



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

Revised course 1: “Hydrology”

QUALITY ASSESSMENT
Quality criteria 1: Number of credit units for lectures, practical sessions and self-learning are appropriate to the contents
<ul style="list-style-type: none"> <p><i>Evaluation</i></p> <p>The distribution of credits among lectures, practical sessions and self-learning is appropriate. A high ratio of the awarded credits is allocated to practical sessions and self-learning, along with to in-class discussions, whereas only 20 out of 120 work hours are assigned to theoretical lectures (i.e. to presentations by the lecturer). This is of high relevance and very positively valued: we consider that it is a good approach to train highly capacitated and critical thinking professionals ready to address this important topic in practice.</p> <p>First, the special weight given to practical sessions and the associated practical assignments should enable students to better integrate the concepts and tools introduced during the theoretical sessions and, most importantly, to reflect and experience themselves for the first time how to put into practice all these concepts/ tools in reality. The development of field work and laboratory tasks using equipment and tools previously introduced in the lectures is significantly positive in this regard. Second, the high ratio of hours devoted to in-class discussions (20 hours of workload) appears promising for the development of a reflexive way of thinking among students, which can be barely developed through the mere passive involvement in theoretical lectures and becomes crucial in order to train professionals open to alternatives and, thus, ready for a sustainable management of hydrological processes. Students are given the chance to express themselves, which, additionally, allows them to better integrate their already existing knowledge with the new concepts taught. The combination of in-class discussions with quizzes, etc. (as suggested) makes the course experience more attractive, which might increase the students’ motivation on the topic and the course.</p> <p>For all these reasons, the high weight in terms of the number of ECTS given to practical sessions, in-class discussions and self-learning is very positively valued. The structure and organisation of the course proposed lead us to believe that highly capacitated and critical thinking professionals are trained.</p> <p><i>Strategies for improvement</i></p> <p>Everything is deemed correct. The course looks well organised and prepared, the reason why the strategies for improvement that we point out here only concern some very particular aspects that might additionally be considered by the course organisers. As with other courses, a promising strategy for improvement might be to consider the involvement of local stakeholders (such as local professionals in the field) in the field work and laboratory tasks and/or in-class discussions, so that students are given the chance to work with them and can gain first-hand knowledge on the opportunities, hurdles, etc. faced in practice when it comes to manage hydrological processes in the country. This can substantially enrich the practice-oriented knowledge of students and potentially translate into better skilled future professionals.</p> <p>In any case, we would strongly recommend to provide more in-depth information in the syllabus regarding 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 (interconnection between theoretical and practical knowledge), the course descriptions and distributed workloads suggest that a high interconnection exists and most emphasis is put on the gain of a practice-oriented experience, the reason why the course is very positively evaluated. The way theory and “practice” are interlinked in the timeline remains, however, unclear in the provided course schedule. This information should, thus, be made explicit, so that it is clear when and how discussions, practical sessions, etc. take place. Regarding the second (course assignments), more extensive descriptions would enable to better identify the objectives, tasks to do in each of them. The current descriptions appear to be misleading to us. For instance, it seems that assignments 1 and 2 at least partially consist of theoretical presentations/ explanations on the functioning of the equipment provided by the lecturer, which might entail that</p>

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they can actually not be classified as assignments. These improvements in the syllabus would allow us to provide more precise and better targeted recommendations for improvement.

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 curricula is appropriate. Its positioning in the second year of BSc students in Environment and Climate Studies is deemed as appropriate, as this theme constitutes a specialised area that requires the previous provision of basic knowledge in environmental management, so that all concepts and practices can be more accurately integrated and put into practice. The course can constitute the basis for courses going more in-depth in the topic during the third year of the Bachelor's degree.

• *Strategies for improvement*

None. Everything is deemed correct.

