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COURSES REVISED AND NEWLY CREATED BY PARTNER P9 (ROYAL UNIVERSITY OF BHUTAN)

Work Package 2

QUALITY ASSESSMENT BY EU PARTNERS (PARTNER P2: UNIVERSITY OF SALZBURG)

Revised course 4: "Water Resources Management"

QUALITY ASSESSMENT
Quality criteria 1: Number of credit units for lectures, practical sessions and self-learning are appropriate to the contents

- *Evaluation*

The credit units are adequately distributed among lectures, practical sessions and self-learning. The majority of the credit units are devoted to practical sessions and self-learning. Only 20 out of 120 work hours are used for theoretical lectures (i.e. for presentations by the lecturer). The limitation of the number of hours for theoretical lectures and accentuation of practical and self-learning tasks is very positively valued by the reviewers, as it constitutes a promising approach to train highly capacitated future professionals. The integration of the theoretical concepts and tools learnt is better ensured and, most importantly, certain abilities are developed that enable students to more easily use the learnt concepts and tools in practice during their professional career. Additionally, it seems that in-class discussions do also take place over the course timespan, which further enriches the learning experience and fosters the development of important abilities required in the professional world. In-class discussions have the potential to become tools for the formation of a reflexive and critical mindset among students, which is crucial in order to train future professionals open to alternatives and ready to take over the challenge of a sustainable management of water resources. The extent to which in-class discussions are organised during the course should be, however, better cleared up in the syllabus. Due to all that, we resolve that the structure and organisation of the course appears promising for the training of highly capacitated professionals.

- *Strategies for improvement*

Given the little relevance apparently given to in-class discussions in the course, our first suggestion for improvement is to increase the number of credit units allocated to in-class discussions, by converting part of the credit units used for theoretical lectures (i.e. presentations by the lecturer) into credit units for in-class discussions. In addition to the potential development of a reflexive way of thinking (see comment above), this can also make the course more attractive for students and allow them to better integrate their already existent knowledge on the topic with the new concepts learnt.

Our second suggestion consists in engaging local stakeholders in the in-class discussions and/or assignments planed, including the visit to the field, if not done. This might involve the participation of local professionals in e.g. discussions about the integrated management of watersheds or policy aspects of water management in Bhutan and transboundary areas. However, it might not be limited to that, but also include members of the local community, who might provide some interesting input e.g. on rainwater harvesting, etc. This might make the learning experience more enriching for students. It might enable students to learnt first-hand practice-oriented knowledge including experiences, opportunities and barriers faced in reality and, as such, to better develop themselves as future professionals.

The provision of additional suggestions for improvement (if any is additionally required) would require the furnishing of more in-depth information in the syllabus. We would specifically really appreciate it, if further details could be offered on the following two aspects: 1) the way the provision of theoretical knowledge and the provision of practical knowledge are interconnected in the course timeline, and 2) the course assignments. Regarding the first of them (interconnection between the theoretical and practical components of the course), the syllabus states that theoretical lectures, practical sessions and self-learning are combined in the timeline, in such a way that practical sessions and theoretical sessions are alternated over time. This is considered one of the strengths of the course. The extent to which this is true remains, however, unclear through the provided details in the course schedule, where only the topics addressed in each of the sessions are detailed but not how these topics are delivered to the students (as practical sessions and/or theoretical sessions). This information should be specified in the course schedule. Regarding the second aspect (course assignments), a more extensive description of the assignments might enable us

to better identify the objectives and tasks to do in each of them. For example, it seems that at least part of "assignment 1" consists of theoretical presentations by the lecturer, which might entail that it can actually not be classified as an assignment. These improvements in the syllabus are highly relevant so as to making it possible for us to provide more precise additional recommendations for improvement, if any additional recommendation is needed.

Quality criteria 2: Total number of credit units in the course is correct and appropriate

- *Evaluation*

The total number of credit units awarded is correct and appropriate. This is illustrated by the number of hours devoted to the course (120 hours, including lectures, practical sessions and self-learning) and the fact that 1 ECTS equates to 20 hours in Bhutan.

- *Strategies for improvement*

None. Everything is deemed correct.

Quality criteria 3: Positioning of the courses in Curricula is appropriate based on the progressive level of difficulty

- *Evaluation*

The positioning of the course in the last year of the BSc in Environment and Climate Studies is appropriate. The reason for that are the specialised contents offered during the course, which correspond to a specific area within environmental management. The teaching of these contents asks for the previous provision of basic knowledge, first, in environmental management and, afterwards, in hydrology. This is progressively done during the first and second year of the bachelor's degree. This way, the contents of this course can be better integrated and be put into practice by students, if taught during the last year of the bachelor's programme, as it is done.

