



**ERASMUS+ PROGRAMME**  
**Project Number: 573927-EPP-1-2016-1-JO-EPPKA2-CBHE-JP**

**EGREEN:**  
**Development of Environmental Engineering Courses and Injection of Climate  
Change Concept For Undergraduate Curriculum**

**Minutes  
of  
The Second Steering Committee Meeting**

**Ostwestfalen-Lippe University of Applied Sciences (OWL UAS)**

**Höxter-Germany**

**September 13<sup>th</sup> - 15<sup>th</sup>, 2017**



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**EGREEN Second Steering Committee**  
 September 13<sup>th</sup> - 15<sup>th</sup>, 2017

**Participants list:**

No.	Participant Name	Position
<b>The University of Jordan (UJ)</b>		
1.	Prof. Ahmed Al-Salaymeh	EGREEN Project Coordinator
2.	Prof. Mohammad Hamdan	Professor at Mechanical Engineering Department
3.	Eng. Leena Marashdeh	Research Assistant at School of Engineering
<b>The German-Jordanian University (GJU)</b>		
4.	Dr. Louy Qoaidar	Assistant Professor at Energy Engineering Department
<b>Al al-Bayt University (AABU)</b>		
5.	Dr. Moayyad Shawaqfah	Dean of Engineering College
6.	Eng. Ibtehal Qudah	Research Assistant
<b>Al-Zaytoonah University of Jordan (ZUJ)</b>		
7.	Dr. Loai Dabbour	Vice Dean for Faculty of Engineering/ Assistant Professor at Department of Architecture
8.	Eng. Eman Abdelhafez	Lecturer in Alternative energy technology department
<b>Mutah University (MUTAH)</b>		
9.	Prof Omer Maaitah	Dean of the Faculty of Engineering
10.	Prof. Mohammed Majali	Chairman of Mechanical Engineering Department
<b>Jordan University of Science and Technology (JUST)</b>		
11.	Prof. Fahmi Abu Al-Rub	Professor at Chemical Engineering Department
12.	Prof. Suhil Kiwan	Professor at Mechanical Engineering Department
13.	Prof. Saeb A. Khresat	Jordan University of Science and Technology
14.	Eng. Qatada Damra	Research Assistant
<b>Al-Baath University (ABU)</b>		
15.	Prof. Adnan Ghata	Professor at Chemical Engineering Department



<b>Tishreen University (TU)</b>		
16.	Prof. Hani Mahmoud Shaaban	President of Tishreen University
17.	Prof. Ali Zidan	
18.	Prof. Moussa Al Samara	The Dean of the higher Institute for Environmental Research
19.	Dr. Boushra Neameh	Professor at Science Faculty
<b>Hamburg University of Technology (TUHH)</b>		
20.	Prof. Martin Kaltschmitt	Director of Institute of Environmental Technology and Energy Economics (IUE)
21.	Mr. Marvin Scherzinger	Research Assistant
<b>Hochschule Ostwestfalen-Lippe (OWL-UAS)</b>		
22.	Prof. Salman Ajib	Head of the department renewable energies & decentralized energy supplying
23.	Prof. Burkhard Wrenger	Vice president Teaching and Internationalisation/Full professor in IT systems
24.	Prof. Klaus Maßmeyer	Faculty Member at OWL-UAS
25.	Prof. Joachim Fettig	Faculty Member at OWL-UAS
26.	Prof. Martin Oldenburg	Faculty Member at OWL-UAS
27.	Prof. Stefan Wolf	Faculty Member at OWL-UAS
28.	MSc. Majd Ali	Research Assistant
29.	Mr. Wolfgang Langner	Technical staff
<b>University of Innsbruck (UIBK)</b>		
30.	Prof. Wolfgang Streicher	Professor of Energy Efficient Buildings and Renewable Energies
31.	Mr. Martin Hauer	Research Assistant
<b>Catholic University of Portugal (UCP)</b>		
32.	Dr. Eduardo Cardoso	Assistant Professor and Scientific Officer for Knowledge Transfer, Entrepreneurship and Partnerships at Faculty of Biotechnology