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

• *Evaluation*

The designed grading system is appropriate to support transferable skills in practice. The derivation of the awarded grade entirely through the evaluation of the quality of practical assignments and self-learning activities is proof of this fact. It is noteworthy that a fairly wide range of activities are considered during the evaluation process, enabling to assess the extent to which students have integrated the theoretical knowledge and are able to use it in practice, as well as other important skills in the professional world, such as the communication and presentation of results in front of an audience or the writing of reports. The activities evaluated include the participation in in-class discussions, team work, written assignments and oral presentations. Very positively valued is also the fact that the suggested assignments are interconnected among them (each builds on the results of the previous ones), constituting a large project.

During the course, thus, not only the acquisition of theoretical knowledge by students is evaluated, but, most importantly, the ability of students to reflect about and utilise the learnt concepts in practice in order to give an answer to real situations. The formation of a reflexive way of thinking and acquisition of practice-oriented knowledge constitute the main elements of evaluation. This is very positively valued by the reviewers, as a very good procedure to make the skills acquired transferable in practice.

• *Strategies for improvement*

Everything is deemed correct. We might only suggest slightly reducing the percentage weight attributed to the quality of the oral presentations done by students, when calculating the final grade, in favour of the remaining activities evaluated. We consider that too much importance is given to the oral presentation, whereas the remaining activities are also of high relevance. Apart from that, we do not have any further suggestions. The provision of further suggestions would require that more details are previously provided in the syllabus on the suggested assignments, as pointed out under quality criteria 1. This would be really desirable, so as to being able to give you more precise suggestions. For example, it remains unclear to us, what the categories "seminar group assignments" and "use of equipment and generation of quality data" are and how they differentiate from each other. It is also unclear how each of them are connected to the 4 assignments that you describe at the end of the syllabus.

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 should be defined for attending this course, which has not been done. This is especially relevant given the required previous knowledge on basic concepts in environmental management but particularly in geology in

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Work Package 2



order to be able to follow the course contents smoothly. On the other hand, regarding the e-learning materials, no evaluation can be conducted about them from our side, as we do not have access to them.

- *Strategies for improvement*

The introductory character of the course to the field of hydrology explains the establishment of no required previous knowledge in this field as a prerequisite for attending the course. Courses providing basic knowledge about geology and environmental management should, however, be included in the list of prerequisites. These courses need to be held during the first year of the BSc in Environment and Climate Studies, to which this course belongs.

Regarding the e-learning materials, the absence of access to them (we do not have access to them) entails no knowledge from our side on the relevance of the suggestions that we make here. Some of our suggestions might have already been put in practice. First, we would suggest making available the slides and videos of the theoretical lectures on the e-learning platform, with the aim to make it possible for students to revisit the learnt contents anytime and as many times as desired. This might enable a better understanding of any parts that might not have been clearly comprehended during the lectures and encourage self-working at home. Second, it might be useful to create an online chat. An online chat might substantially ease the communication and encourage the discussion among students and with professors on any content-related or organisation-related issues/doubts that might arise. Third, additional complementary literature and interactive online practical exercises might be offered for all those willing to learn more on the topic. This might additionally make the learning experience more attractive.

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).



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

Revised course 2: “Climate Change Assessment and Mitigation”