- *Strategies for improvement*

None. Everything is deemed correct.

Quality criteria 4: Tests are suitable and appropriate to support transferable skills

- *Evaluation*

The grading system is deemed as appropriate to support transferable skills. The grade awarded to students is entirely derived through the evaluation of the quality of practical and self-learning tasks. Team work and the associated written assignments (including a field visit) constitute the main elements of evaluation. The acquisition of practice-oriented knowledge, through the reflection and application of the theoretical concepts and tools learnt during the lectures, constitutes, thus, the main subject of evaluation. This also encompasses the evaluation of additional important skills required in the professional world, such as the writing of reports. This is highly remarkable, as a very good procedure to make the skills acquired transferable in practice, and, as such, very positively valued by the reviewers. The main weakness appears to be in the evaluation of the formation of a reflexive way of thinking by students. The provided indications in the syllabus seem to suggest that this is not considered in the evaluation process.

- *Strategies for improvement*

As suggested under "quality criteria 1", one of the main recommendations for improvement is to give a larger weight in the course schedule to the carrying out of in-class discussions. This can be done by transforming parts of the lectures conceived as theoretical sessions into thematic debates among the students and with the professors. This increased weight should also be reflected in the grading system, where the active participation in in-class discussions appears to be disregarded. Another activity that should be used for the evaluation of students is the carrying out of oral presentations, given the relevance of oral communication skills in the professional world. To that end, at least one session should be incorporated to the course for the presentation and discussion of the results of e.g. the course project.

As with other courses, the provision of further suggestions for improvement (if any other is necessary) will only be possible if more in-depth information is provided from your side in the syllabus on the assignments, etc. planed. This would be really advisable and really appreciated, as several aspects regarding the course assignments remain unclear for us at the moment. For example, it remains unclear, what the categories "project work" and "written assignment" mean and how they differentiate from each other. It is also unclear how each of them are connected to the 2 assignments that you describe at the end of the syllabus. In any case, it is advisable that the focus in the assignments is not only put on analytical procedures (to assess the current status of a system) but also on possible strategies to

enhance the current situation. The descriptions in the syllabus suggest that a focus on the former (analytical procedures) prevails.
Quality criteria 5: TLM and assessment strategy support students in undertaking the course i.e. prerequisites are helpful and relevant, assessments helps gauge students understanding etc.
• *Evaluation* Prerequisites for attendance should be defined for the course, which has not been done. This is due to the previous knowledge in environmental management and hydrology needed to be able to follow the contents of the course smoothly. With regard to the e-learning materials, we do not have access to them and, as a result, are unable to evaluate their quality. • *Strategies for improvement* A listing of prerequisite courses for attendance should be created. Prerequisite courses should have been held during the first or second year of the BSc in Environment and Climate Studies and offer basic knowledge in the fields of environmental management and hydrology. An example of such a course might be the course "Hydrology", taught during the second year of the bachelor's programme and revised under the framework of the SUNRAISE project. Regarding the learning materials, our suggestions are threefold. First, we would highly recommend to upload the slides and videos of the theoretical lectures on the e-learning platform, with the aim to enable students to review and re-watch them anytime and as many times as necessary. This can make it possible for the students to better understand some parts of the lectures that might have not been correctly comprehended during the in-class sessions and encourage self-working at home. Second, an online chat might be created for the discussion and communication among students and between students and the professor. Apart from making the communication easier, this might constitute a tool to motivate further students to participate in the discussions, especially those who do not feel confident enough to take part in in-class debates. Third, additional complementary literature and interactive practical exercises might be posted on the online platform, so that all those students that are interested on the topic and want to learn more on it have the chance to do it. This can additionally increase the attractiveness of the course and the learning experience.
Quality criteria 6: Theory/Practice-oriented components are sufficient to cater the learning outcomes and skills development
• *Evaluation* Theory/Practice-oriented components are sufficient to cater the learning outcomes and skills development. Through both theoretical and practical sessions all relevant theoretical and practical themes are covered for the acquisition of the promised learning outcomes and skills. • *Strategies for improvement* Everything is deemed correct. However, further clarifications should be offered in the syllabus in order to be able to provide a more accurate evaluation (see suggestions under quality criteria 1).