

EVALUATION AND ACCREDITATION DOCUMENTS

Master Research Program on Climate Change and Marine Sciences

Institute of Engineering and Marine Sciences
(ISECMAR)

Atlantic Technical University

Mindelo, Cabo Verde

June 2024

Rapport publié le 28/06/2024

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International evaluation and accreditation

EVALUATION REPORT

Master Research Program on Climate Change and Marine Sciences

Institute of Engineering and Marine Sciences
(ISECMAR)

Atlantic Technical University

Mindelo, Cabo Verde

February 2024



The WASCAL network (West African Science Centre on Climate Change and Adapted Land Use) has mandated the Hcéres to perform the evaluation of the Master Research programme on Climate Change and Marine Sciences (MRP-CCMS) delivered by Atlantic Technical University, Cabo Verde. The evaluation is based on the “Evaluation Standards for international study programmes”, adopted by the Hcéres Board on January 31st, 2022. These standards are available on the Hcéres website (hceres.fr).

In the name of the expert committee¹ :

Benoit Gabrielle, President of the committee

In the name of Hcéres¹ :

Stéphane Le Bouler, acting President

The Higher Council for Evaluation of Research and Higher Education (Hcéres) is an independent public authority. It is responsible for evaluating higher education and research institutions, research organizations, research units, and training programmes.

¹In accordance with articles R. 114-15 and R. 114-10 of the Research Code, evaluation reports are signed by the chairman of the expert committee and countersigned by the President of Hcéres.

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I. STUDY PROGRAMME IDENTITY SHEET

- Name of the Institution: Atlantic Technical University (Universidade Técnica do Atlântico - UTA)
- Component, faculty or department concerned: Institute of Engineering and Marine Sciences (ISECMAR)
- Year of creation: 2019
- Legal status: public university
- Place(s) where the institution is located and the programme is taught:
 - o City: Mindelo, São Vicente Island, Cabo Verde
 - o Campus: Campus de Ribeira de Julião, Mindelo.
- Precise name of the programme subject to evaluation: Master Research Program on Climate Change and Marine Sciences (MRP-CCMS)
- Level and duration of studies: graduate study programme (2 years)
- Context: The Master was launched in 2019, with the creation of the new university of Cabo Verde (Atlantic Technical University - UTA), but the Institute of Engineering and Marine Sciences (ISECMAR) existed since 1996. The University, along with two other institutions focusing on marine and maritime sectors (Institute of Sea – IMAR - and School of Sea – EMAR-), operate under the umbrella of a consortium known as Campus do Mar, established in 2020. The consortium aims to foster synergies and explore the potential benefits of shared resource management.
- This study programme is being implemented within the framework of WASCAL (West African Science Centre on Climate Change and Adapted Land Use), a large-scale research-focused service centre, which encompasses 11 West African countries (Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria, Senegal, Gambia and Togo). The programme is funded by the German Federal Ministry of Education and Research through WASCAL. One student per country is selected and admitted in each batch.

PERSON IN CHARGE OF THE PROGRAMME

- Surname, first name: ALMEIDA, Corrine
- Position held: Director
- Field: Marine Biologist and Oceanographer

RESULTS OF PREVIOUS ACCREDITATIONS AND QUALITY SYSTEM IN PLACE

The programme received its first accreditation in 2020 from an external entity separated from the University, which is the Higher Education Regulatory Agency of Cabo Verde. The objective of the latter is to establish a national system for quality assurance of higher education performance by implementing an assessment system, accreditation, and supervision of higher education institutions, as well as internal quality assurance systems. Accreditation will be subject to renewal every five years. In the framework of the WASCAL network, the Master programme underwent external evaluation by the Hcéres in 2023.

The Atlantic Technical University has an established quality assurance system applied to the Department of Maritime transports with international certification. This system is in the process of being implemented in all study programmes.

HUMAN AND MATERIAL RESOURCES MADE AVAILABLE TO THE PROGRAMME

This programme benefits from human resources comprising three Associate Professors of Cabo Verde, 21 invited Professors (German, American, Portuguese, French, Ivorian, Beninese, Nigerian), four graduated Assistants of Cabo Verde, three administrative staff and four technical staff (including three in full time, accountant, janitor and secretary).

This programme also benefits from material resources such as laboratories, rooms, libraries, computer rooms, vessels, thanks to the Atlantic Technical University and partners. Through the framework of WASCAL (with its Competence Centre based in Ouagadougou – Burkina Faso) and OSCM (with IMAR), students have access to online bibliographic repositories and quality research resources to stay abreast of new research trends. At OSCM, the students have access to computers linked to the GEOMAR network.

