



CONNECTING SCIENCE-SOCIETY COLLABORATIONS
FOR SUSTAINABILITY INNOVATIONS

ConSus: 543742-TEMPUS-1-AT-TEMPUS-JPHES

Final Report on ConSus Work Package 3

Development of teaching resources for HEIs

Richard Kromp

BOKU University of Natural Resources and Life Sciences, Vienna



October, 2016



This project has been funded with support from the European Commission. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Contents

| | | |
|---|---|----|
| 1 | Introduction to WP3: Development of teaching resources for HEIs..... | 3 |
| 2 | Deliverable 3.1: Review of available teaching materials and methods | 4 |
| 3 | Deliverable 3.2: Resource platform development..... | 5 |
| 4 | Deliverable 3.3: Development of teaching methodologies..... | 9 |
| 5 | Deliverable 3.4: Development of learning materials | 10 |
| 6 | Conclusion | 14 |
| 7 | Annex:..... | 15 |

1 Introduction to WP3: Development of teaching resources for HEIs

This work package aims to provide suitable and innovative teaching resources to foster science-society collaborations and sustainability innovations among the network stakeholders and higher education institutions. The University of Natural Resources and Life Sciences Vienna (BOKU) has taken the responsibility for the success of this WP.

The objective was achieved at first by a review of available and suitable teaching materials and methodologies (**Deliverable 3.1**).

The development of an open virtual platform for teaching resources was the main activity of the project ConSus. Stakeholders and teachers may benefit directly from this platform as they can get access to teaching resources suitable to their current aims. The official internet address of the platform is www.consus-tempus.com (**Deliverable 3.2**).

Teaching methodologies that foster science-society collaborations and transdisciplinary settings were collected and uploaded by the EU partners to the platform (**Deliverable 3.3**).

The EU partners supported the partners with their methodological know-how, whereby the partner universities in Albania and Kosovo used their regional expertise to work on the development of teaching resources (inspired by the results of the needs analysis of WP2) that are especially designed to address the needs and challenges of the region regarding sustainable development. University professors and lecturers, students and network partners were invited to participate and develop teaching materials that foster science-society collaborations. All teaching resources collected and developed within this project were uploaded to the resource platform. The voluminous nature of most of the submitted and developed teaching resources required some improvement (splitting of long teaching resources into a set of short teaching resources) in order to increase the usability of the developed materials, because of the intensive translation process all materials are available in English and Albanian (**Deliverable 3.4**).

The success of this WP was essential for the project since it supported the development of trainings for the network stakeholders (WP 4), and ensured the implementation of workshops for interested teachers, students and other interested individuals (WP 5).

The initial time frame was 12/2013 - 08/2015. The major work load was finalized within this time frame, but additional challenges such as the process of splitting voluminous teaching resources or the translation process lead to a final time frame 12/2013 - 09/2016.

2 Deliverable 3.1: Review of available teaching materials and methods

Deliverable 3.1. was in the responsibility of project partner ULG. The time frame for this deliverable was 12/2013 - 08/2014. The report was delivered duly in August 2014 by Marlene Mader (ULG) in close co-operation with Audrey O'Grady (UL) and Richard Kromp (BOKU).

The outcome of the first deliverable was a review of available teaching resources and methods. The deliverable 3.1 report (see annex 01) includes a review of a selection of worldwide available teaching materials and methods that focus on fostering the collaboration between universities and society. This internet research was guided by the results of the analysis of the current situation in Albania and Kosovo (Del. 1.1). Furthermore, recommendations about lacking teaching materials and methods were provided:

"... it has not been an easy task to find well explained learning materials and teaching methods, which foster the collaboration between science and society, which in turn demonstrates the relevance of developing such resources in the course of the ConSus project, especially lecture notes and hand-outs for students as these are hardly available."

