

The External Evaluation Report of Doctoral Study Domain FORESTRY - UNITBV

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I. Introduction¹

The periodic external evaluation of doctoral study domain FORESTRY was conducted in on-line format during November 8th and 12th 2021. The Experts Committee consisted of Prof. Dr. Mircea Mihalache, Prof. Dr. Viliam Picher and PhD student Sergiu Orasan-Alic.

The doctoral study domain FORESTRY is part of the Interdisciplinary Doctoral School (SDI) of Transilvania University of Brasov (UNITBV), Romania. Currently, it has 19 doctoral supervisors and 57 doctoral students.

Doctoral studies in forestry have been organized at Brasov University since 1953, as per Decree 291/1953 and HCM 2471/1953 (full-time and part-time post-graduate studies). Within the Polytechnic Institute of Braşov (the former name of UNITBV), the first doctoral theses in forestry were defended in 1957 (Stanescu Victor and Costea Constantin), the first doctor's degree diploma being obtained in 1958.

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 FORESTRY and its Annexes;
- The analysis of documents, data and information available on the IOSUD/Doctoral School (SDI) website, in electronic format;
- On-line 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;

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



- Meeting/discussions with doctoral students in the doctoral study domain FORESTRY;
- Meeting/Discussions with the graduates of the doctoral study domain FORESTRY;
- Meeting/Discussions with employers of the graduates in the doctoral study domain FORESTRY;
- Meeting/Discussions with the school officials of the Doctoral School in which the doctoral study domain under review is operating;
- Meeting/Discussions with the doctoral advisors in the doctoral study domain FORESTRY;
- Meeting/discussions with the representatives of the various structures of the IOSUD/Doctoral School 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);

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

IOSUD-UNITBV and the Interdisciplinary Doctoral School (SDI) were established in 2010 by the Senate of UNITBV.

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

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.

IOSUD-UNITBV and the Interdisciplinary Doctoral School (SDI) have implemented the effective mechanisms provided for in the specific legislation on the organization of doctoral studies in forestry.

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.*



The specified regulations exist at the level of the Doctoral School (SDI) and forestry doctoral study domain. The documentation provided prior to the evaluation underlines this assessment. Furthermore, during meetings with relevant parties and stakeholders it was evident that regulations are properly applied.

Recommendations: Upload specific regulations translated in English on the website of the Doctoral School

The indicator is fulfilled.

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

The requirements indicated in Art. 17 par. (5) of the Code of doctoral studies are regulated by a set of specific instructions, made by C-SDI and approved by CSUD, which are included in the Appendix to the Regulations of the Interdisciplinary Doctoral School.

Recommendations:

The indicator is fulfilled.

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

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.

A dedicated computer system of the online electronic platform type is currently being implemented in order to modernize and streamline the existing record system of doctoral students and their route, while ensuring the possibility of direct access to information regarding the personal situation for doctoral candidates and doctoral supervisors.

Recommendations:

The indicator is fulfilled.

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

SDI is currently using the plagiarism detection software TURNITIN. The software is used for each written work submitted by the PhD candidates. The plagiarism score is communicated to the PhD supervisors.

Recommendations:

The indicator is fulfilled.

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

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.

Currently there are 4 research grants obtained in national competitions (2 RU-TE 2020; 2 PCE 2020), 5 international educational projects and 2 contracts with third parties in implementation. Also, during the evaluated period, 7 national research grants, 5 international research grants, 11 international educational grants and 46 third-parts research contracts were implemented by doctoral supervisors in the field of forestry (Annex A.1.3.1).

Recommendations:

The indicator is fulfilled.

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

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 21.21%.

Recommendations:

The indicator is fulfilled.

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

More than 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 was used to reimburse professional training expenses of doctoral students (e.g. access to scientific literature via Anelis, participation in scientific events).

Recommendations:

The indicator is fulfilled.

Criterion A.2. Research infrastructure

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.



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

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.