QUALITY ASSESSMENT
Quality criteria 1: Number of credit units for lectures, practical sessions and self-learning are appropriate to the contents
<ul style="list-style-type: none"> <p><i>Evaluation</i></p> <p>The number of credits devoted to lectures, practical sessions and self-learning is appropriate. Most part of the credit units are allocated to practical sessions and self-learning, while the percentage weight of theoretical lectures (i.e. of presentations by the lecturer) is kept to only 25% of the total workload. This is highly relevant for the training of highly capacitated professionals and, as such, very positively valued by the reviewers. The high ratio of practical sessions and self-learning activities ensures a better integration of the concepts, tools and strategies learnt by students during the theoretical lectures and the training of professionals not only knowledgeable of these concepts, tools and strategies but also capable of using them in real case studies. This is the reason why we resolve that the high weight in terms of the number of ECTS given to practical sessions and self-learning is very positive. The structure and organisation of the course proposed lead us to believe that highly capacitated professionals are trained.</p> <p><i>Strategies for improvement</i></p> <p>As strategies for improvement, we would suggest converting part of the credit units devoted to theoretical lectures into credit units for in-class discussions. The conduction of the latter (in-class discussions) is not contemplated in the course schedule. In light of the importance of encouraging the building of a reflexive and critical way of thinking, the inclusion of in-class discussions replacing some theoretical lectures is highly recommended. This is especially relevant in a field as crucial for the present and future of our societies as climate change mitigation and adaptation and sustainability. In-class discussions have the potential to enable the development of a reflexive way of thinking among students, besides allowing them to better integrate their already existent knowledge with the new concepts taught. This can be barely achieved by merely involving students in a passive way in theoretical lectures. The attractiveness of the course and motivation of students might also increase, especially if in-class discussions are combined with quizzes and other sorts of interactive games.</p> <p>On the other hand, it is advisable to involve local stakeholders in in-class discussions and during the fulfilment of the suggested assignments, if possible. For instance, it might be really enlightening to involve local stakeholders in the discussions about the Bhutanese approach to address climate change. This might include the involvement of both the local community and local professionals and constitute a very enriching experience for students. The latter is due to the fact that local stakeholders can provide additional specific knowledge on experiences, opportunities and barriers faced in practice/ in the reality. Their involvement might, thus, entail the training of better skilled future professionals.</p> <p>As in the case of other courses, further strategies for improvement might be provided from our side if more in-depth information was offered in the syllabus on aspects that so far remain unclear to us. We would particularly really appreciate it if you could furnish more details on the following: 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. While the interconnection among theoretical and practical knowledge appears as one of the key strengths of this course, it remains unclear to us the extent to which practice and theory are equitably interlinked in the course timeline. No information is provided in the course schedule on when and how each practical session, etc. takes place; only the topic of each of the sessions is highlighted. Additionally, the course schedule seems to suggest that all practical assignments are developed by the end of the course, which is not advisable, as the students’ memory is limited and they might have already forgotten many of the concepts if they have to apply them in a practical case for the first time after several weeks of the start of the course. This should be clarified. Similarly, a more extensive description of the assignments might enable us to better identify the objectives and tasks to do in each of them. As an illustration, it seems that at least part of “assignment 1” consists of theoretical presentations by the lecturer,</p>

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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 does not seem optimal. This is explained by the fact that the subject area addressed in the course (i.e. climate change mitigation and adaptation) constitutes one of the pillars of the bachelor's degree: the course is part of a bachelor's degree with a focal point on climate studies. Other more specialised courses should be built based on its contents, which becomes impossible if the course is taught in the programme's last year.

• *Strategies for improvement*

The course should be scheduled at an earlier point in time of the bachelor's programme (in the second year). It offers basic knowledge about climate change mitigation and adaptation, which might be pivotal for students in order to better follow the contents of assumingly more specialised courses about climate change that should take place during the last year of the bachelor's programme. One example of more specialised course in the bachelor's programme seems to be the course "Climate Resilient Agriculture". Additionally, it is assumed that the course builds on and goes deeper into thematic areas addressed in introductory courses during the first year of training, the reason why the positioning in the second year appears as the most suitable. These more introductory courses should broadly introduce the areas of climatology, climate change and environmental management. This seems to be the case, for example, of the courses "Introduction to Meteorology and Climatology" and "Climate Change", which are also part of the bachelor's programme.

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

• *Evaluation*

The grading system is appropriate to support transferable skills. This is shown by the fact that the awarded grade is entirely derived through the evaluation of the quality of practical assignments and self-learning activities. Remarkably, the activities submitted to evaluation do not only enable to assess the extent to which students have integrated the theoretical knowledge, but, most importantly, their ability to use it in practice. They also make it possible to assess other important more general skills of students needed in the professional world, such as the ability to write reports. Very positively valued is also the interrelation existent between the two suggested assignments in the course (the later one builds on the results of the former one), constituting a large project.