STUDENT NUMBERS AND TYPE OVER THE LAST 4 YEARS

The master programme has been in existence for five years since its establishment in 2019. To date, the first batch of students completed the programme, while a portion of the second batch has defended their theses, and others are in the process of completing course their master's thesis. The duration of the master thesis can extend up to one year. The third batch commenced during the 2021-2022 academic year and a fourth one will be launched in 2023-2024.

		Batch 1	Batch 2	Batch 3
		2019-2020	2020-2021	2021-2022
1 st year (newcomers)	Male	9	9	5
	Female	3	6	6
	Nationals	2	3	2
	Foreigners	10	12	9
	Total	12	15	11

Enrolled students in 2nd year

			2020-2021	2021-2022	2022-2023
2 nd year	Male	-	9	9	5
	Female	-	3	5	6
	Nationals	-	2	2	2
	Foreigners	-	10	12	9
	Total	-	12	14	11

Graduate students

			2020-2021	2021-2022	2022-2023
	Male	-	9	3	13
	Female	-	2	2	9
	Nationals	-	1	1	2
	Foreigners	-	10	4	20
	Total		11	5	22

II. COMPOSITION OF THE PANEL OF EXPERTS

- Benoit GABRIELLE, Professor, AgroParisTech, Université Paris-Saclay, Chair of the panel
- Mathilde COLAS, PhD Student, Université de Technologie de Troyes, Student Expert
- Anass NAGIH, Professor, Université de Lorraine
- Vanina PASQUALINI, Professor, Université de Corse

Hcéres was represented by Pierre COURTELLEMONT, Science Advisor, and Michelle HOUPE, Head of project (Europe and International Department).

III. EVALUATION PROCESS

DESCRIPTION OF THE ON-LINE VISIT

- Date of the visit: 20th March 2023
- Organisation of the visit: on-line
- Cooperation of the programme and institution to be accredited: perfect cooperation by all stakeholders
- Any problems: no problems identified.

PEOPLE MET

Day/Hour (Cabo Verde Time)	People met
March 20 th 01:00 – 01:30 pm	Meeting with the Vice Rector of UTA
March 20 th 01:30 – 03:00 pm	Meeting with the MRP-CCMS team: Director, Deputy director, Scientific coordinator, IT officer
March 20 th 03:00 – 04:00 pm	Meeting with a panel of permanent professors and temporary lecturers
March 20 th 04:00 – 05:00 pm	Meeting with a panel of professional partners and former students (alumni)
March 20 th 05:00 – 06:00 pm	Meeting with a panel of students (from different countries belonging to the WASCAL network)

In total, 27 participants were met during the on-line interviews.

IV. OVERALL PRESENTATION

PRESENTATION OF THE STUDY PROGRAMME

The Master Research Program on Climate Change and Marine Sciences (MRP-CCMS) is hosted by the Institute of Engineering and Marine Sciences (ISECMAR) of the Atlantic Technical University (UTA), located at Mindelo (São Vicente, Cabo Verde) in Campus de Ribeira Julião. It is a flagship programme for UTA and also its unique Master's programme.

This Master Research Programme has been part of the WASCAL network (West African Sciences Centre on Climate Change and Adapted Land Use) since 2019. It occupies a distinctive and significant position within the WASCAL network, focusing on marine sciences and offering a cutting-edge expertise on specific issues.

It benefits from the support of international partners such as GEOMAR Helmholtz Centre for Ocean Research (Kiel), the University of Kiel and the Thünen Institute in Germany, the members of WASCAL Network in West Africa, and other partners in European countries (e.g., France).

The partnership with GEOMAR is formalised via the Ocean Science Centre of Mindelo (OSCM), which brings together the local facilities of GEOMAR and the Institute of Sea (IMAR). OSCM provides laboratory facilities to the Master's students, and facilitates synergies between GEOMAR, ISECMAR and IMAR in terms of resource management, including teaching staff.

This research Master's programme aims to cultivate the critical mass of human capacities in the fields of climate change, marine science, and ocean management in West Africa. Through interdisciplinary education, students acquire knowledge and develop technical skills to deepen their understanding of coastal and ocean ecosystems. By equipping students with both theoretical and applied skills, the programme aims to train students capable of developing solution-oriented projects in marine sciences and management within the context of climate change. Since its inception in 2019, the MRP-CCMS has consisted of two or three years of study, offering a single specialty with elective courses. In accordance with WASCAL enrolment regulations, each batch has enrolled 11 to 15 students from the West African countries involved in this network.