The report also states:

"...collaborations between higher education institutions and societal actors in the partner countries are often based on project activities (see Del. 1.1). The teaching resources can provide a good opportunity both to maintain existing co-operations once projects are finalised as well as to build first contacts with new partners. In the case of Albania, where NGOs and development organisations aim at linking vocational trainings with the private sector, the ConSus teaching resources can additionally be of interest and create synergies."

3 Deliverable 3.2: Resource platform development

Deliverable 3.2. was the responsibility of project partner BOKU. The initial time frame for the development of the platform was 12/2013 - 08/2015. In the following year the project team was asked to suggest additional improvements to enhance the quality and usability of the platform. This led to a final time frame 12/2013 - 09/2016.

The teaching resource platform was developed by the Center of Global Change and Sustainability of BOKU in close co-operation with all ConSus partner Universities. The programming of the platform was done by Allafine™ Design & Development.

The functions of the platform are mainly:

- collecting teaching resources (users create an account and add new teaching resources),
- publishing the resources on the ConSus website (resource search via search engine),
- giving free access to these resources for all, mainly HEI teachers and stakeholders, especially project consortium members, members of the ConSus network, and interested institutions and individuals,
- and support feedback and evaluation of teaching resources.

The online resource platform must be discerned from the project website (development within WP5, www.consus-tempus.com), which aims to provide information about the project in general, all partner institutions, work packages, activities, and the progress of the project. After the projects end, it also functions as the "face" and access point of the ConSus network installed within WP5. It is the display surface for the teaching resources collected in the teaching resource platform, users can search for ConSus teaching resources with the help of several search filters. It also serves as the access point for teaching resource authors to the teaching resource platform, where the authors can create and administrate the teaching resources. The website and the online platform communicate with each other, as shown in the following figure:

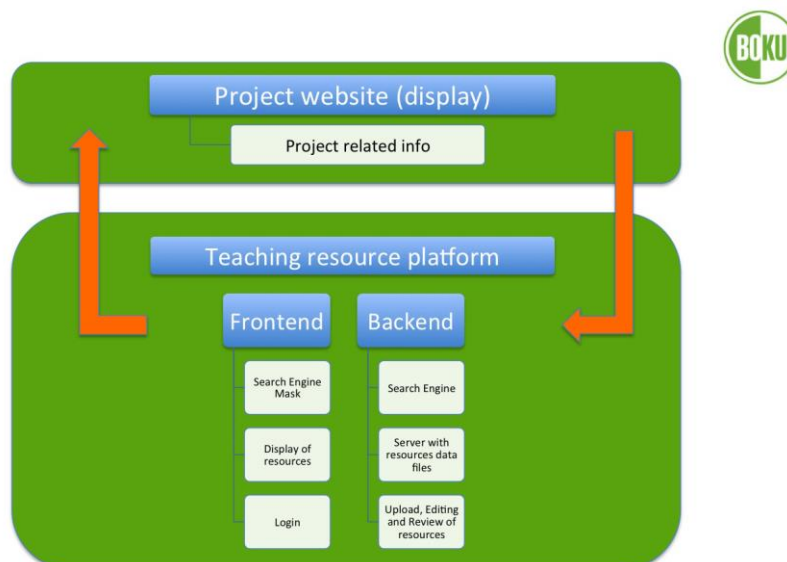


Figure 1: communication of the network website and teaching resource platform

The **ConSus Resource Platform Meeting** from Sept 1st - 3rd 2014 in Vienna was an important milestone within Del 3.2., where the platform's functionality and important ConSus requirements were discussed ([resource platform meeting minutes - see annex 02](#)).

