



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.).

The Doctoral School of Geosciences (SDG) appeared on 20.06.2017, as an independent organizational and administrative structure, within the IOSUD of "Alexandru Ioan Cuza" University of Iași in the context of the reorganization of the Doctoral School of Chemistry, Life and Earth Sciences. The Doctoral School of Geosciences has merged the existing PhD programmes in Geography, Geology and Environmental Science in the Doctoral School of Chemistry and Life and Earth Sciences. The Doctoral School of Geosciences is a multidisciplinary research system.

The Doctoral School of Geosciences has 3 PhD areas:

- Geography,
- Geology,
- Environmental Science.

The Doctoral School of Geosciences is organized as a separate Department of the Faculty of Geography and Geology, with its Regulations and management structures.

For the evaluated timeframe, the Geosciences Doctoral School had 20 PhD supervisors. As of 31 December 2020, 88 PhD students were enrolled in the Doctoral School of Geosciences, of which 54 were on probation and 34 on extension. Within the Doctoral School of Geosciences

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



in the field of Environmental Science, for the evaluated period 2016-2020, 6 doctoral supervisors carried out their activity. From January 2021, after Prof. dr. Gheorghe Nemtoi is reaching the age of 70, only 5 will remain.

In total, the SDG premises cover an area of 2613.88 m² in 55 rooms. All spaces are equipped with video projection and internet access. The Doctoral School of Geosciences has merged the existing PhD programmes in Geography, Geology and Environmental Science in the Doctoral School of Chemistry and Life and Earth Sciences. The specialized laboratories have specific equipment and infrastructure. The teaching and research facilities available to the Doctoral School of Geosciences include lecture halls, seminar rooms; laboratories and research stations.

PhD students have access to the research centers, to research infrastructures and facilities (the spaces belonging to the Faculties of Biology, Chemistry, Orthodox Theology and from the ICI-UAIC Department of Science and Natural Sciences) where they benefit from a modern and adequate infrastructure specific to the research conducted in the field of Environmental Science.

The Expert Report summarizes the results of the online meetings, on-site visit, and self-evaluation report evaluation. The expert group appreciates the open and constructive atmosphere of all discussions.

Composition of the Committee:

1	Coordinator: Prof. univ. dr. Lucica Tofan	Universitatea „Ovidius“ din Constanța
2	International expert: Prof. univ. dr. Ruzickova Petra	Masaryk University, Brno, Czech Republic
3	PhD student: Sorin Furdui	Universitatea din Oradea

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 in 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 with the student representatives of these structures);
 - the Career Counselling and Guidance Center;
 - student organizations;
 - secretariats;
 - various departments/administrative offices (Social/Student residences-Cafeterias etc.);
- Application of questionnaires to doctoral students or academic staff in the doctoral study domain under review.

The External Institutional Evaluation Process is organized by ARACIS and is carried out in the following steps: the Doctoral School submits its self-evaluation report which clearly and explicitly formulates the Doctoral School's strategy and objectives as well as its quality management system and educational activities. The Doctoral School gives an overview of its resources, facilities and responsibilities. Additional documentation and annexes are also submitted.

The Evaluation Panel for a peer review is nominated. The complete documentation submitted by the Doctoral School is forwarded to the expert group. Due to the worldwide COVID situation, the online meetings with - the representatives of the UAIC institution and of the Council for Academic Doctoral Studies (CSUD), with the contact person for the doctoral study domain under review, with the director of CSUD/UAIC Doctoral School, with IOSUD academic staff of UAIC Doctoral School, with the academic staff corresponding to the doctoral study domain, with UAIC PhD students, with the members of the Ethics Commission, with the graduates of the respective doctoral study domain, with the Directors/persons in charge of the research centers/laboratories within the doctoral study domain, with the Commission for Quality Evaluation and Assurance (CEAC) members/Quality Assurance Department, with employers of UAIC doctoral graduates were performed.

The on-site visit of the expert group takes place. During the on-site visit, the consistency of the submitted documentation is verified. Additional aspects, which might not be covered by the written documentation, are also reviewed. Following the online meetings and visit, an Expert

The report is produced; it sums up the key aspects and outcomes of the visit and the reviewed documents. The University can comment on the Expert Report.



III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

**general description of domain analysis.*

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

**general description of the criterion analysis.*

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.*

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

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

Recommendations:

The Environmental Science doctoral field was developed as a continuation of studies for the bachelor and master specializations of Environmental Geography and Current Environment and Sustainable Development (Faculty of Geography and Geology), Ecology (Faculty of Biology), Environmental Chemistry (Faculty of Chemistry), Heritage Restoration (Faculty of Orthodox Theology) in order to meet the needs of professionals in the field of Environmental Science.

