aptitudes that the PhD students will acquire after completing each discipline.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator B.2.1.4. *All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

For the development of the doctorate, the doctoral student is supported by a guiding commission whose role is to coordinate, monitor and correct, together with the doctoral supervisor, the activity of the doctoral student throughout the doctoral program. This commission consists of three members with the title of doctor, who may be persons affiliated to the doctoral school or teachers and researchers not affiliated to it. The composition of the guiding committee is established by the doctoral supervisor after consultation with the doctoral student. The steering committee participates in the definition and monitoring of the research program of the doctoral student. At the same time, the members of the guidance committee offer the doctoral student, in agreement with the doctoral supervisor and in accordance with the rules of the doctoral school, support in carrying out research activities and in the entire doctoral training process. The composition of the steering committees is presented in the function statements and in the Self-Assessment Report (p. 36). The members of the guiding commissions were selected from the specialists from the Faculty of Biology, Geography, but also from the Academy of Economic Studies in Bucharest.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Within the SSUDDE, the activity of the PhD students is supported by functional guidance committees, which contribute significantly to the success of the individual research of each PhD student. The list of the guidance committee members from the evaluated period includes 20 teaching staff and researchers, having the minimum academic/research degree of lecturer/CS III PhD (page 36 - Self-Assessment Report).

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator B.2.1.5. *For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must*



not exceed 3:1.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The ratio between the number of PhD students and the total number of teaching staff/researchers from the guiding committees is 1,1:1 (22 PhD students : 20 teaching staff), according to page 36 - Self-evaluation report

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The ratio of 1,1 I am not sure how it was calculated – 22:20 = 1,1 :1 between the number of PhD students and the total number of teaching staff/researchers from the guiding committees confirms the fulfilment of the indicator B.2.1.5, which proposes a ratio below 3: 1.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Criterion B.3. The results of doctoral studies and procedures for their evaluation.

**general description of the criterion analysis.*

Standard B.3.1. Doctoral students capitalize on the research through presentations at scientific conferences, scientific publications, technological transfer, patents, products and service orders.

**general description of the standard analysis.*

The PhD students enrolled at the Doctoral School of Ecology capitalized the research results through presentations within conferences in the country and abroad and through scientific publications in international journals indexed BDI or indexed/rated WoS. Also, the PhD students have been involved in numerous research projects, and their contributions can be found in the reports of these projects.

Performance Indicator B.3.1.1. For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

According to the data included in the Self-Assessment Report and in Annex B 3.1.1, there is at least one significant contribution of each doctoral graduate from SSUDE. Annex B 3.1.1 lists 29 articles of the 9 PhD students who obtained the title of doctor during the evaluation period.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The graduates of the Doctoral School of Ecology demonstrated the high-level capitalization of research results through publications in the main international flow and in BDI indexed journals. Each graduate of doctoral studies within SSUDE has at least one publication relevant to the topic, and the average is 3,2 publications/graduate.

Recommendations: There are no recommendations.

The indicator is fulfilled.

*Performance Indicator *B.3.1.2. The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious international events (organized in the country*



or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The ratio between the number of presentations of doctoral students who completed their doctoral studies in the evaluated period (last 5 years), including those of poster type, made at prestigious international events (held in the country or abroad) and the number of doctoral students who have completed their doctoral studies in the evaluated period (last 5 years) is $32/9 = 3.55$, higher than the standard of 1 proposed by indicator B.3.1.2 (Annex B.3.1.2).

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

(5) The ratio between the number of presentations at prestigious scientific events and the number of graduates of the Doctoral School of Ecology is 3.55, which indicates the fulfilment of the criterion B.3.1.2.

(6) **Recommendations:** There are no recommendations.

(7) **The indicator is fulfilled.**

Standard B.3.2. The Doctoral School engages a significant number of external scientific specialists in the commissions for public defense of doctoral theses in the analyzed domain.