## Day 1

Monday, September 13, 2017

### The Opening Ceremony

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The opening ceremony of the EGREEN second steering committee meeting was conducted under the patronage of **Prof. Dr. Jürgen Krahl**, President of (OWL UAS), the ceremony included welcome speeches of the representative of the partners, as follow:

- Welcome Speech by the local Coordinator of EGREEN Project, **Prof. Salman Ajib**(OWL UAS)
- Welcome Speech by the President of the Ostwestfalen-Lippe University of Applied Sciences, **Prof. Dr. Jürgen Krahl**
- Speech by the Representative of the Jordanian Partners, **Prof. Suhil Kiwan** (Jordan University of Science and Technology)
- Speech by the Representative of the Syrian Partners, **Prof. Hani Shaaban** (President of Tishreen University)
- Speech by the Representative of the European partners, **Prof. Wolfgang Streicher**, (University of Innsbruck)
- Speech by the local coordinator, **Prof. Moussa Al Samara**, (Tishreen University)

After the welcome speeches, a presentation about the progress in EGREEN project was delivered by **Prof. Ahmed Al-Salaymeh, Egreen General Coordinator.**

Then leaders of different work packages presented the progress and the needed action plan for each work package during the sessions.


**Session (1): Chaired by Prof. Martin Kaltschmitt (TUHH)**
**WP2**
**WP2: Scoping and training needs**

Title	Major Activities	Coordination			Estimated Start\End Date	
		Coordinator	Co-Coordinator	partners involved		
WP2: Scoping and training needs	<b>Task 2.1:</b> Scoping and Market Needs Analysis	UIBK	TU, AABU	All	1.4.2017	1.1.2017 To 1.7.2017
	<b>Task 2.2:</b> Scoping and Market Needs Analysis				1.5.2017	
	<b>Task 2.3:</b> Planning and Methodologies				1.7.2017	

Mr. Martin Hauer, UIBK, presented the tasks and activities of this work package and the action plan for the implementation. The partners agreed on the following:

No.	Task	Responsibility	Due Date
1.	The co-leaders are responsible to collect the surveys from partners in Jordan and Syria	TU AABU	Over the project
2.	Each partner university has to provide the needed number of filled Stakeholder questionnaires and according to the provided summary from UIBK Survey on teaching and management facilities and on the structure of the partner universities	JO SY	Oct 15, 2017
3.	Upload agreements on EGREEN website	UJ	Oct 31, 2017
4.	The surveys will be analyzed, and the final report including the two surveys analysis will be prepared	UIBK	Oct 15, 2017


**Session (2): Chaired by Prof. Wolfgang Streicher (UIBK)**
**WP5**
**WP5: Capacity Building**

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
WP5: Capacity Building	<b>Task 5.1:</b> Development a Capacity Building Programme	TUHH	GJU, ABU	All	1/3/2018	1.1.2018 To 1/10/2018
	<b>Task 5.2:</b> Academic Visits to EU Partners				1/7/2018	
	<b>Task 5.3:</b> Students Visits to EU Partners				1/7/2018	
	<b>Task 5.4:</b> Training Workshops in environment in Jordan and Syria				1/10/2018	

Mr. Marvin Scherzinger (TUHH), presented the tasks and activities of this work package and the action plan for the implementation. The capacity building plan was elaborated

The partners agreed on the following tasks:

No.	Task	Responsibility	Due Date
1.	Prepare the training program for the planned workshops targeting faculty members and technical assistants after consultations with EU partners (online meetings)  The proposed timetable during the meeting discussions is as follow: <ul style="list-style-type: none"> <li>➤ Training in OWL-UAS, Jun 26-29, 2018,</li> <li>➤ Training in UCP and P&amp;B, Jul 23-27, 2018</li> <li>➤ Training in TUHH, Jul 9-13, 2018</li> <li>➤ Training in UIBK, Jul 16-20, 2018</li> </ul>	TUHH GJU ABU	Dec, 2017
2.	Prepare Selection Criteria to visit Europe for faculty members, technical assistants and students.	TUHH GJU ABU	Dec, 2017