The mission of the Environmental Science domain of Doctoral School is to train doctoral students through the acquisition of advanced knowledge, skills and abilities of



scientific research in environmental sciences which lead to building careers in field-specific research, both nationally and internationally.

At the level of the Doctoral School of Geosciences, there are specific regulations concerning: Doctoral School Regulations, Methodology for the conduct of elections for the position of Director of the Doctoral School Council (DSB), as well as the election of the student representative to the DSB, and evidence of their conduct, Methodologies for organising and conducting doctoral studies and The existence of mechanisms for recognising the status of doctoral supervisor and the equivalence of PhD title obtained in other countries; Functional governance structures, The model contract for doctoral studies; Internal procedures for reviewing and approving proposals for the subject matter of doctoral degree programmes.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

The Regulations of the Doctoral School of Geosciences include the adequate and sufficient 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/partially fulfilled/not 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.*

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

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

Recommendations:

Within IOSUD - UAIC there is implemented an appropriate information system for the registration of doctoral students and their academic career, called eSims, resulting from the implementation of the project "*Integrated information system for the management of students' professional activities in the context of the transformations generated by the*



Bologna process", funded by the Ministry of Education and Research. It has been continuously completed and improved so far by specialists working in the Department of Statistics and Informatics of IOSUD-UAIC, in order to better meet the needs of the higher education institution.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

IOSUD - UAIC Iasi has shown a continuous concern for providing the necessary resources to verify the percentage of similarity for the works elaborated by students from all three cycles of university studies, therefore also for PhD theses. Thus, starting from 2016, within IOSUD-UAIC, the special module is dedicated to this functionality within the Blackboard e-learning platform. "Alexandru Ioan Cuza" University of Iasi being among the first higher education institutions in Romania to invest in this direction and the only public university to have purchased this e-learning platform.

The licenses for the use of this application have been extended every year through successive purchase contracts, and in 2018, with the decision to adopt another technical solution based on Moodle to provide the e-learning platform for distance and part-time learning, the Turnitin application was purchased. Thus, the access of all the teaching staff of "Alexandru Ioan Cuza" University of Iasi, and therefore of the PhD supervisors, is ensured, as well as the possibility for PhD students to use, with the agreement of the PhD supervisor, an electronic system for checking the degree of similarity with other existing scientific or artistic creations. The similarity report, being a compulsory part of the doctoral degree validation dossier, is carried out for all doctoral theses.

The indicator is fulfilled/partially fulfilled/not 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.*

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

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

Recommendations:

During the period evaluated, 2016-2020 PhD students in the field of Environmental Science have benefited from seven projects (four institutional and another three were won by doctoral supervisors in the field of Environmental Science.

It is needed to stress the fact that there should be more public funding and that the currently limited access to European funding can carry the risk of slowing down the research activities at the Doctoral School.

I, therefore, recommend increasing the visibility of the Doctoral School and proceeding with measures of internationalization to attract international students as well as other stakeholders from abroad.

It is suggested to continue with fundraising with a special focus on EU funding possibilities, which could, for example, help to cover future spending on lab supplies and to help stay one step ahead of any development efforts.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

There were 13 active PhD students and 6 PhD students in extension at 31 December 2020. In addition to the source of government funding, doctoral students in training are funded from other sources:

- from the "Alexandru Ioan Cuza University" of Iași for the entire 3-year doctoral training period, through scholarships and support for the training and research activity of doctoral students on a no-scholarship - no-fee basis
- 6-month scholarships (Human Capital Operational Programme 2014-2020)
- funding from the ERASMUS + Program

5 students benefit from supplementary funding, which represents 26.32% of the 19 PhD students active in the field of Environmental Science, in 2020.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

Of the amounts related to doctoral grants obtained by the university through institutional contract and tuition fees collected from doctoral students in the form of paid education, a part is used to cover the training expenses of doctoral students.

For the years 2016 and 2017, the amounts related to the Doctoral School were not broken down separately, as they entered the same account with the faculty income. In these conditions, all the statements for trips and internships abroad of the doctoral students were passed as a source of financing income of the Faculty of Geography and Geology. For this reason, it is not possible to assess more specifically the fulfillment of the required criterion.

During the evaluated period, 32 PhD students from the Geography field were supported for trips abroad from the funds of the Doctoral School of Geosciences (in the Field of Environmental Science, 4 trips abroad and 8 domestic trips were supported).

The indicator is ~~fulfilled~~/partially fulfilled/~~not fulfilled~~.

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.*

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

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.



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

Recommendations:

The Doctoral School grants doctoral students access to the research infrastructure of its institutes, research centres, laboratories and libraries.

The doctoral school provides the detailed description and evidence of the spaces and the facilities of IOSUD as well as of the Faculty of Geography and Geology allow the development of the research activity within the Doctoral School of Geosciences - Environmental Science Field.