**general description of the standard analysis.*

Performance Indicator *B.3.2.1. *The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The doctoral committees for the public defence of the PhD thesis included members from prestigious institutions in the country and abroad. According to the Annex B.3.2.1, in the compiled statistics, there are no external members of the doctoral committees who have participated in more than two theses coordinated by the same PhD coordinator in one year.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

All the designated members demonstrated their professionalism and adequacy for the subject of the theses they evaluated. The number of 2 participations of a reviewer to theses coordinated by the same PhD supervisor in one year, was not exceeded in any situation.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator *B.3.2.2. *The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

According to the Self-Assessment Report, only 9 doctoral theses in the last five years have been defended in the field of Environmental Science. For the 9 doctoral theses defended, 16 scientific references from another higher education institution than the University of Bucharest



were involved.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

According to Annex 2, less than 10 doctoral theses were defended during the evaluation period.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Domain C. QUALITY MANAGEMENT

**general description of domain analysis.*

Within IOSUD-UB and at the Doctoral School of Ecology level, there is a permanent interest for quality assurance and there are functional evaluation mechanisms regarding the quality.

At faculty's level and also in its departments, including the doctoral school, annual quality assurance programs are carried out. These programs refer to the quality of the educational process, scientific research, internal services, as well as services to the community.

Criterion C.1. Existence and periodic implementation of the internal quality assurance system

**general description of the criterion analysis.*

Standard C.1.1. There are an institutional framework and procedures in place and relevant internal quality assurance policies, applied for monitoring the internal quality assurance.

**general description of the standard analysis.*

The evaluation of the quality and progress of the schools / fields of doctoral studies is performed periodically. IOSUD-UB has developed structures responsible for ensuring and continuous improvement of quality and applies procedures for evaluation and internal monitoring of the evolution of doctoral schools. By analysing the information in the Self-Assessment Report, the discussions with the members of the Commission for Evaluation and Quality Assurance (CEAC) of IOSUD-UB, with the members of the doctoral school and with the doctoral students, it is found that there is an institutional framework and procedures for quality assurance.

Performance Indicator C.1.1.1. The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory:

- (a) the scientific work of Doctoral advisors;*
- (b) the infrastructure and logistics necessary to carry out the research activity;*
- (c) the procedures and subsequent rules based on which doctoral studies are organized;*
- (d) the scientific activity of doctoral students;*
- (e) the training program based on advanced academic studies of doctoral students;*
- (f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

At the level of IOSUD-UB there are structures responsible for quality assurance and continuous improvement that have a well-established role and responsibilities: the Quality Assessment and Assurance Commission; Quality Management Department (DMC); Curricular Development and Qualifications Office. Within each faculty there is the Commission for Evaluation



and Quality Assurance at faculty level (CEAC-F) which assumes the objectives proposed by CEAC-UB, but also objectives specific to the areas within the faculty and its own strategy. It is also involved in the internal quality assurance processes of the Council of Doctoral Studies (CSUD), as well as of the Councils of Doctoral Schools. According to the Methodology on monitoring, evaluation and quality assurance of doctoral studies, the coordination of monitoring, evaluation and quality assurance in doctoral schools is the responsibility of CSUD which adopts the necessary measures to ensure the quality of doctoral studies, for the proper conduct of periodic evaluations of doctoral schools and doctoral supervisors, for the observance of the norms of ethics and deontology by doctoral supervisors and doctoral students. Monitoring is carried out at institutional level through the Annual Report of the Commission for Evaluation and Quality Assurance of the University of Bucharest (provides data, information, analysis on the organization and conduct of doctoral studies) and periodically, but not less than once in 5 years, by the CSUD which carries out an internal evaluation at the level of all doctoral schools which is finalized through a Report on the activity of the University of Bucharest as IOSUD.