3.	Trained staff will be responsible to hold regular multiple effect workshops at their own institutions	Trained persons	2018
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**Session (3): Chaired by Chaired by Dr. Eduardo Cardoso (UCP)**  
**WP6**

**WP6: Monitoring and Evaluation**

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
WP6: Monitoring and Evaluation	<b>Task 6.1:</b> Quality Committee	GJU	TUHH	All	1/2/2017	1.11.2016 To 1/10/2019
	<b>Task 6.2:</b> External Evaluation				1/8/2019	
	<b>Task 6.3:</b> Monitoring and Evaluation Plan				1/9/2019	
	<b>Task 6.4:</b> Mid-Term Evaluation Report				1/4/2018	
	<b>Task 6.5:</b> Final Evaluation Report				1/9/2019	

Dr. Louy Qoaidar, GJU, presented the tasks and activities of this work package and the action plan for the implementation. The partners agreed on the following:

No.	Task	Responsibility	Due Date
1.	Announce the external evaluator vacancy and send the invitation to potential evaluator	GJU	Oct, 2017
2.	Prepare two Progress reports, one for each six months	GJU	Oct, 2017
3.	Every document should be reviewed by quality committee before publication	Quality committee	Over the project
4.	Courses outlines will be reviewed by a checklist that will be produced the quality committee	Appointed courses reviewers	2017
5.	Prepare the quality measures like peer review guidelines, and evaluation surveys.	GJU	Nov, 2017


**Day 2**
**Thursday, September 14, 2017**
**Session (4): Chaired by Prof. Ahmed Al-Salaymeh (UJ)**
**WP3**
**WP3: Development of Study Plan and Curricula**

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
<b>WP3: Development of Study Plan and Curricula</b>	<b>Task 3.1:</b> Workshop on Curricula Updating	HS-OWL	ZUJ, MUTAH,TU	All	1/9/2017	1.8.2017 To 1/4/2018
	<b>Task 3.2:</b> Selection of Pilot Courses and Labs				1/11/2017	
	<b>Task 3.3:</b> Detailed Design of Pilot Courses				1/2/2018	
	<b>Task 3.4:</b> Accreditation of New Curricula				1/6/2018	
	<b>Task 3.5:</b> New Curricula for environment Courses				15/9/2018	
	<b>Task 3.6:</b> Establishment of Environmental lab				15/4/2018	
	<b>Task 3.7:</b> Monitoring and Feedback Methodology and Reports				1/10/2018	

**Prof. Salman Ajib, OWL-UAS**, presented the tasks and activities of this work package and the action plan for the implementation. A typical course was suggested for each theme, committees responsible about the courses development was formed. Please refer to Annex (1) for the whole courses list.

The courses and committees are shown in the following table:

#	Course Title	Committee
1.	Water Resources Engineering including non-conventional water recourses	<ol style="list-style-type: none"> <li>1. Dr. Paulo Baptista (P&amp;B)</li> <li>2. Prof. Joachim Fettig (HS-OWL)</li> <li>3. Prof. Adnan Ghata (ABU)</li> <li>4. Prof. Omer Maaitah (MUTAH)</li> <li>5. Prof. Abd-alnasser Alaaraj (ABU)</li> <li>6. Dr. Mo'ayyad Shawaqfah (AABU)</li> </ol>
2.	Water and Wastewater Treatment including Bio-Techniques for Waste Water Treatment	<ol style="list-style-type: none"> <li>1. Prof. Martin Oldenburg (HS-OWL)</li> <li>2. Prof. Adnan Ghata (ABU)</li> <li>3. Prof. Fahmi Abu Al-Rub (JUST)</li> <li>4. Dr. Amal Dayoub (TU)</li> <li>5. Prof. Ahmad AbuYaghi (UJ)</li> <li>6. Dr. Muna Hindiyeh (GJU)</li> <li>7. Dr. Mo'ayyad Shawaqfah (AABU)</li> </ol>
3.	Design of Sustainable Buildings including Energy efficient building services	<ol style="list-style-type: none"> <li>1. Prof. Wolfgang Streicher (UIBK)</li> <li>2. Dr. Louy Qoaidar (GJU)</li> <li>3. Dr. Hamzeh Ali (ABU)</li> <li>4. Dr. Loui Dabbour (ZUJ)</li> </ol>
4.	Air Pollution and Air Quality Management	<ol style="list-style-type: none"> <li>1. Prof. Klaus Maßmeyer (HS-OWL)</li> <li>2. Dr. Mo'ayyad Shawaqfah (AABU)</li> <li>3. Prof. Khalaf Alabdullah (AU)</li> <li>4. Prof. Adnan Ghata (ABU)</li> <li>5. Prof. Ahmed Al-Mahmoud (ABU)</li> <li>6. Prof. Mohammad Hamdan (UJ)</li> <li>7. Prof. Ahmad AbuYaghi (UJ)</li> </ol>
5.	Environmental engineering and sustainable development	<ol style="list-style-type: none"> <li>1. Prof. Martin Kaltschmitt (TUHH)</li> <li>2. Prof. Fahmi Abu Al-Rub (JUST)</li> <li>3. Prof. Moussa Al-Samara (TU)</li> <li>4. Prof. Ahmad AbuYaghi (UJ)</li> <li>5. Dr. Muna Hindiyeh (GJU)</li> <li>6. Dr. Mo'ayyad Shawaqfah (AABU)</li> </ol>
6.	6.a. Introduction To Environment and Climate Change  <b>(New course)</b>	<p>First sub-committee for Introduction To Environment and Climate Change :</p> <ol style="list-style-type: none"> <li>1. Prof. Martin Kaltschmitt (TUHH)</li> <li>2. Dr. Eduardo Luís Cardoso (UCP)</li> <li>3. Prof. Moussa Al-Samara (TU)</li> <li>4. Dr. Mo'ayyad Shawaqfah (AABU)</li> </ol>



	<p>6.b. Meteorology and climatology <b>(New Course)</b></p> <p>And/or</p> <p>6.c Environmental Monitoring Systems <b>(New Course)</b></p>	<p>5. Prof. Klaus Maßmeyer (HS-OWL) 6. Dr. Saeb Khresat (JUST)</p> <p>Second sub-committee for Meteorology and climatology:</p> <p>1. Dr. Eduardo Luís Cardoso (UCP) 2. Prof. Burkhard Wrenger (HS-OWL) 3. Prof. Klaus Maßmeyer (HS-OWL) 4. Prof. Adnan Ghata (ABU) 5. Prof. Ahmed Al-Mahmoud (ABU) 6. Prof. Khalaf Alabdullah (AU) 7. Prof. Moussa Al-Samara (TU)</p>
7.	Energy Resources and Engineering and Energy conversion Technologies	<p>1. Prof. Martin Kaltschmitt (TUHH) 2. Prof. Wolfgang Streicher (UIBK) 3. Prof. Mohammad Hamdan (UJ) 4. Eng. Razan Al Rhia (TU) 5. Dr. Loui Dabbour (ZUJ) 6. Dr. Zayed Al-Hamamre (UJ)</p>
8.	Design Of Renewable Energy Systems	<p>1. Prof. Martin Kaltschmitt (TUHH) 2. Prof. Wolfgang Streicher (UIBK) 3. Prof. Salman Ajib (HS-OWL) 4. Prof. Suhil Kiwan (JUST) 5. Prof. Ahmed Al-Salaymeh (UJ) 6. Dr. Eduardo Luís Cardoso (UCP) 7. Prof. Mohammad Smairan (AABU) 8. Prof. Chehadeh Moussa (ABU) 9. Prof. Shoaib Mahmoud (TU) 10. Dr. Louy Qoaidar (GJU)</p>
9.	Heating Ventilating and Air Conditioning Systems including solar energy driven system	<p>1. Prof. Salman Ajib (HS-OWL) 2. Prof. Wolfgang Streicher (UIBK) 3. Dr. Mohammad Majali (MUTAH) 4. Dr. Osama Ayadi (UJ) 5. Eng. Eman Abdelhafez (ZUJ) 6. Prof. Suhil Kiwan (JUST) 7. Dr. Mohammad Al-Rbai</p>
10.	Power and Refrigeration Cycles	<p>1. Prof. Salman Ajib (HS-OWL) 2. Prof. Wolfgang Streicher (UIBK) 3. Prof. Mohammad Hamdan (UJ) 4. Dr. Mohammad Majali (MUTAH) 5. Prof. Suhil Kiwan (JUST)</p>