Overview of the time schedule of Del 3.2:

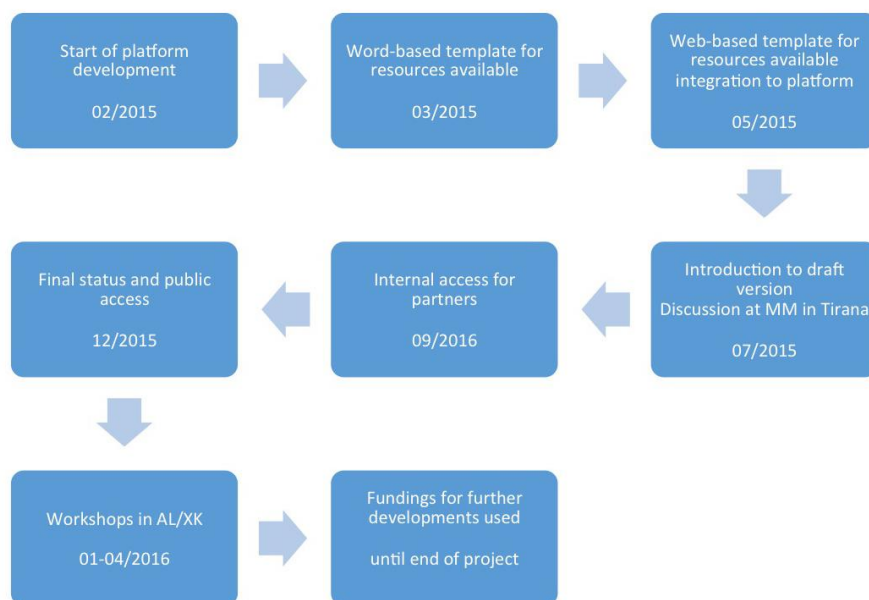


Figure 2: time schedule for Del 3.2

All tasks regarding development and improvement of the platform within Del 3.2 (and Del 5.1 in grey), were done by the programmer Allafine within the project lifetime, and are listed in the following table:

| | | |
|---|--|---|
| 1 | (WP5: Website Design & Development) | - Concept and design of the logo - concept and design of the project's website - Implementation of the basis-structure in HTML/CSS |
| 2 | (WP5: Completion of the project website) | - completion - adding final content - check and fixing errors |
| 3 | Development of a user management system | Development of a user management system with different roles on a per user basis. |
| 4 | Teaching resources management tool for teaching resource authors | Development of a variety of templates which allow the users to create new teaching resources such as learning materials and teaching methods, in order to submit the resources to the platform. |
| 5 | Development of testing and evaluation workflows for teaching resources | A testing and evaluation workflow was developed and adapted to the requirements of the partner universities involved in creating teaching resources. The testing and evaluation system was used for the testing of resources produced within the project. |
| 6 | Testing and verification of the platform's functionalities | Extensive testing of the platforms functionalities including but not limited to: user management, creating and changing teaching resources. Verification of the proper implementation of the test- and evaluation workflow. Verification |