PRESENTATION OF THE PROGRAMME'S SELF-EVALUATION APPROACH AND INTERNAL QUALITY ASSURANCE PROCESS

The programme management put a formal procedure in place to produce the self-evaluation report. The Atlantic Technical University has a quality assurance system still in progress but is not yet applied to the Master's programme. The MRP-CCMS defines an internal evaluation process for lecturers, courses, and overall training blocks based on student feedback forms and WASCAL guidelines. This process will allow continuous improvement. The study programme has identified an advisory board with a set of relevant partners but has not organised meetings of this board to analyse the internal evaluations.

V. EVALUATION REPORT

FIELD 1. TRAINING POLICY AND CHARACTERIZATION OF THE STUDY PROGRAMME

The MRP-CCMS programme aligns closely with the Atlantic Technical University strategy, which seeks to integrate teaching into international dynamics and foster the training of top executives with technical-scientific skills in maritime economies and related fields. It stands as a flagship programme for the UTA. Master's students are extensively exposed to interdisciplinary and transdisciplinary approaches encompassing oceanography, marine ecology, fisheries, coastal management and planning. This MRP-CCMS is the sole graduate study programme implemented in the host university, and a doctoral program in related disciplines is in the works. It occupies a particular position in the WASCAL network and in West Africa in general since it is the only programme focusing on marine science.

An extensive network of lecturers and researchers from Germany, France, Portugal, Benin, Nigeria, and Brazil support the courses and supervise Master's theses. However, it should be noted that the coordination of the teaching team is weak. Nevertheless, these partnerships also create opportunities for student visits to labs in different scientific fields, especially in Germany, France and Portugal. These stays focus on data gathering and analysis with the help of local supervisors. Furthermore, the students participate in an oceanographic cruise by combining research with education, where they spend about three weeks in the ocean from Mindelo to Bremerhaven in Germany. Within the framework of WASCAL, which has a Competence Centre based in Ouagadougou – Burkina Faso, student mobility to this centre is facilitated with financial support and complemented by diverse language courses. Francophone and Lusophone students attend English courses at the University of Cape Coast in Ghana; while Anglophones students take French courses at the University of Lomé, Togo. In addition, through WASCAL, it is feasible to include students from at least 11 West African countries into the study programme, as well as students from other West African countries not part of WASCAL, with the support of other partners.

Agreements with foreign higher education institutions are in place to offer mobility opportunities to students. The programme benefits from the support of research units at an international and national level, such as:

- GEOMAR - Helmholtz Centre for Ocean Research Kiel, Germany
- Thünen Institute University of Kiel, Germany
- OSCM (Ocean Science Centre of Mindelo) with the Sea Institute (IMAR).

Others research units from West Africa, Europe or Brazil support the study programme:

- WASCAL Competence Centre, Burkina Faso
- Wetlands International Afrique, Senegal
- University of Abomey Calavi, Benin
- University of Cape Coast, Ghana
- Laboratoire d'Océanographie de Villefranche, France
- Institut Universitaire Européen de la Mer, France
- Universidade Federal de São Paulo, Brazil.

The researchers (German, American, French, Portuguese, Caboverdean, Ivorian, Beninese, and Nigerian) from the different disciplines of the study programme participate in the courses. GEOMAR and the programme management help students in identifying a topic for their Master's thesis and finding a suitable supervisor. Most students use the three-week shipboard training to meet their supervisor or co-supervisor in Germany or other countries. With scientists on board, the students learn sample collection techniques, manipulate and use the different oceanographic instruments, and analyse and interpret the data. In addition, the study programme includes a course on scientific writing and communication, as well as one on research integrity, to assist students throughout the research lifecycle. Thanks to WASCAL (with its Competence Centre) and OSCM (with IMAR), the students have access to online bibliographic repositories and quality research materials to stay abreast of new research trends. Classes on scientific integrity and ethics are absent from the curriculum although these topics are addressed in some courses such as Communication and scientific writing, Scientific programming, Geospatial data analysis and other courses.

The training curriculum offers students opportunities to meet West Africa's socio-economic needs regarding natural resources management and sustainable development, but it is highly research-oriented. The MRP-CCMS involves socio-economic actors, for instance, the Calhau Shrimp Farm in Mindelo, companies linked to the aquaculture sector, the Cabo Verde Seaweed Bank, and non-governmental organizations (e.g., Biosfera I).