The research objectives are to improve the infrastructure for research activities, to collaborate in an international research exchange, to improve cooperation with different research institutes both nationally and internationally and to educate future researchers.

The indicator is fulfilled/partially fulfilled/not 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.*

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

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

Recommendations:

IOSUD has strictly defined minimum standards for the conferral of the status of PhD supervisor and the habilitation certificate in accordance of CNATDCU with the Order of the Minister of National Education and Scientific Research No 6129 of 20 December 2016 published in the Official Gazette (Part I) No 123 of 15 January 2017.

Achieving minimum qualification standards by doctoral supervisors is fulfilled.

The indicator is fulfilled/partially fulfilled/not 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



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

Recommendations:

In the Environmental Science doctoral domain, there are human resources to ensure high-quality doctoral studies. Until the end of 2020, all 5 PhD supervisors are full-time staff at "Alexandru Ioan Cuza" University of Iasi, Faculty of Geography and Geology, Faculty of Biology, Faculty of Chemistry and Interdisciplinary Research Department – Field Science.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

All disciplines in the training program based on advanced university studies related to the field are supported by doctoral supervisors from the Geoscience Doctoral School.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

None doctoral supervisors conducted more than 8 doctoral students (actual maximum is 8).

The indicator is fulfilled/partially fulfilled/not 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.*

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.



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, 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

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

Recommendations:

In the Environmental Science doctoral domain, the PhD supervisors have international visibility in the last five years, consisting of membership of scientific committees of international publications and conferences; membership of boards of international professional associations; membership of invited speakers at conferences or expert groups held abroad or membership of committees for the defence of PhD theses at universities abroad. The supervisors have national and international visibility, which is reflected by adequate number of citations in Web of Science, Scopus, Google Scholar.

The international visibility of PhD supervisors in the domain of Environmental Science is proven by scientific papers published in international journals listed or indexed in Web of Science or other prestigious databases, by their presence in the scientific committees of international conferences, and by the presence in the editorial teams of some international journals.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

A specific level of qualification and experience is required for members of the Doctoral School's teaching staff. The Doctoral School shows clear awareness of qualification requirements set for the members of the academic staff. The required experience and



activities assigned to the staff are also well-defined. The duties and responsibilities of the staff correspond to their qualifications and experience. During the evaluated period, it is necessary to achieve 25% of the criteria within the CNATCU Minimum Standards provided for obtaining the quality of doctoral supervisor. Achieving 25% of the minimum qualification standards by doctoral supervisors in the period 2016-2020 was submitted.

The indicator is fulfilled/partially fulfilled/not 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.*

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

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

Recommendations:

The ratio between the candidates registered for admission and the number of budgeted places is 0,6 (at least 0.2) in the last 5 years.

The indicator is fulfilled/partially fulfilled/not fulfilled.

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

**general description of the standard analysis.*

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



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

Recommendations:

Admission to the PhD studies, for Environmental Science domain is carried out in accordance with the Methodology of admission to IOSUD, approved annually. In the evaluated period (less the admission from 2020), the doctoral admission consisted of two tests: written test and oral test (interview).

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

According to the number of enrolled students and expelled students, a 3-year expulsion rate of 0 was calculated (not exceed 30%).

The indicator is fulfilled/partially fulfilled/not 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.*

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

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

Recommendations:

The Geosciences Doctoral School (GDS) provides doctoral students with training programs based on advanced university studies, consisting of activities carried out in institutionalized study formations, through courses, seminars and others. Within the training program based on advanced university studies, the doctoral student participates in the activities from three compulsory disciplines:

- Current trends in fundamental and applied research,

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.



- Experimental techniques, processing and presentation of results in the field of specialization,
- Ethics and academic integrity.

At the suggestion of the doctoral supervisor he can choose from the optional disciplines provided. Each discipline followed by the doctoral student is credited with a number of credits. The doctoral student must accumulate 30 credits from this activity.

It is recommended the PhD program develop courses on soft skills, such as communications and entrepreneurship, in supporting graduating students.

The program can consider a more systematic approach in offering teaching assistant possibilities to the PhD students. It was not clear how the PhD students can gain important teaching experience through helping instructors with the courses.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

The doctoral curriculum include list of subjects and disciplines which focused on Ethics in scientific research and relevance to research methodology and data statistisc.

The indicator is fulfilled/partially fulfilled/not 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.*

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

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

Recommendations:

The curriculum contains a discipline for the in-depth study of research methodology and a discipline for the statistical processing of experimental data. The course description for each subject in the curriculum of the training program based on advanced university studies details the competencies, skills and attitudes that doctoral students will acquire after completing each subject.

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 Higher Education (RNCIS) approved by the Order No.3475/2017 with subsequent amendments and additions.