| | | |
|----|--|---|
| | | of the results delivered by the teaching resource platform search function. |
| 7 | Connecting the CONSUS teaching resource platform to CONSUS project website | The teaching resource platform was connected to the project website, in order to enable users to search via search engine mask displayed on the website to find teaching resources uploaded to the platform. Teaching resource authors can login via the website login mask, in order to administrate and upload new teaching resources. |
| 8 | Design of subpages displaying the teaching resources | Teaching resources are displayed on a subpage of the project website. A clear and intuitive design allows the quick navigation of the teaching resources and displays all required details of the teaching resource and how to use it. |
| 9 | Design of Icons for resource types | In order to increase the usability of teaching resources, an icon for each type of resource was designed. |
| 10 | Adaption of the news module | The adapted news tool allows participating universities to create and upload their news about events and other progress related to the CONSUS project via the platform account. The news are displayed on the CONSUS project website. |
| 11 | Multi-language contents | Two language versions of the contents (English and Albanian) were implemented in the platform. |
| 12 | User administration | The account owners were allocated to project related roles with specific permissions, such as observer, resource responsible, deliverable leader, work package leader. Since these roles are not required after project ends, existing roles were adapted for the „time after project“: (e.g. author, university responsible, network chair, administrator,...). |
| 13 | Configuration and implementation of notification system | Based on the permissions set for the roles (such as author, university responsible, administrator,...), the system automatically sends a notification email to the account owner with information about the submission of a new resource, acceptance of a resource, and others. |
| 14 | Enhancement of the management of resource status | The tool enables the administrator or university responsible to change the status (created, submitted, revision required, accepted) of resources in bulk. |
| 15 | Exporting a resource as PDF document | An export tool was installed that enable users to export a resource as a PDF document, which was optimized for printing. |
| 16 | Password reset function | A function was added to the platform which allows authors to reset their own passwords. |
| 17 | Automated renewal of passwords after a defined period of time | In order to keep the platform and its users safe, a tool was installed to automatically renew email passwords after a certain period of time and the new password will be communicated to the user. |
| 18 | Design and implementation of additional icons | 3-pillar-of-sustainability icons (social, economical, ecological sustainability) were designed and integrated into the platform. Each resource was allocated to the corresponding pillars. |
| 19 | Dissemination of ConSus resources on the Sustainicum platform | To foster the dissemination of the ConSus resources, a communication tool between the ConSus platform and the CONSUS platform will be implemented. |
| 20 | Improvement of sorting of teaching resources | After the adaption, the teaching resources were sorted automatically after date of acceptance. To allow this sorting order, a special field will be added, which stores the acceptance date. |
| 21 | Development of a Comment Module | The comment tool allows users of teaching resources to comment the individual teaching resources. The participating universities are able to switch the comment tool on or off individually. |
| 22 | Adaption of the existing teaching resource specification field „required time“ | In the beginning, the teaching resource specification „time required“ was split into the categories „15-30 minutes“, „1 lecture unit“, „up to three lecture units“ and „more than three lecture units“. Finally, the last option was deleted, and following categories were added instead: „4-7 lecture units“, „up to 1 semester“, „more than 1 semester“. In addition to these changes a warning note informs the user if a teaching resource requires more than 3 lecture units. |
| 23 | Further changes to the resource templates | The resource templates were adjusted, and some fields were added. |
| 24 | Allow additional attachments to be connected to a teaching | In addition to the instruction file, further attachments are allowed. The uploaded files are displayed in following order: teaching resource bulk, instruction file, handouts, additional files. |

| | resource | |
|----|---|--|
| 25 | Link between methods and teaching resources | A system was developed which allows the authors of learning material resources to connect their resources to teaching method resources which might be relevant for the resource. |
| 26 | Security aspects I | A "captcha system" prevents spam bots from spamming the project website and platform. |
| 27 | Security aspects II | An email notification tool sends a warning email to the administrator whenever the website or platform is down. This tool will minimize platform and website downtime. |

Table 1: required steps of workload of Del 3.2

4 Deliverable 3.3: Development of teaching methodologies

Deliverable 3.3. was in the responsibility of project partner UL. The time frame for this deliverable was 06/2014 - 12/2014. The report (teaching methods handbook) was delivered in March 2015 by Audrey O'Grady (UL) in close co-operation with Marlene Mader (ULG), Jonas Meyer (KFUG) and Richard Kromp (BOKU).

4 to 6 innovative teaching methods and teaching method outlines for HE teaching were collected and described in an understandable way by each of the 4 participating EU-Universities UL, ULG, KFUG and BOKU. The outcomes of this deliverable were 17 teaching methods and 8 teaching method outlines, which aimed to serve as a basis for the development of learning materials within Del 3.4. All methods were uploaded to the teaching resource platform, and also collectively described in the final report of this deliverable, the *teaching methods handbook* (see annex 03).

The handbook provides a definition of key terms:

- Teaching Method: made of the principles and procedures used for instruction, such as the World Café.
- Teaching Method Outline: a combination of methods within a learning material. It can be seen as a short draft of a learning material. It describes the general sequences of a resource, without necessarily being confined to a topic. It might be best described as a reasonable combination of teaching methods that can be used for the development of a teaching resource.

All methods are addressing science-society collaborations and present a basis for the development of the teaching materials. They consist of demonstrations, action learning methods and participation tools to enable efficient multi-stakeholder learning among network partners, universities and students.