		6. Dr. Osama Ayadi (UJ)
11.	Modulation and simulation of power plant cycles (new); This needs a software programm Epsilon.	<ol style="list-style-type: none"> <li>1. Prof. Wolfgang Streicher (UIBK)</li> <li>2. Prof. Suhil Kiwan (GJU)</li> <li>3. Dr. Mohammad Majali (MUTAH)</li> <li>4. Eng. Scandar Handad (TU)</li> </ol>
12.	Waste Resource Management including Solid Waste Management	<ol style="list-style-type: none"> <li>1. Prof. Martin Kaltschmitt (TUHH)</li> <li>2. Dr. Mo'ayyad Shawaqfah (AABU)</li> <li>3. Dr. Rasin Zakieh (ABU)</li> <li>4. Dr. Muna Hindiyeh (GJU)</li> <li>5. Dr. Loui Dabbour (ZUJ)</li> <li>6. Dr. Mohammad Al-Rbai (UJ)</li> <li>7. Dr. Zayed Al-Hamamre (UJ)</li> </ol>

The partners agreed on the following:

No.	Task	Responsibility	Due Date
1.	The committees will be responsible to develop the thirteen typical courses and will meet online periodically	Courses Committees	Feb, 2018
2.	Proposed workshop for curricula development in Amman, Jordan	UJ	March, 2018
3.	Prepare a course outline template for EGREEN project by a committee composed from	JUST ZUJ UJ	Sep 30, 2017
4.	Each course committee has to fill the course outline	Courses Committees	Oct, 2017
5.	The course outline will be prepared by: <ul style="list-style-type: none"> <li>• <b>Course 1:</b> Dr. Mo'ayyad Shawaqfah (AABU), and Prof. Adnan Ghata (ABU)</li> <li>• <b>Course 2:</b> Dr. Mo'ayyad Shawaqfah (AABU), and Prof. Fahmi Abu Al-Rub (JUST)</li> <li>• <b>Course 3:</b> Dr. Louy Qoaidar (GJU), and Dr. Loui Dabbour (ZUJ)</li> <li>• <b>Course 4:</b> Prof. Mohammad Hamdan (UJ), and Prof. Adnan Ghata (ABU)</li> </ul>	Appointed developer from JO and SY partners	2017



	<ul style="list-style-type: none"> <li>• <b>Course 5:</b> Dr. Mo'ayyad Shawaqfah (AABU), Prof. Fahmi Abu Al-Rub (JUST)</li> <li>• <b>Course 6:</b> Dr. Saeb Khresat (JUST), and Dr. Mo'ayyad Shawaqfah (AABU)</li> <li>• Prof. Adnan Ghata (ABU), and Ahmad Abu-Yaghi (UJ)</li> <li>• <b>Course 7:</b> Prof. Mohammad Hamdan (UJ), and Dr. Loui Dabbour (ZUJ)</li> <li>• <b>Course 8:</b> Prof. Suhil Kiwan (JUST), and Prof. Ahmed Al-Salaymeh (UJ)</li> <li>• <b>Course 9:</b> Prof. Suhil Kiwan (JUST), Dr. Mohammad Majali (MUTAH), and Dr. Osama Ayadi (UJ)</li> <li>• <b>Course 10:</b> Prof. Suhil Kiwan (JUST), Dr. Mohammad Majali (MUTAH), and Dr. Osama Ayadi (UJ)</li> <li>• <b>Course 11:</b> Prof. Suhil Kiwan (JUST), and Dr. Mohammad Majali (MUTAH)</li> <li>• <b>Course 12:</b> Dr. Mo'ayyad Shawaqfah (AABU), and Dr. Loui Dabbour (ZUJ)</li> </ul>		
6.	Submit an official letter indicating the approval of partner university to include the EGREEN courses within the curriculum.  Letter template will be provided to universities.	JO partner SY partners	2017
7.	Equip the labs Provide the procurement supporting documents Labs inauguration	JO SY	Early 2018