The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

Throughout the doctoral training period, doctoral students in the field benefit from the advice/guidance of functional mentoring committees, reflected through written guidance and feedback or regular meetings. The table presenting the commissions for advising / guiding doctoral students in the doctoral field Environmental Science was submitted.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

Ratio Doctoral students/Members of mentoring committees 19 DS /29 MMC = 0.65

The indicator is fulfilled/partially fulfilled/not 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.*

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

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

Recommendations:



During the period evaluated within the field of Environmental Science, 13 doctoral students obtained the title of doctor. Their research results include 18 scientific articles published in peer-reviewed journals, 9 non-IF journals, 5 articles published in BDI indexed journals, 44 articles published in conference volumes. The students attend 11 national and 2 international scientific events.

Randomly selected 5 papers:

Name, surname PhD student	Year of award of doctorate	Number of conference participations	Relevant contribution	Annex
VIERU P. OLGA (căs. PINTILIE)	2016 06.XII	7	T.C. IURCOVSCHI, V. VASILACHE, I. SANDU, Z. MARIUS, O. PINTILIE, A.V. SANDU, New Ecological Solutions Involved in the Cleaning of a 19th Century Icon, Applied Sciences-Basel, 10(3), 2020, Article Number: 1175; (ISSN 2076-3417), doi:10.3390/app10031175//0,351	https://www.mdpi.com/2076-3417/10/3/1175/htm
PELIN V. VASILE (căs. PELIN-COSTACHI)	2017 27.VIII	20	V. PELIN, I.G. BREABAN, I. SANDU, S. GURLUI, The atmospheric pollution influence on the surface structures of porous geomaterials in correlation with some natural radionuclides, REVISTA DE CHIMIE, (Bucharest), 68, 6, 1431-1438, 2017. //0.047 ALEXANDRU COCEAN, VASILE PELIN, MARIUS MIHAI CAZACU, IULIANA COCEAN, ION SANDU, SILVIU GURLUI, FELICIA IACOMI, Thermal effects induced by laser ablation in non-homogeneous limestone covered by an impurity layer, Applied Surface Science Volume 424, Part 3, 1 December 2017, Pages 324-329	https://www.sciencedirect.com/science/article/pii/S0169433217308565#!
PĂDURARU M. MARIUS	2018 28.IX	4	BRATU, I., PADURARU, M., MARUTOIU, C., POP, S. S. F., KACSO, I., TANASELIA, C., MARUTOIU, O. F. & SANDU, I. C. A. 2016. Multianalytical Study on Two Wooden Icons from the Beginning of the Eighteenth Century Evaluation of conservation state. Revista De Chimie, 67, 2383-2388.	http://bch.ro/pdfRC/BRATU%20I%2011%2016.pdf
COJOCARU G. ȘTEFANA	2017 08.IX	11	BORHAN, A. I., GHERCA, D., COJOCARU, S., LUPU, N., ROMAN, T., ZAHARIA, M., PALAMARU, M. N. & IORDAN, A. R. 2020. One-pot synthesis of hierarchical magnetic porous gamma-Fe ₂ O ₃ @NiFe ₂ O ₄ composite with solid-phase morphology changes promoted by adsorption of anionic azo-dye. Materials Research Bulletin, 122.	https://www.sciencedirect.com/science/article/pii/S0025540819317933



TUCALIUC OANA MARIA	2015 16.XII	5	TUCALIUC, O. M., CRETESCU, I., NEMTOI, G., BREABAN, I. G., SOREANU, G. & IANCU, O. G. 2014. MONITORING OF MERCURY FROM AIR AND URBAN DUST IN THE INDUSTRIAL AREA OF IASI MUNICIPALITY. Environmental Engineering and Management Journal, 13, 2051-2061.	http://www.eemj.icpm.tuiasi.ro/pdfs/vol13/no8/Full/25_206_Tucaliuc_14.pdf
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All selected papers contain significant original contributions in the respective domain.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

The ratio of the number of presentations by doctoral students who have completed their doctoral studies during the period evaluated (last 5 years), including poster presentations, exhibitions, at prestigious international events (in the country or abroad) to the number of doctoral students who have completed their doctoral studies during the period evaluated (last 5 years) is 8,30 (at least equal to 1).

108 presentations /13 doctoral students =8.30

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

It is noticed that there are cases in which there are more than two theses supervised by the same doctoral supervisor assigned to a certain referent from a higher education institution, other than IOSUD evaluated. (follow comment please, find below B.3.2.2)

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

It is noticed that there are cases in which there are more than two theses supervised by the same doctoral supervisor assigned to a certain referent from a higher education institution, other than IOSUD evaluated, per year, but finally the ratio between the number of theses doctorate awarded to a specific scientific referent from another higher education institution the situation recorded in the last five years is not higher than 0.3. It was mentioned that at the level of IOSUD there is the recommendation that the proposals of official referents be only from the University consortium (UAIC-UB-UBB-UVT).