Nevertheless, the training should involve more socio-economic actors in the courses (companies, organisations representing an activity or a profession, associations or institutions). It should develop specific courses focusing on job-market integration and entrepreneurship to prepare students for consulting roles and entrepreneurship, including business creation.

To conclude, the study programme strongly aligned with the institution's education strategy, serving as its sole Master's level programme. It occupies a distinctive and relevant position in the WASCAL network, focusing on marine sciences. It has effectively addressed socio-economic needs in its field and identified potential job market sectors for its graduates. However, it currently maintains limited connections to the socio-economic world and incorporates only a few elements of professionalisation. Its partnerships with a vast network of internationally-renowned universities and research centres, whose quality and involvement in the programme are real, ensure a fruitful connection to research.

FIELD 2. PEDAGOGICAL ORGANISATION OF THE STUDY PROGRAMME

The curriculum includes twenty-one courses (18 core courses and three electives) spread over three semesters (S1, S2 and S3). The semester S4 corresponds to the Master's thesis. The courses are diverse and encompass topics related to climate change and marine sciences across relevant disciplines (e.g., Earth Climate System, Oceanography, Ocean Dynamics, Marine Microbiology, Fisheries, Ecology, Coastal dynamics and sea level change, Experimental marine ecology). They are associated with other disciplines, techniques, or transversal skills (e.g., Geospatial data analysis, Communication and scientific writing, Marine Governance and Law, Coastal and Marine Spatial Planning, Genetics tools applied to marine biology, and Ecosystems modelling).

The teachings benefit from the presence of the local research vessel based at a partner institution in Cabo Verde and of the German research vessel Polarstern (notably during its annual south-north transit with Germany). In the third semester (S3), students can visit the WASCAL Competence Centre based in Ouagadougou (Burkina Faso), where they can access climate-related equipment and infrastructure, including powerful tools of data analysis. GEOMAR, IMAR (OSCM) and WASCAL have established infrastructures in Cabo Verde available for the study programme (laboratories, rooms, and electronic access to international research literature).

The MRP-CCMS is open for students and professionals with at least a B.Sc. degree or equivalent in natural sciences and a Second Class Upper (2.1) Grade Point Average, typically representing a score of 60 to 69% for a UK undergraduate degree. The programme's objectives are clearly communicated to the students and other stakeholders, and a syllabus is available for each course. Nevertheless, the study programme should adopt a skill-based approach and acknowledge the value of acquired skills, such as by enabling students to develop a skills portfolio. The study programme should be structured around the acquisition of academic knowledge while also considering the development of skills (also called transversal competencies) and additional competencies such as computer literacy, foreign languages, and communication.

Students are taught through a variety of methods including lectures, seminars, practical sessions and tutorials. The curriculum includes research project development, instruction in current computer tools (such as programming and statistics), coastal management simulation games, active classes, practical laboratories sessions, field trips, visits, and shipboard training. The initial plan was to have only face-to-face classes, but with the Covid-19 pandemic, hybrid classes (on-line and in-person) were set up using the Google Classroom platform. Weekly meetings are organised with each student. Teaching in small groups is favoured to tailor the learning process to student needs, monitor progress, and continually adapt the learning approach to facilitate further improvement. In addition, the study programme offers training to enhance students' critical thinking, research abilities, self-management skills, communication, and social skills.

Regarding the acquisition of credits, it would be beneficial to harmonize them by semester, akin to the European system (ECTS), to facilitate student mobility. The programme incorporates four months of English language courses for Francophones and Lusophones students at the University of Cape Coast in Ghana, and French Language courses for Anglophones at the University of Lomé, Togo. These languages courses continue every week throughout the first three semesters; however, there is currently no associated certification. The study programme does not prepare its students for incoming and outgoing mobility, nor does it provide a diploma supplement or annex specifying the knowledge and skills acquired by students.

The programme should strive to incorporate opportunities for entrepreneurship education, create pathways for professional internships, and provide certification in the relevant field whenever feasible.

To conclude, while the study programme remains consistent with its overall training objectives, it falls short in meeting the needs of the socio-economic sector and lifelong learning. It lacks a skill-based approach. The programme offers various teaching methods and individual monitoring to bolster student success. The

programme's content is adapted to ensure international accessibility from a language perspective. Nevertheless, there is a need to harmonise credits acquired per semester. The study programme could consider providing a descriptive annex outlining the knowledge and skills acquired to facilitate student mobility or professional integration.