The internal evaluation follows, at the level of each doctoral school, at least the following aspects: the own activity of the doctoral school council; the human resources of the doctoral school and the coverage of the subdomains; analysis of the capacity of the doctoral school to attract candidates for doctoral studies, of the number of candidates for admission & enrolled doctoral students; analysis of the capacity of the doctoral school to attract candidates for doctoral studies; the number of candidates for admission & enrolled doctoral students; how to organize doctoral studies; training program based on advanced studies; individual research program; scientific events & publications; the contribution of the doctoral school to the research component of UB; institutional cooperation & co-tutoring (national, international, interdisciplinary); internationalization; projects; ethics and academic integrity; duration of doctoral studies; weight analysis and reasons for failures (expulsions, invalidated theses, etc.); doctoral theses defended; notable achievements of doctoral students & doctoral school students (eg publications, awards, prestigious postdocs).

Students are represented at the level of all structures, in the number or percentage provided by law. At the institutional level, students have three main roles in quality assurance: providing information by participating in surveys, discussion groups, etc.; participation in the drafting of self-assessment reports, but also as members of the institutional bodies responsible for university processes. Transparency is promoted within the UB.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

At the level of IOSUD-UB and SSUDDE the process of evaluation and internal quality assurance is constantly carried out, in accordance with the procedures and regulations developed by UB based on clear criteria, which summarize the research activity, teaching activity and community activity of school members and demonstrates compliance with the standard. There are also mechanisms for evaluating the activity of teachers by colleagues (inter-evaluations) and students, according to the related procedures.

Recommendations: There are no recommendations.

The indicator is fulfilled.

*Performance Indicator *C.1.1.2. Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing to identify their needs, as well as their overall level of satisfaction with the doctoral study program in order to ensure continuous improvement of the academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented.*

- description of the facts, the findings from the assessed institution's documents and the



evaluation visit itself

At the level of IOSUD-UB and SSUDDE, the operational procedure regarding the organization and development of the student satisfaction assessment process exists and is applied. This procedure is applicable to undergraduate, master and doctoral students. Annually, the UB Statistics Office performs analyzes on both the professional trajectory of graduates at different time intervals from the date of graduation, and on the satisfaction of students and teachers. The analyzes are performed on cycles of studies, fields, programs and cover many of the aspects of the professional life of graduates (Self-assessment report, page 42). In addition, at the SSUDDE level, a satisfaction questionnaire is applied, in physical or online format, which includes 11 questions that assess students' satisfaction with the teaching-learning-research process, professional development and openness to vocational training needs of students.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Within the IOSUD-UB and the doctoral school, there are mechanisms and procedures for identifying and assessing the needs of the PhD students and their level of satisfaction regarding the doctoral study program. The questionnaire for the PhD students includes 3 dimensions, evaluating the teaching-learning-research process, the material resources, and the facilities and services. The synthesized conclusions and recommendations are used for the continuous improvement of academic and administrative processes.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Criterion C.2. Transparency of information and accessibility of learning resources

**general description of the criterion analysis.*

Standard C.2.1. Information of interest to doctoral students, future candidates and public interest information is available for electronic format consultation.

**general description of the standard analysis.*

Within the IOSUD-UB, the information regarding the doctoral studies is accessible on the Institute for Doctoral Studies website, <https://doctorat.unibuc.ro/>. The Doctoral School of Ecology provides information on its own website, <https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie>. The two web pages provide complete information on doctoral studies within the Doctoral School of Ecology.

Performance Indicator C.2.1.1. The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:

- (a) the Doctoral School regulation;*
- (b) the admission regulation;*
- (c) the doctoral studies contract;*
- (d) the study completion regulation including the procedure for the public presentation of the thesis;*
- (e) the content of training program based on advanced academic studies;*
- (f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;*
- (g) the list of doctoral students within the domain with necessary information (year of registration; advisor);*
- (h) information on the standards for developing the doctoral thesis;*
- (i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days*



before the presentation.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The information of general interest regarding the doctoral university studies within IOSUD-UB are posted on the web page <https://doctorat.unibuc.ro/>. The specific information regarding the activity at doctoral level within SSUDE can be found on the web page <https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie>.