**Session (5): Chaired by Prof. Klaus Maßmeyer**  
**WP1, WP7**

**WP1: Networking**

Title	Major Activities	Coordination			Estimated Start\END Date
		Coordinator	Co-Coordinator	Other partners involved	
WP1: Networking	<b>Task 1.1</b> : Elaboration of Agreement, Members List and Statute	JUST	P&B	All	15/10/2016 To 14/10/2019

Prof. Fahmi Abu Alrub(JUST) presented the tasks and activities of this work package and the action plan for the implementation. . The partners agreed on the following:

No.	Task	Responsibility	Due Date
1.	Provide a summary of received agreements	JUST and P&B	Sep 30, 2017
2.	Partner universities have to sign 10 agreements	JO	Oct 15, 2017
3.	Partner universities have to sign 10 agreements	SY	Oct 30, 2017
4.	Upload agreements on EGREEN website	UJ	
5.	Organize networking workshops and dissemination workshop in Jordan and Syria First one was in Mar, 2018 for Jordan Second one to be in Oct/Nov, 2018 Third one to be during GCREEDER 2018 conference Fourth to be before final conference	JO SY	One workshop yearly
6.	Produce Dissemination material	JO SY	Oct, 2018

#### WP4: Development of Online Content and Competencies

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
WP4: Development of Online Content and Competencies	<b>Task 4.1:</b> Development of e-Learning Environment.	UCP	JUST, AU	All	1/1/2018	1.12.2017 To 1/4/2018
	<b>Task 4.2:</b> Adaptation of e-learning Courses Content into curricula				1/4/2018	
	<b>Task 4.3:</b> Personalization of e-learning.				1/4/2018	

Dr. Eduardo Cardoso, UCP, presented the tasks and activities of this work package and the action plan for the implementation. The partners agreed on the following:

No.	Task	Responsibility	Due Date
1.	The two e-learning courses were selected to be: <b>Course#6:</b> Introduction To Environment and Climate Change ( <b>New course</b> ) <b>Additional Course:</b> Environmental Monitoring Systems ( <b>New Course</b> ) <b>Course#8:</b> Design Of Renewable Energy Systems	Courses Committees	Sep, 2017
2.	Select the learning modalities that will be applied to the two courses : PBL, CBL, MOODLE , Flipped classroom, etc..	Courses Committees	Jan, 2018
3.	<ul style="list-style-type: none"> <li>➤ Conduct training workshop in Portugal on design, construction and operation of e-learning courses</li> <li>➤ Cooperate with TUHH to set a timetable for training in Portugal on design, construction and operation of e-learning courses</li> <li>➤ Prepare selection criteria for trainees</li> </ul>	TUHH UCP	July 23-27, 2018
4.	Selection of the learning modalities that will be applied to the two courses: PBL, CBL, MOODLE, Flipped classroom, etc..	Courses Committees	2018

### WP7: Dissemination and Sustainability

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
WP7: Dissemination and Sustainability	<b>Task 7.1:</b> Communication Plan to Disseminate Activities	ABU	ZUJ, P&B	All	1/3/2017	1.11.2016 To 1/10/2019
	<b>Task 7.2:</b> Info-Days "Environments and Climate Change"				1/6/2018	

Dr. Adnan Ghata, ABU, presented the tasks and activities of this work package and the action plan for the implementation. The partners agreed on the following:

No.	Task	Responsibility	Due Date
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1.	Next issue of Newsletter	ZUJ	Oct 15, 2017
2.	Conduct Info-days (open door days-Environment and Climate Change) in each partner university for faculty member and students	JO SY	One yearly