The indicator is fulfilled/partially fulfilled/not fulfilled.

Domain C. QUALITY MANAGEMENT

**general description of domain analysis.*

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.*

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



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

Recommendations:

At IOSUD level, the Operational Procedure for the evaluation and internal monitoring of doctoral schools within the "Alexandru Ioan Cuza" University of Iasi has been approved and used. The Institutional Regulations for the organization and functioning of doctoral studies establish internal quality assurance policies that apply to all doctoral schools of the UAIC. At the level of the Geosciences Doctoral School, the permanent evaluation of the activity is regulated by the Regulation of operation of the doctoral school and represents one of the objectives provided in the Strategic Plan of the Faculty of Geography and Geology. At the level of the Geosciences Doctoral School for all domains, the Questionnaire for assessing the quality of doctoral studies. The process is still in the continuous process to improvement of the academic and administrative activity.

The University has built up a rigorous internal quality assurance system with clearly defined objectives. The system has been implemented; structures, responsibilities and procedures are in place.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

A tool for monitoring student satisfaction is the questionnaire applied at IOSUD Level: How satisfied are you with the University services? It is launched annually to assess students' perceptions in a systematic way and to better understand what they want from university. It is important for university representatives to know these aspects, to improve activities that involve interaction with students at the level of faculties or libraries, the offer of personal and professional development courses, accommodation conditions and to focus more on the students needs.

More transparency is necessary in order to demonstrate how the evaluation results can directly affect the improvement of the teaching process.

The indicator is fulfilled/partially fulfilled/not 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.*

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

Recommendations:

Information of interest to doctoral students and information of public interest is available for consultation on the University's website and on the Doctoral School website. This information concerns: the doctoral school regulations; admission regulations; doctoral studies contract; the regulations for completing the studies, including the procedure for the public defense of the thesis; the content of study programs; the scientific profile and thematic areas / research themes of the doctoral advisors within the domain, as well as their institutional contact data; list of doctoral students within the domain with basic information (year of registration; advisor); information about the standards for the elaboration of the doctoral thesis.

The website of Doctoral School of Geosciences is :

<https://www.geo.uaic.ro/ro/programe-de-studii/scoala-doctorala-geostiinte>

English version of the Doctoral School of Geosciences website is available at:

<https://www.geo.uaic.ro/en/programs-of-study/doctoral-school>

Attention paid to the English version of the Doctoral School website and publish English versions of all relevant documents on the website of the University is appreciated. Publication of all information in English increases the Doctoral School's recognition abroad and serve as distinct evidence of the School's transparency policy.

The indicator is fulfilled/partially fulfilled/not 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.*

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

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

Recommendations:

"Alexandru Ioan Cuza" University of Iasi offers doctoral students the opportunity to access the following databases: Science Direct Freedom Collection, Scopus, SciFinder (CAS), MathSciNet, etc., while through the "Mihai Eminescu" Central University Library in Iasi they also have access to other representative databases, such as: SpringerLink Journals, ProQuest Central, Emerald Journals, Science Journals, Thompson Reuters, Oxford Journals, SAGE Journals HHS Collection, EBSCO, Wiley Journals etc.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

IOSUD –"Alexandru Ioan Cuza" University of Iași has shown a continuous concern for ensuring the necessary resources to verify the percentage of similarity for the works developed by students from all three cycles of university studies, including those of doctoral theses.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

As part of the on-site visit, the buildings and premises of the Doctoral School were inspected. During the tour around several laboratories, seminar and lecture halls, the expert



group observed the available facilities. The experts had a positive overall impression of the premises and facilities of the Doctoral School.

Doctoral students in the field of Environmental Science have access to scientific research infrastructure, infrastructure belonging entirely to UAIC, access being provided based on operational procedures for access to infrastructure of research and teaching staff, approved at the institutional level. As evidence of this statement are the mentions of infrastructure users at the end of the published articles.

The indicator is fulfilled/partially fulfilled/not 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.*

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

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

Recommendations:

The Environmental Science field, through the "Alexandru Ioan Cuza" University of Iași and the Faculty of Geography and Geology, has concluded bilateral inter-institutional agreements and agreements within the ERASMUS program, both for practice and study mobility for doctoral students and teachers. Examples of training activities and internships are mentioned, but it is not possible to relevantly confirm whether At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences.

Collaborations and partnerships with universities, companies and other institutions are described and documented.

Still, for further development regarding the aspect of internationalization, it is suggested to continue the collaborative efforts and to seek orientation and funding among European research organizations and bodies. Furthermore, intensive mobility efforts are recommended – incentives could be set. In addition, inter-and transdisciplinary efforts should be continued since these are a strong point of the Doctoral School.