The English version is available at the website of the Institute for Doctoral Studies: <https://unibuc.ro/studii/programe-de-studii/doctorat/> but not available for the Doctoral School of Ecology at <https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie>

The information displayed is in accordance with the regulations on the protection of personal data.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The following information is available in electronic format:

- the regulations of the doctoral school - <https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/451-iii-legislatie>

- the admission regulation - <https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/450-ii-admitere>

- the doctoral studies contract - <https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/230-contracte-studii-doctorale>

- the regulation for completing the studies, which should also include the public support procedure

of the thesis - <https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/452-iv-informatii-studenti-doctoranzi>

- Online thesis defense procedure -

https://bio.unibuc.ro/images/Procedura_UB_sustinere_doctorat_ONLINE_2021-02-17_Finala.pdf

- the content of the training programs based on advanced university studies -

<https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/461-avizier>

- the scientific profile, the thematic areas / research topics of the doctoral supervisors in the field, as well as their institutional contact data -

https://bio.unibuc.ro/images/Domeniile_de_expertiza_ale_conducatorilor_de_doctorat.pdf

- list of doctoral students in the field with basic information (year of registration; leader) -

<https://bio.unibuc.ro/index.php/scoala-doctorala/scoala-doctorala-de-ecologie/144-lista-studentilor-doctoranzi>

- information about the standards for the elaboration of the doctoral thesis -

https://bio.unibuc.ro/images/REDACTAREA_TEZEI_DE_DOCTORAT.pdf

Recommendations: There are no recommendations.

The indicator is fulfilled.

Standard C.2.2. The IOSUD/The Doctoral School provides doctoral students with access to the resources needed for conducting doctoral studies.

**general description of the standard analysis.*

PhD students from IOSUD-UB, and consequently also those in the field of Environmental Science, have access through international ANELIS + projects to international databases. The access can be made either directly from any computer inside the University of Bucharest, accessing the link www.anelisplus.ro, or permanent mobile access, from computers outside the



University of Bucharest based on account and password, based on institutional addresses generated by the IT department for all enrolled doctoral students, addresses based on which each doctoral student can create an institutional profile on the E-nformation portal (www.e-nformation.ro) and can access the electronic resources provided through ANELIS Plus from anywhere, from any computer or phone (by installing the myEnf application). PhD students have access to the Turnitin system for checking similarities.

All doctoral students have access to the teaching and research laboratories of the faculty and of the UB, in general.

Performance Indicator C.2.2.1. *All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The representation of the fields of doctoral studies organized by the University of Bucharest is ensured by offering access for doctoral students both to generalist databases and to integrative ones. The complete list of electronic resources to which the University of Bucharest currently subscribes includes the following databases: American Chemical Society, CEEOL, Cambridge Journals, Emerald Management Journals 200, JSTOR, MathSciNet, Nature Journals, PROQUEST Central, SAGE HSS Collection, ScienceDirect Freedom Collection - Elsevier, Scopus - Elsevier, SpringerLink Journals - Springer, Web of Science - Core Collection, InCites Journal Citation Reports, Derwent Innovations Index - Clarivate Analytics, Wiley Journals.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

UB is a member of the Anelis Plus consortium in which several scientific bases are subscribed to which doctoral students have access. In addition, BCU has institutional subscriptions to several international databases. PhD students can access the databases by connecting online from the UB or BCU spaces, or they can connect remotely, using credentials that certify membership in the UB community.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator C.2.2.2. *Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Starting with the 2018/2019 academic year, doctoral students can access one of the electronic systems for verifying the degree of similarity used by the University of Bucharest under the Procedure on the use of the electronic system for verifying the degree of similarity by doctoral students, within the University of Bucharest, (<https://doctorat.unibuc.ro/studii-universitare-de-doctorat/>) which regulates both the possibility of individual requests for the prevention and / or post-factum detection of situations of violation of academic ethics, as well as the of some collective approaches for the familiarization of the doctoral students with the functioning of the electronic systems for checking the degree of similarity