5 Deliverable 3.4: Development of learning materials

Deliverable 3.4. was in the responsibility of project partner BOKU, in close co-operation with Bardha Qirezi (RIINVEST) as the regional co-ordinator for the development of teaching resources and "resource responsible" of each Albanian and Kosovar partner University who supervised the development process at their institution. The initial time frame for this deliverable was 10/2014 - 06/2015. Delays due to unexpected barriers and challenges lead to the final time frame 10/2014 - 09/2016. The final report was delivered in October 2016 by Richard Kromp (BOKU).

Based on the review of the existing teaching materials, teaching methodologies and from the needs analysis in WP 2, 12-15 specific teaching materials were developed by each partner University to introduce specific sustainability topics to their students and workshop participants.

Overview of the time schedule of Del 3.4:



Figure 3: original time schedule Del 3.4

All tasks regarding the development and improvement of learning materials within Del 3.4 are listed in the following table:

| | |
|---|---|
| 1 | In the starting phase , experiences with the development of teaching resources were embedded in the project process. At the first meeting in Graz (Austria) with Richard Kromp (BOKU), Jonas Meyer (KFUG) and Prof. Zimmermann (KFUG) on Jan. 14th 2014, the required quality measures for the development of resources was discussed. Through many Skype and phone meetings the development procedure was discussed and decided. At the kickoff meeting in Graz from Feb 17th - 20th 2014 in Graz, WP3 was presented to the project partner. During a short meeting in Graz on Aug. 6th 2014, the oncoming "ConSus Resource Platform Meeting" in Vienna was discussed and planned. |
| 2 | The ConSus Resource Platform Meeting from Sept 1st - 3rd 2014 in Vienna was an important milestone within Del 3.4. Following topics were discussed: The project and the meaning of science-society collaboration; review of existing teaching resources; how to adapt an existing learning material; analysis of current |