FIELD 3. ATTRACTIVENESS, PERFORMANCE AND RELEVANCE OF THE STUDY PROGRAMME

Information on the study programme is shared mainly on social media (Instagram and Facebook) using also video clips. Furthermore, the MRP-CCMS is advertised on the University and WASCAL web sites. The MRP-CCMS attracts a large audience on social media with more than 1700 followers, a good gender balance (59% male and 41% female), and nine countries in West Africa. The number of applications increased from 109 for the first batch to 134 and 141 for batch 3 and 4, respectively, indicating a significant and growing interest in the MRP-CCMS. Two countries from the WASCAL network, Ivory Coast and Burkina Faso, are under-represented. This is understandable for the latter, given its lack of sea access. However, Nigeria, a country in a similar geographical situation, attracted 74 applications over the four rounds of recruitment. This shows the strong recognition of the MRP in West Africa, due to its unique and specific focus within the network. It is worth noting that only 22% of applicants are women, contributing to the gender bias in the student batches.

The MRP-CCMS began in 2019, and has been evaluated officially by the ARES (Agência de Regulação do Ensino Superior em Cabo Verde), for accreditation. And on a yearly basis, the data on progress of the MRP-CCMS (enrollment and achievements) are updated to this agency. Only one entire batch of students has completed the programme. A portion of the second batch defended their theses, while others are currently revising their master's theses. The third batch commenced during the 2021-2022 academic year and a fourth one will be launched in 2023-2024.

Similar to other WASCAL programmes, the MRP-CCMS aims to recruit 12 students per batch, with one student representing each country of the WASCAL network. The batch may be supplemented by self-paying students who do not receive a stipend from the programme. In practice, batches 1 to 3 enrolled between 11 to 15 students, including nine to 12 international students. Because of the four-month language courses at the outset of the programme and the visit to Germany, students are expected to graduate after 28 months of study. In practice, delays were observed due to the Covid pandemic in 2020-2021, as well as students experiencing difficulties finalising their Master's dissertation.

Based on the data of the first batch, the success rate is 92%, with 82% of successful candidates being male and 91% being foreigners. A survey was conducted after the completion of the Master's programme by the first batch. 90% of the students enrolled in the master's programme stated their intention to pursue careers as graduate-level professors in the fields of climate change and marine science. Regarding the first two batches of 27 students graduated in total, three alumni are currently pursuing their PhDs in the USA and Germany, while twelve others have secured positions in national environment agencies or universities. These positions reflect the typical professional integration of graduates from the programme.

The MRP-CCMS occupies a unique niche in the WASCAL network since all the other programmes focus on terrestrial land and continental ecosystems. It constitutes a recent, highly relevant, and valuable addition to this alliance, as oceans play a pivotal role in the climate system, and their ecosystems provide crucial services to local environments and economies.

To conclude, despite its recent inception, the MRP-CCMS attracted a large number of applicants from the WASCAL countries, including those with little or no sea access. With a success rate over 90%, the programme demonstrates the quality of student supervision and the commitment of the international teaching team. Available data on job-market integration shows that graduates are successful in pursuing PhD opportunities or securing positions in universities or environmental agencies. However, further enhancement of the survey process is recommended. The MRP-CCMS occupies a highly relevant and unique niche within the regional academic environment.

FIELD 4. STUDY PROGRAMME MANAGEMENT AND CONTINUOUS IMPROVEMENT

The responsibilities of the teaching team are clearly defined. There is also a scientific coordinator in GEOMAR (main partner) to support the implementation of this Master's programme. This facilitates the identification of supervisors and lecturers. Students are aware of the list of contributors to the programme and their roles. Lecturers manage their courses according to the syllabus outlined in the programme plan. Their level of expertise and responsibility is consistent with the programme.

To fulfil its mission, the MRP-CCMS benefits from human resources, as well as administrative and pedagogical resources (secretarial offices, rooms, libraries, computer rooms, etc.). It involves numerous foreign academics (21 invited Professors: German, American, Portuguese, French, Ivorian, Beninese, Nigerian), compared to three Assistant Professors and four Graduated Assistants from Cabo Verde. WASCAL provides the funds necessary for hosting the invited faculty members. Nevertheless, the local teaching staff lacks continuous training and faces significant administrative and scientific workloads.

