

<b>Meeting Date</b>	December 2, 2013	
<b>Time</b>	6:00 – 8:00 pm	
<b>Place</b>	School of Sciences and Engineering (SSE) Conference Room	
<b>Note Taker</b>	Dr. Khaled Tarabieh	
<b>Revised by</b>	Dr. Ossama Hosny	
<b>Purpose</b>	To initiate the Board meeting series and provide feedback to the ProGreen team on the current program structure and future tasks	
<b>Old Business</b>	None	
<b>Action Items</b>	None	
<b>Attendees</b>	<b>AUC Administration</b>	
	President Lisa Anderson	President
	Provost Amr Shaarawi	Provost
	Dean Tarek Shawki	Dean, School of Science and Engineering
	Dr. Marc Rauch	Sustainability Director
	Dr. Sherif Aly	Associate Dean for Graduate Studies and Research
	Dr. Mohamed Abou Zeid	Chair, Construction and Architectural Engineering Department
	<b>Advisory Board Members</b>	
	<u>Dr. Aly Abdel-Rahman</u>	Governor of Giza
	<u>Eng. Mamdouh Raslan</u>	Head of The Holding Company for Water and Waste Water
	<u>Dr. Eng. Mohammed Mostafa El-Khayat</u>	Managing Director of Technical Affairs, New And Renewable Energy Authority (NREA)
	Dr. Abel Hady Hosny	Former Chairman of The Egyptian Engineering Society

Dr. Mostafa El-Demerdash	Head of The Permanent Committee for The Code of Recycling and Former Head of The Housing and Building Research Center
Dr. Mahmoud Abdel-Azeem	Professor of Environmental Engineering - Ain Shams University
<u>Dr. Nabil El-Maraghy</u>	International Desalination And Water Treatment Corporation
Dr. Mohamed Hosny	Former Chairman of The Saeed - Red Sea Development Company
<u>Eng. Ahmed Sabour</u>	The CEO of El-Ahly Company for Real Estate Development
Eng. Amr Soliman	Owner and Founder of Dar Maamar Group
<u>Dr. Mohamed El-Mekawi</u>	CEO of Al-Futtaim For Investment – Cairo Festival City
<u>Dr. Mahmoud Hosny</u>	CEO of Kemet Company for Natural Food
Eng. Ramy Eldahan	Leading Architect
Eng. Ossama Hashem	Development Manager, SIAC Contracting Company
<u>Eng. Omar Hosny</u>	Chief Innovative Officer, Karmsolar and Technical Advisor GIZ
<b>Pro-Green Team</b>	
Dr. Nesreene Ghadar	Professor, AUB and Pro-Green PI
Dr. Ehab Abdel-Rahman	Associate Provost for Graduate Studies and Research, AUC
Dr. Ahmed Sherif	Professor of Architecture Engineering, AUC
Dr. Amr Serag El-Din	Professor, Mechanical Engineering Department, AUC
Dr. Emad Imam	Professor, Construction Engineering, AUC
Dr. Khaled Tarabieh	Assistant Professor of Sustainable Design, AUC
Dr. Ahmed El Gendy	Associate Professor, Construction Engineering, AUC

	Dr. Ossama Hosny	Professor, Construction Engineering. AUC
<b>Not in Attendance</b>	<b>Advisory Board Members</b>	
	Eng. Ibrahim Mahleb	Minister of Housing
	Dr. Abdel Kawi Khalifa	Former Minister of Interior Affairs, Professor, Ain Shams University - Hydraulic and Irrigation Department
	Dr. Yehia Rashed	Chief Leading Officer for Al Kharafi Group for Tourism
	Dr. Ahmed Mitto	A Leading Architect
	Dr. Ahmed Moawad	Advisor, Holding Company for Water and Waste Water
	<b>AUC Administration/Professors</b>	
	Counsellor Amr Salama	University Counselor, AUC
	Dr. Ezzat Fahmy	Former Dean, SSE, AUC
	Dr. Salah El-Haggar	Professor, Chair, Mechanical Engineering Department, AUC
	Dr. Mahmoud Farag	Professor, Chair, Engineering & Science Services, AUC
	Dr. Richard Tutwiler	Director - Research Institute for a Sustainable Environment, AUC
	Dr. Hani Sewilam	Professor, CANG & Director of Center for Sustainable Development, AUC
	Dr. Khaled Nassar	Associate Professor, Construction Engineering, AUC