| | |
|----|---|
| | sustainability collaborations and expertise; platform functionality and ConSus requirements; Using the World Cafe, suitable topics for ConSus resources were identified; definition of key terms (teaching resource, learning material, teaching method); finally, the partners asked for guidelines for the development of teaching resources for their future authors of teaching resources. The results of this meeting can be found in the minutes of the meeting (<i>resource platform meeting</i> - see annex 10). |
| 3 | In order to facilitate the work of the teaching resource authors in Kosovo/Albania, BOKU developed guidelines for the development of learning materials (<i>development guidelines</i> , see annex 04). The guidelines and a WP3 schedule for the development of teaching resources (<i>ConSus_Timelines.pptx</i>) were introduced to the partner institutions at the Management Meetings in Lüneburg (Germany) from Oct. 21st - 24th 2014. |
| 4 | As a first measure, BOKU installed so called " resource responsables " (RR) at each partner University that would develop teaching resources. The function of a RR is to supervise and monitor the authors of their University during the learning material development process, and also to check the new learning materials before they are submitted to the teaching resource platform. |
| 5 | The RR were asked to organize the 1st RR group meeting in Prishtina (Kosovo) on Dec. 4th 2014 (<i>1st RR meeting minutes</i> , see annex 05). The RR of the partner Universities discussed the oncoming process of the development of teaching resources on the basis of the <i>Guidelines for the development of learning materials</i> (outcome 3.4), the <i>Analysis of the current situation in Albania and Kosovo</i> (outcome Del. 1.1), and the <i>Review of available teaching materials and methods</i> (outcome Del 3.1). The results of this meeting can be found in " <i>ConSus_1st RR Meeting_Prishtina_minutes.pdf</i> ". The meeting opened many questions, which were answered by BOKU in order to clarify the oncoming development process. |
| 6 | BOKU installed a regional deliverable leader in Kosovo (Bardha Qirezi, RIINVEST) for the regional co-ordination of development strategies and meetings. |
| 7 | In the next step, each RR was asked to open a call for application for the development of 12 - 15 learning materials at each partner University in January 2015. Within the call, lecturers of the partner Universities were asked to contribute drafts of new learning materials. |
| 8 | The RR were asked to organize " Workshops for teaching resource authors " at each partner University. Here the RR were asked to promote the idea of the ConSus project at their own University and to communicate the principles of the development of learning materials on the basis of the development guidelines of BOKU. The participants (future learning material authors) were also asked to discuss and work on topics for teaching resources. In order to keep the number of meetings low, the workshops were combined with the Stakeholder meetings of WP2 (to discuss the ToR of the future network). The workshops were held during the period between January and February 2015. |
| 9 | The Management Meeting in Limerick (Ireland) on Feb. 24th - 27th 2015 was the next important milestone within WP3. It was the place for the 2nd RR group meeting , where the development process was discussed in general. All partner Universities were asked to present their pool of learning materials submitted during the call. In a short method workshop, all RR were trained on how to improve the method outlines of the submitted learning materials (<i>2nd RR meeting minutes</i> , see annex 06). Since the communication with the Kosovar and Albanian partners was always very good during the meetings, but turned out to be challenging in the time between the meetings (cultural differences and different approaches in dealing with project duties and responsibilities), and since most partners did not stick to any confirmed deadline, a communication strategy was discussed. |
| 10 | In the next step, the RR were asked to finalize the draft versions of the learning materials . |
| 11 | Then the RR were asked to distribute the teaching methods handbook (<i>teaching methods handbook</i> , see annex 03) and the development guidelines (<i>development guidelines</i> , see annex 04) for the development of learning materials to the authors. |
| 12 | During the following months (March 2015 - July 2015), the development of learning materials was started by the authors of the partner Universities. The authors created an author account on the teaching resource platform. Then they created the learning material files and uploaded all required contents, such as general descriptions, instruction files for the lecturer, handout material for the students, and additional documents (ppt, pdf) if available. |
| 13 | The Management Meeting in Tirana (Albania) from Jul. 20th - 24th 2015 was also the place of the 3rd RR group meeting (Jul. 22nd, 2015). It was the next important milestone within WP3, since no partner University was able to stick to the communicated deadlines, and a new strategy and time plan had to be found. First, the status quo of the platform was presented to the partner by BOKU. Then each RR presented a status quo of the |