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

PhD students can use the Turnitin similarity detection program on request. Starting with the 2017/2018 academic year, the first year doctoral students had the opportunity to get acquainted with the operation of electronic programs for verifying the degree of similarity within



the discipline Academic Deontology, and later the discipline Ethics and academic integrity.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator C.2.2.3. All doctoral students have access to scientific research laboratories or other facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The PhD students have access to the research and teaching laboratories within the Faculty of Biology. A large part of the PhD students are members of the research teams of some projects, being effectively involved in the experimental activity carried out within these projects.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

According with the study contracts and with the internal regulations of IOSUD-UB, the PhD students have access to the research laboratories within the university.

Recommendations: There are no recommendations.

The indicator is fulfilled.

Criterion C.3. Internationalization

**general description of the criterion analysis.*

Standard C.3.1. There is a strategy in place and it is applied to enhance the internationalization of doctoral studies.

**general description of the standard analysis.*

At the level of doctoral studies at the University of Bucharest, internationalization is an important component both in terms of research and in terms of curriculum / teaching. The internationalization strategy of doctoral university studies is based both on the classical dimension of internationalization, respectively student mobility and on the internationalization "from home" (internationalization of curriculum, study programs, administrative dimension). Although, none of the program disciplines is taught in English. The internationalization strategy regarding the doctoral university studies is in accordance with the internationalization strategy of the University of Bucharest which can be accessed at: <https://www.unibuc.ro/international/strategia-de-internationalizare/>

University of Bucharest (Romania), together with the University of Aix-Marseille (France), National and Kapodistrian University of Athens (Greece), Free University of Brussels (Belgium), Autonomous University of Madrid (Spain), Sapienza University of Rome (Italy), The University of Stockholm (Sweden) and the University of Eberhard Karls in Tübingen (Germany) joined forces and built a network of European universities, called "CIVIS". The CIVIS network will strengthen existing research links between member universities through interdisciplinarity, joint research and funding infrastructures, designed to stimulate projects developed in partnership. The European Civic University Consortium will have as a priority to respond to major global challenges, acting as a vector of change and innovation in the following priority areas: health; urban environment, territories and mobility; climate, environment, energy; digital and technological transformations; society, culture and heritage.

The evaluated unit concluded ERASMUS and CEEPUS mobility agreements, which facilitate the international exchange and mobility of doctoral students and teachers at institutions abroad. At the SSUDE level, there were actions to invite renowned specialists from



foreign universities who held courses, invited conferences, provided double coordination or actually worked with doctoral students in the field and in the laboratory.

Performance Indicator *C.3.1.1. *IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The School of Doctoral Studies in Ecology has concluded bilateral agreements within the Erasmus Program, which allow mobility for undergraduate students, for master and doctoral students, as well as for teachers, at European universities such as: University of Lille, University of Jena, Vrije Universiteit Brussel, Aristotle University of Thessaloniki. There are collaborations with profile institutes in Europe regarding the coordination of doctoral works, currently being elaborated two such doctoral papers with double coordination Romania-Switzerland (Eawag Institute) and Romania-Austria (BOKU) respectively. Another doctoral thesis was defended in 2019 in double coordination Romania-Switzerland (Eawag Institute).

A large percentage (10/23 = 43%) of doctoral students completed a training internship abroad. In addition, IOSUD supported 15 participation of PhD students in the field of Environmental Science in international scientific conferences (Annex C.3.1.1.bis).

Proof of international recognition is the presence of many of its members in the composition of international professional bodies / organizations, such as the International Association for the Danube Research, International Union for Conservation of Nature, European Center for Nature Conservation, International Society of Limnology, Institute of Ecology and Environmental Management, European Federation for Freshwater Sciences.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

At the SSUDDE level, there is a constant concern for the intensification of international cooperation. SSUDDE is integrated into international research networks which together with the numerous ERASMUS / CEEPUS agreements with foreign institutions facilitate the mobility of students and teachers. According to the Self-Assessment Report, 43% of the students benefited from training internships abroad (Annex C.3.1.1.bis).