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 is very positively valued by the reviewers, as a very good procedure to make the skills acquired transferable in practice. The main weakness appears to be in the evaluation of the formation of a reflexive way of thinking by students: the extent to which this is evaluated through the suggested evaluated activities becomes questionable.

• *Strategies for improvement*

The suggestions for improvement made here are related to those pointed out under "quality criteria 1". We would basically suggest including two additional activities for evaluation and, thus, in the calculation of the final grade: 1) participation in in-class discussions, and 2) oral presentations. The former would allow explicitly assessing the level of formation of a reflexive way of thinking among students, whereas the latter refers to a relevant skill in the professional world (oral communication skills), which should also be considered in the evaluation process. This would imply, however, the conversion of some theoretical lectures into in-class discussions (see suggestions under "quality

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criteria 1”) and the incorporation of a session for the oral presentation of results as part of the suggested assignments. The extent to which the latter is already the case remains unclear through the provided descriptions in the syllabus. Indeed, in line with the comments made for other courses, we would strongly recommend to furnish more details in the syllabus on the assignments proposed. This might allow us to provide you better targeted and precise suggestions, if any additional improvements are required. For example, it remains unclear to us, 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 the analysis of impacts of climate change (as the syllabus suggests) but also on the possible mitigation and adaptation strategies that might be implemented (“mitigation” and “adaptation” side of the course).

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*

On the one hand, prerequisites should be defined for attending this course, which has not been done. The required previous knowledge about climatology and environmental management asks for a listing of prerequisite courses that all students should have attended so as to being able to follow the contents of the course smoothly. On the other hand, no evaluation can be conducted of the e-learning materials, as we do not have access to them.

- *Strategies for improvement*

Prerequisite courses should include any course held during the first year of the BSc in Environment and Climate Studies offering basic knowledge in the fields of climatology and environmental management. This might encompass, among others, the two following courses listed in the bachelor’s programme: the course “Introduction to Environmental and Climate Science” and the course “Introduction to Meteorology and Climatology”. Importantly, all prerequisite courses should be held in a point in time preceding the semester of instruction of the present course (course “Climate Change Assessment and Mitigation”).

Regarding the learning materials, our suggestions are similar to those made while evaluating the other courses produced by partner P9 (Royal University of Bhutan). Although we do not have access to the e-learning materials, we hope that these comments can be useful in order to further improve the materials created. To start with, we would strongly recommend to upload the slides and videos of the theoretical lectures on the e-learning platform, so as to enabling students to re-watch and review the learnt concepts and tools anytime and as many time as required. Also interesting would be the creation of an online chat, in order to ease the communication among students and between students and the professor. It might be created as a space for discussion and for the clarification of any doubts related to the contents or organisation of the course. Finally, the provision of additional complementary readings and interactive practical online exercises might be considered, 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).



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

Revised course 3: “Natural Resources Management”