**Day 3**  
**Friday, September 15, 2017**

**Briefing**

Prof. Ahmed Al-Salaymeh, EGREEN Project Coordinator, presented a brief about the conclusions of the second day

**Session (7) Chaired by Prof. Salman Ajib**

**WP8 and Road Map**

**WP8: Management**

Title	Major Activities	Coordination			Estimated Start\END Date	
		Coordinator	Co-Coordinator	Other partners involved		
WP8: Management	<b>Task 8.1:</b> Scientific committee	UJ	-	All	1/2/2017	15.10.2016 To 14/10/2019
	<b>Task 8.2:</b> Steering Committee				1/2/2017	
	<b>Task 8.3:</b> Operational management				14/10/2019	
	<b>Task 8.4:</b> EGREEN Website				1/4/2017	

The action plan for the financial management is as follow:

No.	Task	Responsibility	Due Date
1.	A poll will be conducted to determine the date of the next steering committee meeting in Portugal, the available two dates: 1. January 17-19, 2018 2. January 24-26, 2018	All partners	Sep, 2017
2.	All universities has to purchase the equipment before April, 2018	JO SY	Before April 2018



3.	Update the website continuously	UJ	Over the project life
4.	If any partner didn't fulfill a needed task, the allocated budget for this task will be deducted from them and transferred to other partner	UJ	Over the project life

### **Closing Session, Chaired by Prof. Ahmed Al-Salaymeh (UJ)**

Prof. Al-Salaymeh summarized the action plans for all the work packages, and thanked all partners for the fruitful meeting and wished all success for EGREEN project.

### Annex (1) List of provided courses by partners

Theme	Course Title	University Name
	<b>Water Resources Engineering including non-conventional water recourses</b>	
1	<b>Water Resources Engineering</b>	<b>AABU</b>
1	<b>Sustainable Development in Water Resources</b>	<b>AABU</b>
1	<b>Water Resources Engineering</b>	<b>UJ</b>
1	<b>Non conventional water recourses</b>	<b>MUTAH</b>
1	<b>Water supply</b>	<b>ABU</b>

Theme	Course Title	Univesity Name
	<b>Water and Wastewater Treatment including Bio-Techniques for Waste Water Treatment</b>	
2	<b>Advanced Techniques for Drinking Water Treatment</b>	<b>AU</b>
2	<b>Physical And Chemical Water Treatment</b>	<b>JUST</b>
2	<b>Biological Wastewater Treatment</b>	<b>JUST</b>
2	<b>Wastewater Treatment</b>	<b>UJ</b>
2	<b>Water and Wastewater Treatment</b>	<b>AABU</b>
2	<b>Waste water treatment</b>	<b>TU</b>
2	<b>Wastewater engineering</b>	<b>ABU</b>
2	<b>Bio-Techniques for Waste Water Treatment</b>	<b>AU</b>
2	<b>Water Quality Control</b>	<b>GJU</b>

Theme	Course Title	Univesity Name
	<b>Design of Sustainable Buildings including Energy efficient building services</b>	
3	<b>Green architecture</b>	<b>ZUJ</b>



3	Architecture and environmental control	ZUJ
3	Design of Sustainable Buildings	GJU
3	Architectural Environmental Systems	GJU
3	Sustainable Building Systems	GJU
3	Introduction to Green Construction Methods	GJU
3	Sustainable Environments Design Studio	GJU
3	Built environment technology	UJ
3	Sustainability: Green Engineering	AABU
3	Sustainable Planning II	GJU
3	Energy efficient building services	ABU
3	Energy and Environment	JUST

Theme	Course Title	Univesity Name
	Air Pollution and Air Quality Management	
4	Environmental Pollution	ZUJ
4	Air Quality Management	AABU
4	Air Pollution	JUST
4	Air and Industrial Pollution	MUTAH
4	Human Impacts on Environments	AU

Theme	Course Title	Univesity Name
	Environmental engineering and sustainable development	
5	Environmental Engineering	AABU
5	Introduction to Environmental Engineering	AABU