The Atlantic Technical University has not yet established a quality assurance system at the institutional level. Nevertheless, a system is applied to the Department of Maritime Transports, with International Certification. This system is in the process of being implemented in all study programmes in the university. The study programme itself organises the evaluation of lecturers, courses, and the overall curriculum by the students. According to one evaluation of the study programme, the responses from students were mostly positive. They expressed satisfaction with the MRP-CCMS plans and objectives, and believed that the programme operated very well with good administration. Nevertheless, some improvements are needed, particularly in infrastructure. Students feel that scholarship provided is insufficient and there is a need for more infrastructure to accommodate their needs. Furthermore, the MRP-CCMS's advisory board does not currently include students – following the WASCAL regulations - and has not met convened to analyse the internal evaluations.

Student recruitment procedures and evaluation of knowledge are transparent and clearly defined in the concept note of the study programme. The programme has implemented anti-plagiarism measures.

To conclude, the programme is managed by a formally identified teaching team, contributing to its coherent and efficient functioning. The study programme possesses the necessary resources to achieve its objectives. Although there is a lack of an institutional quality assurance system at university level, the Department of Maritime Transports highlights international certification and the programme itself has implemented an internal evaluation process aimed at facilitating continuous improvement in the near future. Additionally, the programme benefits from a quality-based approach to both students recruitment procedures and the evaluation of knowledge and skills acquisition.

VI. CONCLUSION

The Master Research Program on Climate Change and Marine Sciences (MRP-CCMS) has a clear and relevant dual objective: firstly, to address local needs, and secondly, to create a critical mass of human capacities in the fields of climate change, marine science, and ocean management in West Africa. This study programme benefits from strong involvement from numerous academic international partners, such as GEOMAR Helmholtz Centre for Ocean Research Kiel, the University of Kiel and the Thünen Institute in Germany, the members of WASCAL Network in West Africa, and others partners in European countries. They are also involved in teaching or supervising internships, underlying the value of this training.

The program structure, student recruitment procedures, and evaluation of knowledge are well described in the conceptual note. This study programme offers disciplinary, technological, methodological and linguistic approaches tailored to the relevant domain. However, there is a need to structure the training with a skill-based approach. The study programme should focus on the acquisition of academic knowledge alongside the development of transversal and additional competencies. This approach would enhance and recognise the value of the skills acquired by students during their training. For instance, enabling students to build a skill portfolio would also facilitate their professional integration.

While this study programme is primarily research-oriented, it is essential to establish connections with the socio-economic sector to favour the professional integration of students. This could involve more socio-economic actors, such as companies, professional organisations, associations, and institutions. The study programme should also develop specific training modules focusing on job-market integration and entrepreneurship. These new initiatives would prepare the students for consulting roles and entrepreneurial endeavours, including business creation.

This programme enrolls a small number of students, enabling tailored support. While an internal evaluation process has been established, it is crucial to promptly analyse the indicators and utilise them within the framework of the advisory board. A comprehensive follow-up of students from the beginning of their training (including their origin by country and field of study) until completion and beyond, encompassing further studies or professional integration, will be necessary.

STRENGTHS

In general, for the WASCAL network

- A well-structured international network of partner universities, facilitating high-quality recruitment of PhD students at the international level and providing top-level opportunity for capacity-building across West Africa on climate change.
- A thematic focus on a cross-cutting topic with high societal and scientific relevance to West Africa, in line with well-established needs for decision-making in both public and private sectors, as well as for research and higher education.
- Efficient foreign language and inter-cultural training programmes.
- An effective organisation with adequate support in terms of financial means, human resources, and infrastructure.

Specific points to the Master Research Programme

- A programme positioned within a unique and highly relevant niche within the WASCAL network, offering clear complementarity and added-value to this alliance
- An international teaching team including well-renowned lecturers with diverse backgrounds and nationalities
- A close and tailored supervision of students, resulting in a high level of success
- A strong and strategic partnership with institutions in maritime and marine sectors at local, national, and international levels

- Access to relevant research infrastructure, including a research vessel
- Transparent procedures for student recruitment and evaluation of knowledge acquisition
- Suitable material support for students.

WEAKNESSES

- An absence of certifications and courses focused on job-market integration and entrepreneurship
- A lack of a comprehensive student monitoring system, both before and after training to track progress and outcomes
- A lack of a skill-based approach to the curriculum
- Insufficient availability of local scientific human resources dedicated to the MRP-CCMS
- Scholarships inadequately cover accommodation costs and living expenses.