QUALITY ASSESSMENT
<p>Quality criteria 1: Number of credit units for lectures, practical sessions and self-learning are appropriate to the contents</p>
<ul style="list-style-type: none"> <p><i>Evaluation</i></p> <p>The number of credits allocated to lectures, practical sessions and self-learning is appropriate. A high ratio of the course credits is devoted to practical sessions and self-learning, as well as to in-class discussions, role-play games and quizzes. Only 30 of the 150 hours of workload are used for presentations by the lecturer. This is of high relevance so as to ensuring the training of highly capacitated and critical thinking professionals, and, as such, highly valued.</p> <p>On the one hand, the acquisition of practical knowledge complementing and enhancing the theoretical knowledge gained is crucial in the field of natural resources management, in order to prepare professionals not only knowledgeable of the concepts, tools, strategies, etc. available, but, most importantly, able to apply these concepts, tools, strategies, etc. in practice. Practical knowledge is especially important in master's degrees, where students specialise in a particular subject area and need to receive practical skills that allow them to use the concepts and tools learnt in their future professional careers.</p> <p>On the other hand, a reflexive way of thinking is crucial for the attainment of a sustainable management of resources, which is much better developed through the participation in discussions, etc. than the passive involvement in theoretical lectures. The organisation of in-class discussions, together with quizzes, moreover, brings dynamism to the sessions, which might increase the motivation of students on the topic and the course, and give students a chance to express themselves and better integrate their already existent knowledge with the new concepts taught. These are the reasons why the high ratio of ECTS attributed to discussions, practical sessions, etc. is very positively valued. The structure and organisation of the course proposed lead us to believe that highly capacitated and critical thinking professionals are trained.</p> <p><i>Strategies for improvement</i></p> <p>Everything is deemed correct. Only some particular aspects might need improvement, even though the extent to which this is true remains unknown for us, as they concern aspects that are not clearly described in the syllabus. Therefore, it might be the case that the suggestions for improvement that we make here are not relevant. This should, in any case, be further clarified in the syllabus. The aspects that need to be cleared up the most urgently are, thus, also highlighted in this document.</p> <p>First, we would suggest including tasks involving the usage of the tools taught in the course for the resolution of practical cases of study, as part of the proposed assignments. This might include the usage of GIS. The provision of knowledge on GIS and remote sensing tools for the assessment and monitoring of natural resources is targeted in the course, but no details are provided in the syllabus on the attention that is paid to these tools during the theoretical and practical sessions. This should be cleared up.</p> <p>Second, it might also be interesting to give the chance to students to work with local actors during the fulfilment of the assignments. This might encompass work with both local leaders/managers and the community. Since it is intended that students prepare a communication package for local leaders and communities and gain understanding on the different perspectives of different stakeholders, this becomes particularly relevant. This would additionally potentially translate into better skilled future professionals. This is connected, however, to a necessary reduction in the scale of interest in assignments 1 and 2, as underscored under quality criteria 4.</p> <p>In any case, it is highly recommended that the assignments are described in more detail in the syllabus, in order to be able to provide more precise recommendations. The available descriptions seem, for instance, to suggest that “assignment 1” consists of a mixture of in-class debates and theoretical presentations provided by the lecturer, which might entail that it can actually not be classified as an assignment. The way theory and practice are interlinked throughout the course should be made more explicit in the syllabus. It is highly recommended that this information</p>