5	Environmental Engineering	JUST
5	Environmental Engineering Lab.	JUST
5	Environmental Engineering	UJ
5	Environmental Engineering Laboratory	MUTAH
5	Environmental Systems Modeling & Management	AABU
5	Environmental Measurement	AABU
5	Environmental Awareness for Engineers	AABU
5	Environmental Agricultural Management	JUST
5	Introduction To Problems Of Natural Resources And The Environment	JUST
5	Environmental Analytical Chemistry	JUST
5	Environmental Assessment	MUTAH

Theme	Course Title	Univesity Name
	Introduction To Environment and Climate Change including Meteorology and climatology	
6	Introduction to Environment and Climate Change "new course"	ALL Partners
6	Special Topic in Soil and Climate Change	MUTAH
6	Life cycle assessment	GJU
6	Meteorology and climatology	ABU
6	Introduction To Environment and Climate Change	AU
6	Climate Change, Adaptation and Mitigation	AU

Theme	Course Title	Univesity Name
	Energy Resources and Engineering and Energy conversion Technologies	
7	Energy Conversion	ZUJ



7	Conventional Energy Resources	ZUJ
7	Energy Conversion	UJ
7	Energy efficiency and supply	MUTAH
7	Energy Resources and Engineering	AU
7	Introduction To Energy Technologies, Environment and Sustainability	AU
7	Electricity-Energy Economics-Management and Distribution	TU
7	Energy efficient building services	TU
7	Regional Dimensions Of Energy Security	AU

Theme	Course Title	Univesity Name
8	Design Of Renewable Energy Systems Alternative Energy (1)	ZUJ
8	Design of Renewable Energy Systems	AABU
8	Geothermal Energy Technology	AABU
8	Bioenergy	AABU
8	Renewable energy Supply	ABU
8	Bioenergy	AU
8	Renewable Energy	JUST
8	Design Of Renewable Energy Systems	JUST
8	Biofuel	JUST
8	Renewable Energy and supply System	MUTAH
8	Renewable energy Supply	TU
8	Renewable energy Supply	UJ



<b>8</b>	<b>Solar Energy</b>	<b>UJ</b>
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Theme	Course Title	Univesity Name
	<b>Heating Ventilating and Air Conditioning Systems including solar energy driven system</b>	
<b>9</b>	<b>Air Conditioning-1</b>	<b>UJ</b>
<b>9</b>	<b>Air Conditioning-2</b>	<b>UJ</b>
<b>9</b>	<b>Heating, Ventilating and air conditioning course (HVAC)</b>	<b>MUTAH</b>
<b>9</b>	<b>Heating Ventilating and Air Conditioning (HVAC)</b>	<b>GJU</b>
<b>9</b>	<b>HVAC</b>	<b>ZUJ</b>

Theme	Course Title	Univesity Name
	<b>Power and Refrigeration Cycles</b>	
<b>10</b>	<b>Refrigeration Systems</b>	<b>UJ</b>
<b>10</b>	<b>Refrigeration</b>	<b>MUTAH</b>
<b>10</b>	<b>Power and Refrigeration Cycles</b>	<b>GJU</b>

Theme	Course Title	Univesity Name
	<b>Modulation and simulation of power plant cycles (new)/and Engineering Thermodynamics</b>	
<b>11</b>	<b>Engineering Thermodynamics</b>	<b>JUST</b>
<b>11</b>	<b>Applied Thermodynamics</b>	<b>UJ</b>
<b>11</b>	<b>Internal Combustion Engines</b>	<b>GJU</b>

Theme	Course Title	Univesity Name
	<b>Waste Resource Management including Solid Waste Management</b>	



12	Bioenergy and Waste Management	ZUJ
12	Solid Waste Management	AABU
12	Hazardous Waste Management	AABU
12	Waste Resource Management	AU
12	Recycling of Solid wastes and sorting and biological treatment plants	AU
12	Recycling of Construction and Demolition Wastes	AU
12	waste management	TU
12	Solid waste treatment (management) from Hospitals ,Batteries, Electronical boards ...	ABU