An International and Grant Office can be established to support students and teachers in international cooperation and exchanges. It can be very helpful and provide full support and information regarding various grant calls and support in this regard and international mobility to all students, academic staff and research staff.

Regarding the continuous aspect of internationalization, it is recommended to make English language competence on a level of B2 or C1 according to the European Framework of Reference for Languages a requirement for professors. English language courses should also be mandatory for all personnel. The University could also consider offering incentives to motivate the teaching staff to participate in courses for further development.

Furthermore, the University should invest in both domestic and foreign recruitment efforts. This could be done, for instance, by building up more English courses and by supporting and assisting the mobility of students and teachers. The Doctoral School provided the expert group with a report on mobilities. Currently, a website in the English language is under construction, the availability of which is deemed as indispensable for visibility and future development, especially regarding the offered study possibilities, cooperation and the possibilities to join the Doctoral School.

There is no information regarding IOSUD policies and measures aiming at increasing the number of doctoral students participating in mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.

The indicator is fulfilled/partially fulfilled/not 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

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

Recommendations:

One of the objectives included in the action plan for the continuous improvement of the quality of doctoral studies within the Doctoral School of Geosciences is the organization of co-supervised doctorates or the attraction of international students. In the field of Environmental Science, the organization of activities leading to the internationalization of research is supported, by admitting international doctoral students. These activities need to be intensified.

The visibility of the Doctoral School should be increased and measures of internationalization should be promoted to attract international students as well as other stakeholders from abroad.

For further development regarding the aspect of internationalization, collaborative efforts should be continued and the University should seek orientation among European



research structures. Furthermore, intensive mobility efforts are recommended; incentives could be set. In addition, inter- and transdisciplinary efforts should also be continued since this is a strong point of the Doctoral School.

The indicator is ~~fulfilled~~/partially fulfilled/not 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

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

Recommendations:

The activities and events to achieve the increasing the number of international students at the "Alexandru Ioan Cuza" University of Iași (UAIC), to increase the visibility and promotion of UAIC, to strengthen the existing cooperation relations and to develop new partnerships were performed (e.g. Erasmus + International Staff Training Week, JASSY International Summer School, etc.). These activities need to be intensified.

The University should invest in recruitment efforts, both domestic and abroad. This could be done by, for instance, building up more English courses or supporting and assisting the mobility of students and teachers. In this regard, the advancement of the internationalization strategy of the University by means of teaching experience exchange with other higher education institutions abroad should also be further pursued.

The indicator is ~~fulfilled~~/partially fulfilled/not fulfilled.

IV. SWOT Analysis

<p><u>Strengths:</u></p> <p>- the strengths identified throughout the report will be resumed as part of the indicators' analysis. Other general strengths that do not fall within a particular indicator may be formulated.</p>	<p><u>Weaknesses:</u></p> <p>- the weaknesses identified throughout the report will be resumed as part of the indicators' analysis. Other general weaknesses that do not fall within a particular indicator may be formulated.</p>
<p><u>Opportunities:</u></p> <p>- possible lines of action for the development of the institution under review shall be identified;</p> <p>- examples of opportunities: a favorable economic environment in the proximity of the assessed institution, the uniqueness of the study programs and their relevance to the local/national market, the overall attractiveness of the study programs etc.</p>	<p><u>Threats:</u></p> <p>- the possible causes of the deficient aspects (the causes of the identified weaknesses), which are practically the threats to the proper functioning of the institution, shall be identified;</p> <p>- besides, there may be external threats, such as: the inopportune economic environment in the proximity of the assessed institution, the conduct</p>



	of low attractiveness study programs for both candidates and the labor market etc.
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<u>Strengths:</u>	<u>Weaknesses:</u>
<p><i>Human Resources:</i></p> <ul style="list-style-type: none"> - Existence of a teaching staff with high academic qualifications and competences; - Conducting scientific research promoted through publications in ISI journals with high impact factor and prestigious national and international publishing houses; - Existence of collaborations with universities and research institutes in the EU and neighboring countries; - The prospect for a number of young teachers and researchers to become PhD supervisors in the upcoming period. - Efficient and rigorous administrative services, with control mechanisms and permanent performance development; - Transparency of the decision-making process. <p><i>Educational resources:</i></p> <ul style="list-style-type: none"> - The existence of assets necessary for the development of advanced research activity; - Existence of a modern library that offers high-quality information-documentation services, the possibility of consulting online the database, inter-library loan, online access to national and international information resources; - Periodic application of a questionnaire to evaluate the academic staff by students. <p><i>Scientific research resources:</i></p> <ul style="list-style-type: none"> - Proper endowment of the research laboratories, these being supplied with modern equipment; - Involvement of doctoral supervisors, mentoring team members and doctoral students in research, communication, publishing activities. 	<ul style="list-style-type: none"> - The small number of grants submitted and respectively, won through competition, in the context of reducing the number of competitions due to insufficient research funding in Romania; - Some coordinators need to improve their results; - The limited possibilities of PhD students to publish in OpenAccess journals due to insufficient funding allocated from their own income or research grants; - Insufficient involvement of the business environment and public institutions; - The current economic situation is forcing many students to work since their second cycle of studies, with unfavorable effects manifested by dropping out of school, difficulties in completing their studies, gaps in vocational training.