Doctoral students in the field of Forestry carry out their research activities in the laboratories of the two research centers (Sustainable forestry and wildlife management; Forest engineering, forest management and terrestrial measurement) within the Research and Development Institute of Transilvania University of Braşov. The laboratories are well equipped and supported by relevant staff. The equipment has been purchased with international and national funds to an adequate level of quality and relevance.

Recommendations:

The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

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

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.

The number of doctoral supervisors that meet the minimum necessary and mandatory standards for obtaining the qualification certificate is 14 out of 19 (73.68%).

Recommendations:

The indicator is 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.

At least 50% (11 out of 19, 57.89%) of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD-UNITBV.

Recommendations:

The indicator is fulfilled.

Performance Indicator A.3.1.3. The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved



expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.

The disciplines in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff who are doctoral thesis advisors, professors, with proved expertise in the field of the disciplines they teach.

Recommendations:

The indicator is fulfilled.

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

At the time of the evaluation, no doctoral supervisor in the field of forestry has more than 8 doctoral students.

Recommendations:

The indicator is fulfilled.

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

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.*

At least 13 doctoral supervisors (68.42% of the total number of supervisors activating in the doctoral field) meet the criteria and have international visibility.

Recommendations:

The indicator is fulfilled.

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.3.2.2. *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.*

17 doctoral supervisors (89.47%) meet the required score for this indicator based on scientific results from the last five years.

Recommendations:

The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS

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

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.

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.*

The forestry doctoral field is one of the most attractive at IOSUD-UNITBV. The values for the reported period 2016-2020 are 0.70 and 1.91, respectively, compared to the minimum value of 0.2 and 1.2, respectively.

Recommendations:

The indicator is fulfilled.

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

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.*

At IOSUD-UNITBV, admission to doctoral study programs is based on selection criteria including previous academic, research and professional performance, their interest for scientific research, publications in the forestry domain and a proposal for a research topic. Interviewing the candidate is compulsory.



Recommendations:

The indicator is fulfilled.

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

The expelling rate, including renouncement / dropping out of doctoral students is 14.71%.

Recommendations:

The indicator is fulfilled.

Criterion B.2. The content of doctoral programs

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.

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.*

The curricula comprises at least 3 disciplines relevant for the doctoral students' training in scientific research, in fact between 4 and 6 disciplines, of which at least one discipline is intended for the in-depth study of the research methodology and / or statistical data processing.

Recommendations:

The indicator is fulfilled.

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

One discipline is dedicated to Ethics and one to Intellectual Property in scientific research.

Recommendations:

The indicator is fulfilled.

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

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.

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 training program is oriented towards learning outcomes, each discipline in the curriculum aiming at the formation of competencies clearly specified in the course outline.

Recommendations:

The indicator is fulfilled.

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

Every doctoral students benefit from counselling/supervision of a Doctoral Committee that consists of 3 (4) academic staff with a doctoral degree in forestry.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.5. *For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1.*

Currently there are 57 doctoral students in forestry. The ratio between the number of doctoral students (57) and the number of members of Doctoral Committees (60) is 0.95:1

Recommendations:

The indicator is fulfilled.

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

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

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.*

There are 28 finalized doctoral theses in forestry for the evaluation period. For every doctoral student who completed the doctoral thesis, there is a scientific contribution (article). By reviewing five randomly selected papers it was found they contain significant original contributions.

Recommendations:

The indicator is fulfilled.

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



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

Within the evaluated period, there were 66 scientific presentations at international conferences that were organized in the country or abroad. The ratio between the number of presentations and the doctoral students that completed their doctoral studies in the last five years (28) is 2.36.

Recommendations:

The indicator is fulfilled.

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

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.*

No more than two theses coordinated by the same supervisor were evaluated by a specialist coming from an university.

Recommendations:

The indicator is fulfilled.

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

The ratio does not exceed 0.3, considering the past five years.

Recommendations:

The indicator is fulfilled.

Domain C. QUALITY MANAGEMENT

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

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.

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.

SDI demonstrated the continuous development of the evaluation process and its internal quality assurance following specific methodologies covering the criteria / aspects mentioned in this indicator - the doctoral supervisors' scientific activity, the infrastructure and logistics necessary to carry out the research activity, the procedures and the subsequent rules for the organization of doctoral studies.