| | |
|----|---|
| | learning material development process. Challenges and problems were identified. After being discussed in small groups, solutions for the challenges and problems were found in plenum. Finally, a schedule and action plan with new deadlines for the finalization of the development process was initiated and discussed. All partner agreed to the new time plan (<i>3rd RR meeting minutes, see annex 07</i>). |
| 14 | In the following months (August 2015 - May 2016), whenever a learning material template was finalized, the author was asked to use a check file (provided by BOKU) in order to check if all requirements were fulfilled (1st quality check). |
| 15 | When the 1st check was positive, the RR were asked to do the 2nd quality check (template provided by BOKU). |
| 16 | When the 2nd check was positive, the status of the learning material template was changed from the original status "created" to status "submitted" . As a consequence, the authors could not change the contents of the template. This was required to enable an "undisturbed check". |
| 17 | The 2nd check was the basis for the 3rd quality check done by the EU partner (November 2015 - May 2016). All teaching resources were divided and allocated to the 4 EU partner Universities. In the 3rd check, all suggestions and comments added to the check template were proofed, and additional checks were performed. For each learning material, a summary of suggestions for enhancement of each learning material was sent to BOKU. |
| 18 | BOKU then changed the status of the learning material template from status "submitted" to status "revision required" . As a consequence, the authors could again change the contents of the template. |
| 19 | BOKU forwarded the suggestions for improvement to the RR (quality loop). The RR either asked their authors to improve the quality of their learning materials on the basis of the suggestions listed in the feedback template, or implemented the improvements on their own (December 2015 - May 2016). |
| 20 | It was decided at the last management meeting, that it was not the responsibility of BOKU but the responsibility of the resource responsible (RR) to check again whether all suggestions were implemented. Whenever the RR decided, that a learning material is ready for being published on the internet, BOKU was asked to change the status from status "revision required" to status "accepted" . As a consequence, the specific learning material was then visible on the internet and could be found and displayed on the project website. |
| 21 | In order to ensure high quality, BOKU performed a final check of all learning materials (March 2015 - May 2016). All resources were checked, whether the minimum requirements were met (usability, interactive elements, instruction file for the lecturer, cooperation of stakeholders). |
| 22 | The final checking procedure resulted in a final feedback loop : still some learning materials required a final revision, this time all issues were shared directly from BOKU to the authors. |
| 23 | An additional challenge during the checking process was the fact that most learning materials were too voluminous: the time required to work with the learning material in the lecture was too long regarding the fact that other lecturers should be able to implement the learning material in their existing lectures. Nobody would be able to implement a material that would require 1 semester of time. Hence BOKU suggested to split the long learning materials into a set of smaller resources. The partner UL (University of Limerick) was then responsible for the splitting process (May 2016 - August 2016). The method outline of a long learning material was divided into 3 logical parts. Whenever required, an interactive method was added. Each of the 3 new materials would require participation of the students (e.g. presentation of powerpoint was not sufficient as a split learning material, so a discussion had to be added), and one of the materials of a set would need a cooperation with a stakeholder. Within this splitting process, an additional 42 learning materials were developed. |
| 24 | An additional important process was the translation and check of translation of all learning materials. All materials were provided in Albanian and English. The translation process (October 2015 - September 2016) was the responsibility of the partner European University Tirana (UET) in close cooperation with UC, who was responsible for the design of the teaching resources handbook, and BOKU (WP3 lead). |
| 25 | The ConSus trainings were also used as a good source for feedback for the new learning materials. During the first (<i>Lüneburg May 5th-8th 2015</i>), the second (<i>Graz July 7th-10th 2015</i>) and the 3rd Consus training (<i>Limerick Sept 1st-4th 2015</i>), trainees - which were mostly authors of the learning materials themselves - were asked to discuss the drafts of selected materials and give feedback. At the fourth (<i>Prishtina November 17th-20th 2015</i>) and the fifth training (<i>Tirana January 25th-28th 2016</i>), within workshops trainees could learn about the main aspects of method sets, integration of stakeholders and relevance to sustainability |

| | |
|----|--|
| | regarding new learning materials. They also took part in a role play : lecturers played the part of the students and worked with one exemplar learning material (author: Ms. Vjosa Hajdari, UPHZ). At the time of the sixth ConSus training (<i>Vienna March 14th-19th 2016</i>) most of the learning materials were in the final stages (very close to be finalized) and it was decided not to do another feedback loop in order not to endanger the close deadlines (since each quality loop needs enough time for implementing the suggested improvements). |
| 26 | I would also like to point out the students' seminar at Leuphana University of Lüneburg (ULG) in the winter term 2015/2016 that focused on the development of additional learning materials: 14 Master students from educational science and sustainability science dealt with ESD and developed teaching resources in close cooperation with Rinora Gojani from INDEP (Prishtina) and Elvan Dajko from Polis University (Tirana). Their teaching resources focus on introducing aspects of sustainable development using different approaches. |
| 27 | 89 teaching resources developed by the partner Universities <i>Agricultural University of Tirana (AUT)</i> , <i>Aleksandër Moisiu University of Durrës (UAMD)</i> , <i>European University of Tirana (UET)</i> , <i>Leuphana University of Lüneburg (ULG)</i> , <i>POLIS University (U_POLIS)</i> , <i>Riinvest College (RIINVEST)</i> , <i>University Haxhi Zeka (UPHZ)</i> and <i>Universum College (UC)</i> and were printed in the teaching resource handbook (<i>teaching resource handbook, see annex 08</i>). The short versions that were split and developed by the University of Limerick (UL) were excluded from the handbook due to limited available space. They can be found on the platform together with all teaching resources (learning materials, teaching methods). |
| 28 | The <i>teaching resource handbook</i> and 7 selected learning materials (one of each partner University) were presented at the ConSus Final Conference from Sept. 27th - 30th 2016 in Durres (Albania) . |