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator C.3.1.2. *In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The doctoral school Environmental Science supports the organization of doctorates in co-supervision. Doctoral supervisors in the field of Environmental Science develop contacts with specialists from abroad to initiate new forms of collaboration. These can materialize in co-supervised doctorates), or bilateral agreements that include training internships that doctoral students carry out abroad. Within the Doctoral School in Ecology there is the possibility to carry



out doctoral theses in English or French.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Of the 9 doctoral theses defended in the last 5 years, one was co-supervised internationally (11.1%), presented and written in English and another was written and defended in English (COJOC EMILIA) (11.1 %). Another 8 doctoral theses from the doctoral school (34.8%) are currently written and / or presented in an international language or are co-supervised (Annex 9). In total, 57% of doctoral theses are written in English.

At the time of the submission of the Self-Assessment Report, within the doctoral school 3 theses were coordinated through international cooperation (1 with EAWAG, Switzerland, 1 with NIWA, Norway and 1 with BOKU, Austria).

Recommendations: There are no recommendations.

The indicator is fulfilled.

Performance Indicator C.3.1.3. The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees etc.).

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

IOSUD-UB actively participates in international fairs (Seville, Turkmenistan, Geneva, TUNIS, SIEF Korea, Helsinki, Seoul, Tunisia, Myanmar, Malaysia, Osaka and Tokyo), in which the UB study offer is presented and agreements are initiated for collaboration on various levels.

International experts (eg, Prof. Dr. Piet Spaak, Adam Petrussek) are included in the commissions for the defense of doctoral theses or are involved in the double coordination of the evaluated doctoral school students. Also, doctoral students are integrated in the international research teams within the research projects with international funding, thus benefiting from the internationalization of the activities from the individual research plans.

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

At the level of IOSUD-UB and SSUDDE there are concerns materialized by measures to increase the degree of internationalization of UB.

Recommendations: There are no recommendations.

The indicator is fulfilled.

IV. SWOT Analysis

Strengths:

- Environmental Science doctoral field is served by an elite teaching staff;
- Through research projects and consulting contracts with third parties, the teachers who serve the doctoral school provide an important part of the necessary resources for carrying out the research activity;
- The activity carried out has a pronounced interdisciplinary character;
- There are mobility opportunities for both teachers and PhD students;

Weaknesses:

- The capacity to attract graduates must be diversified and strengthened;
- Better marketing of the faculty's image and the career opportunities it offers is needed;
- The website of the Doctoral School of Ecology lacks the English version
- Small number of books published in publishing houses abroad;
- The periodical publications of the



- There are collaborations with research institutions in the country and abroad;
- Within the doctoral school a sustained scientific activity is carried out, with visible results at national and international level;
- Didactic infrastructure (teaching spaces, GIS laboratories equipped with licensed specialized software, didactic laboratories equipped with state-of-the-art specialized equipment) is very good;
- The monitoring and research infrastructure in the field (including in long-term socio-ecological research sites) is very good and well integrated in the international research networks;
- Very well-developed libraries and infrastructure specific to the field;
- Successes in attracting new financial resources for the continuous modernization and material and technical endowment of the faculty;
- Supporting and developing the internationalization of studies;
- Attracting candidates for admission to doctoral studies from other faculties within the UB and from other higher education institutions in the country;
- The activity of doctoral students is supported both by the doctoral supervisor and by the members of the guidance commission;
- Dissemination of scientific research results by participating in national and international scientific symposia and conferences, publishing papers in specialized journals, organizing annual symposia, workshops and scientific conferences;
- In many cases, the attraction of students to the research activity and implicitly to doctoral studies is done during the master level studies and even during the final years of the bachelor studies;
- Annual investments for infrastructure development from research grants and sponsorships;
- Elaboration and establishment of a system of periodic evaluation of the professional and scientific results and performances of the teachers.

