



**OCENA ŚRÓDOKRESOWA DOKTORANTA SZKOŁY DOKTORSKIEJ
W UNIwersYTECIE PRZYRODNICZYM WE WROCLAWIU**

Przeprowadzona dnia 5 września 2024 r.

przez Komisję ds. oceny śródkresowej w dyscyplinie inżynieria środowiska, górnictwo i energetyka w składzie:

Przewodniczący:

prof. dr hab. inż. Wojciech Janczukowicz, Uniwersytet Warmińsko-Mazurski w Olsztynie

Członkowie:

1. prof. dr hab. inż. Maja Radziemska, Szkoła Główna Gospodarstwa Wiejskiego w Warszawie

2. prof. dr hab. inż. Ewa Wojciechowska, Politechnika Gdańska

Imię i nazwisko doktoranta:	Ahmed Tamma
Promotorzy:	dr hab. Krzysztof Lejcuś, prof. Uczelni dr inż. Wiesław Fiałkiewicz - promotor pomocniczy
Temat rozprawy doktorskiej:	Sustainable technology of phytoextraction of metals from soil with the use of water absorbing geocomposite

I. Ocena postępów w realizacji indywidualnego planu badawczego:

Ocena Komisji:
Pozytywna/negatywna

Uzasadnienie oceny:

The progress of the work is consistent with the prepared Individual Research Plan (IRP). Taking into account the information contained in the prepared report, and in the discussion, the mid-term evaluation committee concludes that the progress in the realization of the dissertation is very satisfactory, which promises the completion of the dissertation within the planned timeframe.

The subject of his doctoral dissertation is: "Sustainable technology of phytoextraction of metals from soil with the use of water absorbing geocomposite". The aim of the dissertation is to develop a new technology of phytoextraction of metals from soil with the use of biodegradable water-absorbing geocomposite (BioWAG). The others goals are:

determination of the influence of water lack on phytoextraction efficiency, possibility of shortening the duration of phytoextraction process.

The PhD Student divided the scope of research during the first two years of studies into partial tasks (4 in total), 3 of them were completed. Task No 4 is in progress. The report does not explain why this is so.

The PhD student's prepared, so far, one publication which is under review in **Journal of Environmental Management**. It was planned in IRP.

He attended one workshop in Poland (oral presentation) and international conference in Prague (with poster).

The documentation also includes four "Individual Doctoral Student Cards at the UPWr Doctoral School (semester-long)" and an "Evaluation Card for the Doctoral Student's Presentation at the Open Seminar". The Committee has no comments on the attached documents. The presentation was assessed positively and certified by the Chairwoman of the Disciplinary Council.

II. Ocena realizacji programu kształcenia, stanu zaawansowania badań naukowych i postępu prac w przygotowaniu rozprawy doktorskiej:

Ocena Komisji:

Pozytywna/negatywna

Uzasadnienie oceny:

The doctoral student carries out the Education Program on time and in accordance with the regulations of the Doctoral School of UPWr.

Research tasks presented in IPB are carried out in a timely manner and according to the schedule.

The degree of advancement of the doctoral thesis was estimated at 50%, which is in line with the plan. The thesis supervisor assesses the PhD student's activities as satisfactory in relation to the level of advancement of work related to the preparation of the doctoral dissertation.

Summing up, the mid-term evaluation committee concludes that the PhD student correctly and timely implements the IPB and the Education Program, which promises to complete the doctoral dissertation on the scheduled date.

III. Rozmowa z doktorantem

Ocena Komisji:

Pozytywna/negatywna

Uzasadnienie oceny:

During a direct conversation with the mid-term evaluation committee, the PhD student discussed the current research results and presented research plans for the next semesters.

The PhD student showed great commitment during the interview, providing comprehensive answers to the questions asked by the members of the Committee.

OCENA KOŃCOWA

Pozytywna/negatywna

Uzasadnienie oceny: (min. 500 znaków)

The progress of the work is consistent with the prepared Individual Research Plan (IRP) and Education Program. Taking into account the information contained in the prepared report, given in the presentation and in the discussion, the committee concludes that the progress in the realization of the dissertation is satisfactory, which promises the completion of the dissertation within the planned timeframe.

The subject of his doctoral dissertation is: "Sustainable technology of phytoextraction of metals from soil with the use of water absorbing geocomposite". The aim of the dissertation is to develop a new technology of phytoextraction of metals from soil with the use of biodegradable water-absorbing geocomposite (BioWAG). The others goals are: determination of the influence of water lack on phytoextraction efficiency, possibility of shortening the duration of phytoextraction process.

The PhD Student divided the scope of research during the first two years of studies into partial tasks (4 in total), 3 of them were completed. Task No 4 is in progress. The report does not explain why this is so. The progress of work, included in IRP, was estimated at 55%. After the explanations of the PhD student during a direct conversation the committee members do not see any threat to the implementation of IRP.

The PhD student's prepared, so far, one publication which is under review in **Journal of Environmental Management**. It was planned in IRP.

He attended one workshop in Poland (oral presentation) and international conference in Prague (with poster).

The doctoral student carries out the Education Program on time and in accordance with the regulations of the Doctoral School of UPWr.

During the face-to-face discussion, the PhD student presented his obtained research results and research plans for the next semesters of doctoral studies. In addition, he has shown great commitment by providing satisfactory answers to questions asked by mid-term evaluation committee members. Considering the above aspects, the members of the mid-term evaluation committee unanimously positively evaluated the progress of the dissertation.

Podpisy członków komisji:

1.

2. *Małgorzata Bednarek*

3. *Emilia Wójcik*