Commented [PR1]: It is recommended to significantly support the internationalization of Doctoral school Environmental Science domain (recommendation in the text), which will increase the number of international cooperation, the number of international projects and financial resources.

Commented [PR2]: Other weaknesses and recommendations, please find, in the conclusions and general recommendations chapter.



<u>Opportunities:</u>	<u>Threats:</u>
<ul style="list-style-type: none"> - Increasing the recruitment pool for international students; - Expanding national and international collaboration with other universities with similar domains; - The good quality of the doctoral theses developed can be a major opportunity for a future career; - Maintaining and extending the National Student Symposium Mihai David. 	<ul style="list-style-type: none"> - Limited pool of student recruitment; - Poor funding through doctoral grants; - Lack of research competitions; - Reduced capacity to attract quality human resources by accessing Horizon Europe projects; - The current economic crisis, which has negative effects on the labor market.

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> <ul style="list-style-type: none"> 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. 	The indicator is fulfilled	
2.	PI	<p>A.1.1.2. The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in</p>	The indicator is fulfilled	



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.		
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	The indicator is fulfilled. On the other hand, more projects would be desirable. The lack of public funding and the so far limited access to European funding carries the risk of slowing down the human resources and research activities at the Doctoral School.
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 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.).	The indicator is partially fulfilled	



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
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 fulfilled	
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 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.	The indicator is fulfilled	
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,	The indicator is fulfilled	



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		who are themselves studying in doctoral programs does not exceed 20%.		
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 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, 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	The institution has mechanisms and requirements for recruiting its doctoral supervisors. Further improving English competencies. English language competence on a level of B2 or C1 according to the European Framework of Reference for Languages should be a requirement for doctoral supervisors. English language courses should be mandatory for all personnel. Nevertheless, the University could also think about offering incentives to increase the motivation of the teaching staff to participate in courses for further development.
14.	PI *	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	The indicator is 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	The indicator is fulfilled	



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.		
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	The program can consider a more systematic approach in offering teaching assistant possibilities to the PhD students. It was not clear how the PhD students could gain important teaching experience through helping instructors with the courses. It is recommended the PhD program develop courses on soft skills, such as communications and entrepreneurship, in supporting graduating students.
19.	PI	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.	The indicator is fulfilled	



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
20.	PI	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	The low ratio of students to teachers is very beneficial since it allows for the teachers to focus on the individual needs of each student and allows for constructive teaching and communication.
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	



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
25.	PI *	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.	The indicator is partially fulfilled	
26.	PI *	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.	The indicator is fulfilled	
27.	PI	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.	The indicator is fulfilled	The Doctoral School is encouraged to continue its quality assurance efforts while focusing on outcome and output and to publicize these results.
28.	PI *	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	The indicator is fulfilled	



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		analysis of the results, there is evidence that an action plan was drafted and implemented.		
29.	CPI	<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	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.	The indicator is fulfilled	
31.	PI	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.	The indicator is fulfilled	
32.	PI	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.	The indicator is fulfilled	
33.	PI *	C.3.1.1. IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes,	The indicator is	



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.	partially fulfilled	
34.	PI	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.	The indicator is partially fulfilled	The visibility of the Doctoral School should be increased and measures of internationalization should be promoted to attract international students as well as other stakeholders from abroad. For further development regarding the aspect of internationalization, collaborative efforts should be continued and the University should seek orientation among European research structures. Furthermore, intensive mobility efforts are recommended; incentives could be set. In addition, inter- and transdisciplinary efforts should also be continued since this is a strong point of the Doctoral School.
35.	PI	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;	The indicator is partially fulfilled	Publish English versions of all relevant information, documents and all other information on the study program and research on the website of the University.



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		by including international experts in guidance committees or doctoral committees etc.).		The University should invest in recruitment efforts, both domestic and abroad. This could be done by, for instance, building up more English courses or supporting and assisting the mobility of students and teachers. In this regard, the advancement of the internationalization strategy of the University by means of teaching experience exchange with other higher education institutions abroad should also be further pursued.

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

Several important issues raised during the evaluation are resumed and some general conclusions are drawn on the quality of the education provided within the doctoral study domain under review; the Experts' Panel also presents general assessments about the institution. Other general recommendation may also be presented, which cannot be related to a specific indicator and have not been presented at point V.