Opportunities:

- European legislation and policy favor specialized training in the field of Environmental Science;
- Existence of cooperation networks with universities in the country and abroad;
- The interest of adults for improvement in the field of environment;
- Accessible research programs and research networks;
- European Commission funding programs and national

Threats:

- Frequent changes in national regulations on higher education are likely to cause confusion among PhD students;
- Competition with similar western doctoral programs;
- Decreasing young people's interest in formal education;



grants;

- Increasing the demand for graduates in the country in environmental specializations occasioned by the implementation of European Directives (Water Framework Directive, Birds Directive, Habitats Directive, EIA Directive, etc.);
- The existence of structural funds, which is a chance to obtain funds for research and institutional development;
- Intensifying the collaboration of the University and the Faculty with similar institutions in Europe;
- Local and regional cooperation with government institutions, public and private economic agents.

- Demographic change in the coming years, with the consequence of reducing the number of potential candidates for studies;

- The discrepancy between the minimum qualification standards in the field, the complexity and the particularities of the field, decrease the interest of teachers to reach the minimum standards and affiliation to doctoral schools in the field of Environmental Science, in particular Ecology.

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
1.	PI	<p>A.1.1.1. The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:</p> <p>a) the internal regulations of the Doctoral School;</p> <p>b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;</p> <p>c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);</p> <p>d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;</p> <p>e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;</p> <p>f) the contract for doctoral studies;</p> <p>g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based</p>	The indicator is fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
2.	PI	on advanced academic studies. A.1.1.2. The doctoral school's Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.	The indicator is fulfilled	
3.	PI	A.1.2.1. The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.	The indicator is fulfilled	
4.	PI	A.1.2.2. The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.	The indicator is fulfilled	
5.	IP	A.1.3.1. Existence of at least one research or institutional / human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation, or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.	The indicator is fulfilled	
6.	PI *	A.1.3.2. The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional / human resources development grants is not less than 20%.	The indicator is fulfilled	
7.	PI *	A.1.3.3. At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts	The indicator is partially	It is recommended to promote among the PhD students,

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).	fulfilled	the participation in training actions, using the resources available through doctoral grants.
8.	CPI	A.2.1.1. The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly	The indicator is fulfilled	
9.	CPI	A.3.1.1. Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than three) meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and mandatory for obtaining the enabling certification.	The indicator is partially fulfilled	It is recommended to prioritize publishing activities and attract new doctoral coordinators in the doctoral school
10.	PI *	A.3.1.2. At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.	The indicator is fulfilled	
11.	PI	A.3.1.3. The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the	The indicator is fulfilled	