RECOMMENDATIONS TO THE INSTITUTION

- Harmonize the number of credits (ECTS for instance) between semesters to facilitate student mobility
- Develop socio-economic partnerships, language certifications, and training programmes focused on job-market integration and entrepreneurship
- Implement a skill-based approach in the training curriculum
- Develop a comprehensive student's monitoring system to track progress before and after training, ensuring effective support throughout their academic journey
- Continue deploying the internal evaluation process to support continuous improvement in programme quality
- Reinforce local scientific human resources
- Improve scholarship and accommodation offering for students to better align with living expenses.

VII. OBSERVATIONS OF THE INSTITUTION



Instituto de Engenharia e Ciências do Mar
Ribeira de Julião, Km 6. CP 163
São Vicente. República de Cabo Verde

April 10th, 2024

President du
Haut Conseil de l'évaluation de la
recherche et de l'enseignement supérieur
(Hcéres) – Paris, France

Dear Dr. Stéphane Le Bouler,

We are writing to address the evaluation report and process conducted by Hcéres regarding our Master's Program on Climate Change and Marine Sciences at the Atlantic Technical University, Cabo Verde in the framework of West African Science Service Centre on Climate Change and Adapted Land Use. After careful review and consideration of the evaluation findings, we would like to share our sentiments and proposed resolutions moving forward.

First and foremost, we extend our sincere appreciation to the Hcéres evaluation team for their thorough assessment of our master program. Their dedication and expertise have provided valuable insights that will guide our efforts towards continuous improvement and excellence in academic endeavors.

Upon reviewing the evaluation report, we acknowledge the commendations and positive feedback regarding the strengths and achievements of our Master Program on Climate Change and Marine Sciences. It is gratifying to see recognition for our commitment to delivering high-quality education and research in this critical field.

However, we also recognize the areas identified for improvement and the challenges outlined in the evaluation report. We view these as opportunities for growth and enhancement, and we are fully committed to addressing them effectively and efficiently.

In light of the evaluation findings, we propose the following resolutions:

- Analyze the recommendations outlined in the evaluation report in the next (second) advisory board meeting.
- Develop a comprehensive action plan with clear objectives, timelines, and responsibilities for implementing the recommended improvements.
- Allocate necessary resources and support to facilitate the implementation of the action plan, including faculty development programs, infrastructure enhancements, and student support services.
- Foster a culture of continuous improvement and quality assurance within our Master Program, emphasizing collaboration, innovation, and accountability.
- Regularly monitor and evaluate the progress of implementation efforts, soliciting feedback from stakeholders, and making adjustments as necessary to ensure the effectiveness and sustainability of improvement initiatives.



Instituto de Engenharia e Ciências do Mar
Ribeira de Julião, Km 6. CP 163
São Vicente. República de Cabo Verde

We are committed to transparent communication and collaboration with all stakeholders throughout this process, and we remain dedicated to upholding the highest standards of academic excellence and integrity in our Master Program on Climate Change and Marine Sciences.
Thank you for your attention to this matter.

Sincerely,

The Director



(Prof. Dr. Corrine Almeida)

The evaluation reports of Hcéres
are available online : www.hceres.com

Evaluation of higher education and research institutions

Evaluation of research

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International evaluation and accreditation



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ACCREDITATION DECISION

Master Research Program of WASCAL on Climate Change and Marine Sciences

Institute of Engineering and Marine Sciences
(ISECMAR)

Atlantic Technical University

Mindelo, Cabo Verde

June 2024

SCOPE OF THE ACCREDITATION GRANTED BY HCÉRES

HCÉRES has based its evaluation process on a set of objectives that study programmes must pursue to ensure recognised quality within France and Europe. These objectives are divided up into four accreditation criteria.

The Accreditation Commission issues an opinion about the accreditation of the study programme after examining the file. The Hcéres President takes the decision based on the Commission's opinion and the final evaluation report of the programme. This accreditation decision, taken in plenary session, is the result of a collegial and reasoned process.

The decision issued by Hcéres regarding the accreditation of the study programme corresponds to the awarding of a label to the evaluated entity.

This decision is independent of the accreditations carried out by the French State and therefore does not entail recognition in France of the institution or the diplomas issued by it.