Table 2: required steps of workload of Del 3.4

Outcomes:

All ConSus teaching resources (learning materials and teaching methods) can be found on the online platform <http://consus-tempus.com/en/modules>

A selection of teaching resources (learning materials and teaching methods) can be found in the *teaching resources handbook* (see annex 05)

6 Conclusion

The development was a great success. Even though 84 new teaching resources was the minimum goal communicated in the project application, more than 130 learning materials were developed, and more than 20 existing teaching methods were described and added to the platform.

The collection of materials and methods for education for sustainable development (ESD) and the development of an online teaching resource platform were not the only goals that were achieved with great success. The development process brought together 9 regional higher education institutions who mainly discussed sustainability issues and ESD for the first time. The resource responsible group meetings were good opportunities for discussions and encouraged learning from each of the other universities. The process of the development of teaching resources was improved during the projects life time. BOKU as the leader of this work package had the great opportunity to act as a changing agent and to guide this process in the Western Balkan region. Regarding the understanding of the teaching resources for ESD, the difference between the beginning and the end of the project is highly visible. Today, implementing participative learning materials with science-society co-operation elements into their teaching is seen by the partner Universities as a must-have holistic approach, with respect to available time and financial resources. The members of the ConSus network stated in the action and sustainability plan that they would like to continue to focus on the development of new teaching resources in the coming years.

Regarding the project work, the original time schedule of WP3 was a challenge. WP3 was interconnected with two important work packages, hence good time management was required. The drafts of the learning materials had to be finalised before the six ConSus trainings (WP4) in order to enable discussions and feedback, and the final versions of the learning materials were required for the *teaching resource handbook* (WP5) presented at the ConSus Final Conference in Durres (Albania).

BOKU tried their best and worked hard to ensure high quality outcomes in time, but it was not possible to stick to the original time frame. Answers to this issue might be found in cultural differences between the partners and in different approaches regarding general project work. For future projects, I would recommend allocating more responsibilities at the beginning of the project. The project team should not only focus on a clear definition of a time schedule, but also find a way to communicate consequences for the case partner that does not stick to the important deadlines. In addition, it is also important to define someone "outside the work package" to keep an eye on the progress and time frame.

More time was required for the work package than scheduled in the application. The checking procedure turned out to be a real challenge, since 9 partner institutions and 80 authors were involved.

Finally, because of my past experiences with projects dealing with teaching resource development, and with the help of my ConSus partners and especially the close co-operation with project leader Jonas Meyer (KFUG), the development of high quality learning materials and the online platform were finalized in time.

I would like to thank my organization, the Center for Global Change and Sustainability of the University of Natural Resources and Life Sciences, Vienna, for their support and patience during the past 3 years.

7 Annex:

Annex 01: *Deliverable 3.1 report* (Annex 01_ConSus_WP3-1 Report.pdf)

Annex 02: Resource platform meeting minutes (Annex02_ConSus_Resource Platform Meeting_minutes)

Annex 03: Teaching methods handbook (Annex03_ConSus_Teaching Methods Handbook.pdf)

Annex 04: Development guidelines (Annex04_ConSus_development guidelines_V02.pdf)

Annex 05: 1st RR meeting minutes (Annex05_ConSus_1st RR Meeting_Prishtina_minutes.pdf)

Annex 06: 2nd RR meeting minutes (Annex06_ConSus_2nd RR Meeting_Limerick_minutes.pdf)

Annex 07: 3rd RR meeting minutes (Annex07_ConSus_3rd RR Meeting_Tirana_minutes.pdf)

Annex 08: Teaching resources handbook (Annex08_ConSus_Teaching Resources Handbook.pdf)