Recommendations:

The indicator is fulfilled.

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

SDI has created mechanisms to collect the feed-back of the doctoral students on their needs and level of satisfaction with the doctoral study programme (specific instruction IS-7).

Recommendations:

The indicator is fulfilled.

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

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

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.

On the website of IOSUD-UNITBV, which also includes a section dedicated to the Interdisciplinary Doctoral School, as well as on the Intranet platform of the University - section Doctorate, all information specified at this indicator is available.

Recommendations:

The indicator is fulfilled.

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

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.*

Doctoral students in forestry have free access to platforms providing academic databases relevant to the doctoral studies domain of their thesis (e.g. ANELiS).

Recommendations:

The indicator is fulfilled.

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

Each doctoral student got access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific works (Turnitin software).

Recommendations:

The indicator is fulfilled.

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

Forestry doctoral students had access to the research laboratories that belong to ICDT (Research Centre Sustainable forestry and wildlife management and Research Centre Forest engineering, forest management and terrestrial measurements).

Recommendations:

The indicator is fulfilled.

Criterion C.3. Internationalization

UNITBV made substantial efforts to develop the internationalization of the doctoral study program in forestry.

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

There is an internationalization strategy in place and it is applied to enhance the internationalization of doctoral studies as well.



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.

More than 40% of the forestry doctoral students benefited from external mobilities (participation in a training course abroad, attending international scientific conferences). IOSUD-UNITBV applies policies and measures aiming at increasing the number of doctoral students participating in mobility periods abroad.

Recommendations:

The indicator is fulfilled.

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

Co-tutorship is actively supported by IOSUD-UNITBV. Six renowned scientists held seminars, lectures, workshops and other activities related to doctoral studies in forestry.

Recommendations:

The indicator is fulfilled.

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

There are four forestry doctoral students from abroad (22% of the total foreign students at the university level), 3 doctoral students involved in ERASMUS+ incoming mobilities (13.04%), a TAS scholarship holder (14.28%), and 4 doctoral students from non-EU countries who benefited from the financial support of the university (66.66%).

Recommendations:

The indicator is fulfilled.

IV. SWOT Analysis

<u>Strengths:</u>	<u>Weaknesses:</u>
- doctoral supervisor with very good scientific results and international visibility;	- small number of doctoral theses written in English;

<ul style="list-style-type: none"> - international cooperation with EU and third countries; - very good research infrastructure; - existing support mechanisms for doctoral students and supervisors (e.g. for international mobility, attending scientific conferences). - high level of application of findings from doctoral theses in forestry practice and significant contribution of doctoral study programmes graduates to achieving their employers goals 	<ul style="list-style-type: none"> - few international experts in supervision/doctoral committees.
<p style="text-align: center;"><u>Opportunities:</u></p> <ul style="list-style-type: none"> - young researcher / academic staff with very good scientific production that can obtain the doctoral supervision; - strong relationships with the economic environment and forest research institute; - relevance of the study program to the local/national/international markets; - development of the existing international collaborations to increase the number of research stays for doctoral students. 	<p style="text-align: center;"><u>Threats:</u></p> <ul style="list-style-type: none"> - strong national and international competition in the field of doctoral studies to attract doctoral students and financial resources; - migration of Romanian high-performing graduates to institutions abroad or to the labour market in other countries; - lack of attractiveness of the existing doctoral research scholarships / grants; - willingness of economic environment to invest in the training of highly qualified specialists and for doctoral research is limited.