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.		
12.	PI *	A.3.1.4. The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs does not exceed 20%.	The indicator is fulfilled	
13.	CPI	A.3.2.1. At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science or ERIH-indexed publications in journals of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness have high international recognition within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defense commissions at universities abroad or co-leading with universities abroad. For Arts and Sports and Physical Education Sciences, doctoral thesis advisors shall prove their international visibility within the past five years by their membership on the boards of professional associations, membership in organizing committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions.	The indicator is fulfilled	
14.	PI *	A.3.2.2. At least 50% of the doctoral thesis advisors in a specific doctoral study	The indicator is	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years	fulfilled	
15.	PI *	B.1.1.1. The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1,2.	The indicator is fulfilled	
16.	PI *	B.1.2.1. Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.	The indicator is fulfilled	
17.	PI	B.1.2.2. The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission does not exceed 30%.	The indicator is fulfilled	
18.	PI	B.2.1.1. The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.	The indicator is fulfilled	
19.	PI	B.2.1.2. At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-	The indicator is fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
20.	PI	defined topics on these subjects within a discipline taught in the doctoral program. B.2.1.3. The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities.	The indicator is fulfilled	
21.	PI	B.2.1.4. All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.	The indicator is fulfilled	
22.	CPI	B.2.1.5. For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1.	The indicator is fulfilled	
23.	CPI	B.3.1.1. For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor’s title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain	The indicator is fulfilled	
24.	PI *	B.3.1.2. The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious international events (organized in the country or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1.	The indicator is fulfilled	
25.	PI *	B.3.2.1. The number of doctoral theses	The	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
26.	PI *	<p>allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.</p> <p>B.3.2.2. The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed.</p>	indicator is fulfilled	
27.	PI	<p>C.1.1.1. The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory:</p> <ul style="list-style-type: none"> a) the scientific work of Doctoral advisors; b) the infrastructure and logistics necessary to carry out the research activity; c) the procedures and subsequent rules based on which doctoral studies are organized; d) the scientific activity of doctoral students; e) the training program based on advanced academic studies of doctoral students; f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students. 	The indicator is fulfilled	
28.	PI *	<p>C.1.1.2. Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing to identify their needs,</p>	The indicator is fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
29.	CPI	<p>as well as their overall level of satisfaction with the doctoral study program in order to ensure continuous improvement of the academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented.</p> <p>C.2.1.1. The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:</p> <ul style="list-style-type: none"> a) the Doctoral School regulation; b) the admission regulation; c) the doctoral studies contract; d) the study completion regulation including the procedure for the public presentation of the thesis; e) the content of training program based on advanced academic studies; f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data; g) the list of doctoral students within the domain with necessary information (year of registration; advisor); h) information on the standards for developing the doctoral thesis; i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation. 	The indicator is fulfilled	
30.	PI	<p>C.2.2.1. All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.</p>	The indicator is fulfilled	
31.	PI	<p>C.2.2.2. Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.</p>	The indicator is fulfilled	
32.	PI	<p>C.2.2.3. All doctoral students have access to scientific research laboratories or other facilities depending on the specific</p>	The indicator is fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
33.	PI *	<p>domain/domains within the Doctoral School, according to internal order procedures.</p> <p>C.3.1.1. IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.</p>	The indicator is fulfilled	
34.	PI	<p>C.3.1.2. In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.</p>	The indicator is fulfilled	
35.	PI	<p>C.3.1.3. The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees etc.).</p>	The indicator is fulfilled	

The recommendations contained in the report shall be resumed in the indicators' analysis. Other general recommendations may be made that do not fit within a particular indicator.

VERY IMPORTANT!!! – *Each identified weakness must be correlated with at least one recommendation to improve the situation!*

VI. Conclusions and general recommendations



A series of important aspects found during the evaluation are resumed and general conclusions are drawn regarding the quality of education provided within the field of evaluated doctoral studies, presenting the general comments of the committee of expert evaluators in the institution. Other general recommendations may be made that do not fall within a certain indicator and have not been presented in point V.

A decision is proposed, together with the motivation for granting it (if the members of the committee of evaluators do not reach a consensus, they can each propose and argue their own version of the decision).

To provide the complete English version for the Doctoral School of Ecology on the university website.

To practise teaching at least one of the disciplines of the doctoral training program in English. I

Evaluator	Institution	Signature
Prof. dr. Mariia Fedoriak	Yuriy Fedkovych Chernivtsi National University, Ukraine	

VII. Annexes

The following types of documents shall be attached:

- *The detailed schedule of the evaluation visit – MANDATORY.*
- *The survey questionnaire applied to doctoral students or academic staff in the doctoral study domain under review, the results - optional (e.g., in graphic form) and their interpretation - if applicable.*
- *Scanned documents – any document requested from the IOSUD during the evaluation visit and received, which is not found in the internal evaluation file received before the visit and referred to in the report.*
- *Pictures – if relevant issues are raised regarding the condition of the student residences, cafeterias, premises for teaching and learning activities, library etc.*
- *Screenshots/Print screens of the Doctoral School/IOSUD website proving specific claims in the report, accompanied by the date when they were accessed and saved.*
- *Any other documents relevant to the evaluation process referred to in the report.*