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<p>is included in the course schedule, so that it becomes clear when and how in-class discussions, practical sessions and presentations by the lecturer take place. All this will enable us to provide a more accurate evaluation and suggestions for improvement.</p>
<p>Quality criteria 2: Total number of credit units in the course is correct and appropriate</p>
<ul style="list-style-type: none"> <i>Evaluation</i> <p>The total number of credit units awarded is correct and appropriate, given the number of hours devoted to the course (150 hours, including lectures, practical sessions and self-learning) and the fact that 1 ECTS equates to 20 hours in Bhutan.</p> <ul style="list-style-type: none"> <i>Strategies for improvement</i> <p>None. Everything is deemed correct.</p>
<p>Quality criteria 3: Positioning of the courses in Curricula is appropriate based on the progressive level of difficulty</p>
<ul style="list-style-type: none"> <i>Evaluation</i> <p>The course is appropriately positioned in the curricula. Its positioning in the first year of MSc students in Natural Resources Management is deemed as appropriate and essential. The theme of the course constitutes the backbone of the master's: knowledge is provided on basic concepts, strategies and tools for the management of natural resources. Most specialised courses building on the contents of this course can thus afterwards be provided during the following semesters, in order to more deeply deal with specific topics related to the management of natural resources.</p> <ul style="list-style-type: none"> <i>Strategies for improvement</i> <p>None. Everything is deemed correct.</p>
<p>Quality criteria 4: Tests are suitable and appropriate to support transferable skills</p>
<ul style="list-style-type: none"> <i>Evaluation</i> <p>The grading system is appropriate to support transferable skills in practice. This is reflected by the fact that the grade awarded to students is entirely derived through the evaluation of the quality of practical assignments and self-learning activities. Especially remarkable is the range of practical/ self-learning tasks considered in the evaluation, going from the active participation in in-class discussions to written assignments to individual oral presentations and team work. The existent interrelation among the 3 assignments defined (each builds on the previous ones) is also very positively valued, along with the chance that they offer to students to reflect and analyse both the prevailing issues and possible strategies for their resolution. The assignments, thus, are not limited to an analysis of the current status and issues in the management of resources, but, very importantly, invite students to reflect on strategies for the resolution of these issues.</p> <p>During the course, thus, not only the acquisition of theoretical knowledge by students is evaluated, but, most importantly, the ability of students to reflect about and utilise the learnt concepts in practice in order to give an answer to real situations. The formation of a reflexive way of thinking and acquisition of practice-oriented knowledge constitute the main elements of evaluation. The latter (acquisition of practice-oriented knowledge) include the development of skills not exclusively needed in the resource management field but of relevance in the professional world, such as the capability to communicate results in front of an audience. This is very positively valued by the reviewers, as a very good procedure to make the skills acquired transferable in practice.</p> <ul style="list-style-type: none"> <i>Strategies for improvement</i> <p>Everything is deemed correct. We would only suggest slightly increasing the weight that the participation in in-class discussions and seminar group assignments receive when calculating the final grade of the students, given the importance of such activities besides the successful completion of the suggested 3 assignments. Additionally, the scale of analysis in assignments 1 and 2 might be reduced from an Asian and global scale to the scale of Bhutan or a certain area within the country. This might enable to better interrelate assignments 1 and 2 with assignment 3 and go deeper into the issues and possible strategies found, which should be related by students to the dynamics observed at an Asian and global scale during the theoretical lectures and discussions. As pointed out under quality criteria 1, however, more details should be provided in the syllabus on the suggested assignments, so as to being able to give you more precise suggestions. For example, it remains unclear to us, what the seminar group assignments are and whether they are connected or not to the 3 assignments that you describe at the end of the syllabus.</p>

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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*

The introductory character of the course to the master's degree in Natural Resources Management justifies the absence of prerequisites for attendance. The prerequisites for attending the master's apply. On the other hand, since we do not have access to the e-learning materials, no evaluation can be made about them from our side.

- *Strategies for improvement*

We do not have access to the e-learning materials. Therefore, we do not know whether the suggestions that we make here can be useful. It might be the case that some of the suggestions mentioned have already been adopted. Our first suggestion concerns the desirability of providing the slides and videos of the theoretical sessions in the e-learning platform, so as to enabling students to re-listen and review the learnt contents anytime and as many times as desired. This might allow a better understanding and encourage self-working at home. Second, an online chat might be created, which would make it possible to easily interact and discuss with the professors and other students on any topics of relevance for the course, both content-related and organisation-related. Third, additional literature as well as interactive online practical exercises might be furnished, potentially making the learning experience more attractive and allowing all students interested in the topic to learn more on it.

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).



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

Revised course 4: “Water Resources Management”

QUALITY ASSESSMENT
<p>Quality criteria 1: Number of credit units for lectures, practical sessions and self-learning are appropriate to the contents</p>
<ul style="list-style-type: none"> <p><i>Evaluation</i></p> <p>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.</p> <p><i>Strategies for improvement</i></p> <p>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.</p> <p>Our second suggestion consists in engaging local stakeholders in the in-class discussions and/or assignments planned, 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.</p> <p>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</p>

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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. planned. 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).