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
1.	PI	Performance Indicator A.1.1.1. <i>The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain</i>	fulfilled	Upload specific regulations translated into English on the website of the Interdisciplinary Doctoral School (SDI)
2.	PI	Performance Indicator A.1.1.2. <i>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.</i>	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
3.	PI	Performance Indicator A.1.2.1. <i>The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.</i>	fulfilled	
4.	PI	Performance Indicator A.1.2.2. <i>The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.</i>	fulfilled	
5.	PI	Performance Indicator A.1.3.1. <i>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.</i>	fulfilled	
6.	PI *	Performance Indicator *A.1.3.2. <i>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%.</i>	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
7.	PI *	Performance Indicator *A.1.3.3.⁶ <i>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.).</i>	fulfilled	Increase the funds allocated for professional training of doctoral students
8.	CPI	Performance Indicator A.2.1.1. <i>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.</i>	fulfilled	
9.	CPI	Performance Indicator A.3.1.1. <i>Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than</i>	fulfilled	Increase the number of doctoral supervisors that fulfil the minimum national standards for forestry domain

⁶ 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.

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<i>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.</i>		
10.	PI *	Performance Indicator *A.3.1.2. <i>At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.</i>	fulfilled	Increase the number of doctoral supervisors by promoting young academic staff from the Faculty of Forestry
11.	PI	Performance Indicator A.3.1.3. <i>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.</i>	fulfilled	
12.	PI *	Performance Indicator *A.3.1.4. <i>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 programs⁷ does not exceed 20%.</i>	fulfilled	

⁷ 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.

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
13.	PI	<p>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.</p>	fulfilled	
14.	PI *	<p>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%</p>	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<i>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.</i>		
15.	PI *	Performance Indicator *B.1.1.1. <i>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.</i>	fulfilled	
16.	PI *	Performance Indicator *B.1.2.1. <i>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.</i>	fulfilled	
17.	PI	Performance Indicator B.1.2.2. <i>The expelling rate, including renouncement / dropping out of doctoral students 3,</i>	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<i>respectively 4, years after admission⁸ does not exceed 30%.</i>		
18.	PI	Performance Indicator B.2.1.1. <i>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.</i>	fulfilled	
19.	PI	Performance Indicator B.2.1.2. <i>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.</i>	fulfilled	
20.	PI	Performance Indicator B.2.1.3. <i>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</i>	fulfilled	
21.	PI	Performance Indicator B.2.1.4. <i>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.</i>	fulfilled	

⁸ 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.

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
22.	CPI	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.	fulfilled	
23.	CPI	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.	fulfilled	
24.	PI *	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.	fulfilled	
25.	PI *	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.	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
26.	PI *	<p>Performance Indicator *B.3.2.2. <i>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.</i></p>	fulfilled	
27.	PI	<p>Performance Indicator C.1.1.1. <i>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:</i></p> <ul style="list-style-type: none"> <i>(a) the scientific work of Doctoral advisors;</i> <i>(b) the infrastructure and logistics necessary to carry out the research activity;</i> <i>(c) the procedures and subsequent rules based on which doctoral studies are organized;</i> <i>d) the scientific activity of doctoral students;</i> <i>e) the training program based on advanced academic studies of doctoral students;</i> 	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<p>f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.</p>		
28.	PI *	<p>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.</p>	fulfilled	
29.	CPI	<p>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:</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; 	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<p>(g) the list of doctoral students within the domain with necessary information (year of registration; advisor);</p> <p>(h) information on the standards for developing the doctoral thesis;</p> <p>(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.</p>		
30.	PI	<p>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.</p>	fulfilled	
31.	PI	<p>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.</p>	fulfilled	
32.	PI	<p>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.</p>	fulfilled	
33.	PI *	<p>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</p>	fulfilled	<p>Increase the mobility of forestry doctoral students</p>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<i>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.</i>		
34.	PI	Performance Indicator C.3.1.2. <i>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.</i>	fulfilled	Co-tutorship should be more actively promoted
35.	PI	Performance Indicator C.3.1.3. <i>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.).</i>	fulfilled	Include international experts in the Supervision /Doctoral Committee

VI. Conclusions and general recommendations

The quality of the education provided within the doctoral study domain Forestry is very good. The domain is very well integrated within the Interdisciplinary Doctoral School of IOSUD-UNITBV.

VII. Annexes



The following types of documents shall be attached:

- *The detailed schedule of the evaluation visit*

Prof. Dr Viliam Pichler	Signature:
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