A decision is proposed, together with the reasons for granting it (if the Experts' Panel members do not reach a consensus, each of them can propose and argue his/her own decision).

In summation, the experts gained a very positive overall impression of the Environmental Science domain of the Doctoral School, which is in line with the overall strategy of the University. It is also correlated with the national and European agenda. The doctoral program contributes to the economic welfare of the country.

The overall impression of the Doctoral School domain is that teaching is kept on a high level. The Programme of study is well designed, studies are well organized, and the environment is student-friendly.



A distinct trait of the Environmental Science Doctoral Programme is that it is largely inter-and cross-disciplinary. It is very appreciated to take note of the dynamic interaction and interdisciplinarity of the doctoral environmental science's study programme and encourage the Doctoral School domain to strengthen further these synergies.

In addition, the process of internationalization and at the same time the visibility of the Doctoral School and University on a European scale should be expedited.

It has been confirmed that the Environmental Science part of the Doctoral School provides all necessary special and material resources. The infrastructure of the Institute is especially excellent, and the services offered to students appear to be very good. Teaching staff have adequate academic qualifications and competencies.

Strengths:

- The mission of the Doctoral School Environmental Science domain stands in line with the general mission of the University, which is to contribute to the achievement of Romanian higher education.
- The overall strategy of the Doctoral School, especially in view of national and regional priorities is seen as very positive.
- A strategic plan corresponds to the market and academic demands of Romania. The plan also covers the internationalization intentions of the Doctoral School.
- The Doctoral School has been set up autonomously. There is an adequate management structure in place to run the school in accordance with its respective objectives.
- The University/Doctoral School has built up a rigorous internal quality assurance system with clearly defined objectives.
- The Doctoral School has a good methodology for institutional management. It has transparent organizational structures and well-documented regulations.
- The Doctoral School grants doctoral students access to the research infrastructure of its institutes, research centers, laboratories and libraries.
- The institution has mechanisms and requirements for recruiting its doctoral supervisors.
- A positive component of PhD programme is the requirement of publications in order to obtain the PhD.
- The low ratio of students to teachers is very beneficial since it allows for the teachers to focus on the individual needs of each student and allows for constructive teaching and communication.
- The program has a plagiarism checking procedure.

Recommendations

- The lack of public funding and the so far limited access to European funding carries the risk of slowing down the research activities at the Doctoral School.



- The visibility of the Doctoral School should be increased and measures of internationalization should be promoted to attract international students as well as other stakeholders from abroad.
- Publish English versions of all relevant documents – such as the strategic plan and business plan, as well as all other information on the study program and research – on the website of the University.
- The Doctoral School is encouraged to continue its quality assurance efforts while focusing on outcome and output and to publicize these results.
- For further development regarding the aspect of internationalization, collaborative efforts should be continued and the University should seek orientation among European research structures. Furthermore, intensive mobility efforts are recommended; incentives could be set. In addition, inter-and transdisciplinary efforts should also be continued. since this is a strong point of the Doctoral School.
- Further improving English competencies. English language competence on a level of B2 or C1 according to the European Framework of Reference for Languages should be a requirement for doctoral supervisors. English language courses should be mandatory for all personnel. Nevertheless, the University could also think about offering incentives to increase the motivation of the teaching staff to participate in courses for further development.
- The University should invest in recruitment efforts, both domestic and abroad. This could be done by, for instance, building up more English courses or supporting and assisting the mobility of students and teachers. In this regard, the advancement of the internationalization strategy of the University by means of teaching experience exchange with other higher education institutions abroad should also be further pursued.
- Specification of the needs of the scientific and industrial community in Romania, European Research Area, etc., and thus improving the possibilities for direct collaboration with industrial and applied partners (e.g. companies, Ministries, etc.).
- There could be a stronger tendency to integrate research outcomes in teaching and to enhance entrepreneurship and innovation.
- The program can consider establishing a more formal industrial advisory board or industry group for receiving feedback and advice from the companies regarding degree relevance and industry requirements for PhD level professionals.
- The program can consider a more systematic approach in offering teaching assistant possibilities to the PhD students. It was not clear how the PhD students can gain important teaching experience through helping instructors with the courses.
- The stipend and financial support instruments available for students should be reviewed periodically in terms of the evolving costs of living.
- The program has grown, but it is still relatively small in terms of the number of students. The program has the aspiration of having more students while keeping the favourable student-teacher ratio and the current high level of administrative support.



- The student-teacher ratio is excellent; however, the PIs have different expertise areas. It was not fully clear how the PhD supervision workload is balanced across the expertise areas of the PIs.
- It is recommended the PhD program develop courses on soft skills, such as communications and entrepreneurship, in supporting graduating students.

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.*