Decision No. EI-2024-22 on the accreditation of Master Research Program on Climate Change and Marine Sciences delivered by the Institute of Engineering and Marine Sciences (ISECMAR) / Atlantic Technical University, Mindelo, Cabo Verde

The President of the High Council for the Evaluation of Research and Higher Education,

Considering the Research Code, in particular Articles L. 114-3-1 to L. 114-3-6;

Considering the Board's deliberation of 29th September 2022 on the accreditation criteria for international study programmes (except doctorates/PhDs);

Considering the Decision No. 2023-9 of 16th March 2023 on the international accreditation procedure of the High Council for the Evaluation of Research and Higher Education;

Considering the agreement DEI_20220407 of 12th May 2022 - for the evaluation/accreditation of seven training courses, delivered by training and research centres affiliated to the WASCAL network in seven sub-Saharan African countries;

Considering the opinion issued by the Accreditation Commission on 25th April 2024;

Decides:

Article 1

Noting that the Master Research Program on Climate Change and Marine Sciences delivered by the Institute of Engineering and Marine Sciences (ISECMAR) / Atlantic Technical University, in Cabo Verde meets the four accreditation criteria, voted by the Board of the High Council on 29th September 2022, as follows:

ACCREDITATION CRITERION 1: TEACHING POLICY AND CHARACTERISATION

The Master Research Programme on Climate Change and Marine Sciences is strongly aligned with the institution's education strategy, serving as its sole Master's level programme. It occupies a distinctive and relevant position in the WASCAL network, focusing on marine sciences. It has effectively addressed socio-economic needs in its field and identified potential job market sectors for its graduates. However, it currently maintains limited connections to the socio-economic world and incorporates only a few elements of professionalisation. Its partnerships with a vast network of internationally-renowned universities and research centres, whose quality and involvement in the programme are real, ensure a fruitful connection to research.

ACCREDITATION CRITERION 2: THE PEDAGOGICAL ORGANISATION OF THE STUDY PROGRAMME

While the Master Research Programme on Climate Change and Marine Sciences study programme remains consistent with its overall training objectives, it falls short in meeting the needs of the socio-economic sector and lifelong learning. It lacks a skill-based approach. The programme offers various teaching methods and individual monitoring to bolster student success. The programme's content is adapted to ensure international accessibility from a language perspective. Nevertheless, there is a need to harmonise credits acquired per semester. The study programme could consider providing a descriptive annex outlining the knowledge and skills acquired to facilitate student mobility or professional integration.

ACCREDITATION CRITERION 3: ATTRACTIVENESS, PERFORMANCE AND RELEVANCE OF THE STUDY PROGRAMME

Despite its recent inception, the Master Research Programme on Climate Change and Marine Sciences attracted a large number of applicants from the WASCAL countries, including those with little or no sea access. With a success rate over 90%, the programme demonstrates the quality of student supervision and the commitment of the international teaching team. Available data on job-market integration shows that graduates are successful in pursuing PhD opportunities or securing positions in universities or environmental agencies. However, further enhancement of the survey process is recommended. The MRP occupies a highly relevant and unique niche within the regional academic environment.

ACCREDITATION CRITERION 4: MANAGEMENT AND CONTINUOUS IMPROVEMENT OF THE ACADEMIC PROGRAMME

The Master Research Programme on Climate Change and Marine Sciences is managed by a formally identified teaching team, contributing to its coherent and efficient functioning. The study programme possesses the necessary resources to achieve its objectives. Although there is a lack of an institutional quality assurance system at university level, the Department of Maritime Transports highlights international certification and the programme itself has implemented an internal evaluation process aimed at facilitating continuous improvement in the near future. Additionally, the programme benefits from a quality-based approach to both students recruitment procedures and the evaluation of knowledge and skills acquisition.

Article 2

The Master Research Program on Climate Change and Marine Sciences delivered by the Institute of Engineering and Marine Sciences (ISECMAR) / Atlantic Technical University, in Cabo Verde is accredited for a period of 5 years from the date of this decision.

Article 3

The decision is accompanied by the following recommendations and comments:

- Harmonize the number of credits (ECTS for instance) between semesters to facilitate student mobility
- Develop socio-economic partnerships, language certifications, and training programmes focused on job-market integration and entrepreneurship
- Implement a skill-based approach in the training curriculum
- Develop a comprehensive student's monitoring system to track progress before and after training, ensuring effective support throughout their academic journey
- Continue deploying the internal evaluation process to support continuous improvement in programme quality
- Reinforce local scientific human resources
- Improve scholarship and accommodation offering for students to better align with living expenses.

Article 4

This decision will be published on the Hcéres website.

Paris, 14th June 2024.

The acting President
signed
Stéphane Le Bouler

The evaluation reports of Hcéres
are available online : www.hceres.com

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