## **Agenda Topics and Discussion Points**

### **Welcome & Introduction**

Dr. Ossama Hosny welcomed the attendees, presented all advisory board members and showed the event agenda. President Lisa Anderson commenced the meeting by a welcome speech followed by a speech from Provost Amr Shaarawi, then a speech from Dean Tarek Shawki .

## **Power Point Presentation – Pro-Green Project Overview**

Dr. Ossama introduced an outline for the presentation then started by showing a short movie on where we stand now from being green and the need for such a project.

He also pointed out how Green is not new to Egypt, some statistics on the current status where Egypt stands now, the drive behind Pro-Green and the role of AUC to help Egypt in achieving sustainable communities. He stated that the project has been funded with support of the European Commission and that the EU Tempus Program supports mainly through university co-operation projects. In the second part of the presentation, Dr. Ossama elaborated on the diploma program structure, project partners, curriculum to be taught, time line of the project, assessment plan and dissemination plan. Finally, Dr. Osama opened the floor for discussion and asked the advisory members to share their advice and give their feedback on the program of the diploma and the different areas that need to be tackled to meet market needs

## **Advisory Board – Floor Discussion**

- **Dr. Mostafa El-Demerdash (Head of The Permanent Committee for initiating the first Code of Recycling and Former Head of The Housing and Building Research Center)** started by describing the initiatives taken by the Ministry of Housing who formed the Egyptian Green Building Council to promote awareness through green building courses and then issued the green pyramid rating system. He emphasized that Egypt has a shortage of water and energy and believes that the Pro-Green Diploma is a very good and important initiative from AUC and the partner institutions. He also added that all involved in the building industry need to separate between green architecture and green building (construction) and stressed that the whole concept of design green need to be studied well.
- **Eng. Ramy Eldahan (A Leading Architect)** Started by a comment “I have been trying to think that I am thinking green all my life!” then added that he himself is thinking seriously of taking the diploma. He then directed his question to Dr. Ossama and Dr. Ehab and asked “How do you expect us to help you? and what is the mechanism to give you advice?”. He also emphasized on the importance of including courses that focus on history which he didn’t find it in any of the proposed course titles. He later explained that the earlier principals such as the use of wind catchers and thick walls are being diminished and he doesn’t see anyone starting from there. Then he wondered what exactly went

wrong. He later added that we are experiencing “greed” as opposed to “Green!” and questioned why all involved in this industry neglecting the fact that buildings have to be simple. Finally, he stressed on the importance of checking the history to see what went wrong in order to start on the right track.

- **Dr. Nesreene Ghadar (Professor, AUB and Pro-Green PI)** Agreed with Eng. Ramy and explained her observation that design is focused on the person and providing comfort rather than the environment. She also added that the history component is embedded within some courses.
- **Dr. Khaled Tarabieh (Assistant Professor of Sustainable Design)** also agreed with Eng. Ramy and Dr. Nesreene and confirmed that the plan is to have history embedded in course work accordingly as applies to each course. However, there is no specific course on history within the curriculum.
- **Dr. Mahmoud Hosny (CEO of Kemet Company)** suggested that the Diploma should include some topics about solid waste management and that he would like to see more of this subject mentioned in the course syllabus.
- **Dr. Mahmoud Abdel-Azeem (Professor of Environmental Engineering - Ain Shams University)** agreed with Dr. Mahmoud that solid waste management should be emphasized more and he added that he would like to have another suggestion since his own expertise is in water. He would like to stress on the idea of the movie and what Dr. Ossama stressed which is the lack of awareness and how important it is for ecology. He said “I don’t want to hear more of construction, architectural or mechanical engineers but rather a new terminology “*Social Engineers*” who can think both socially and environmentally”. He hinted to Hassan Fathy’s work and how it affects the people; however, he felt that we need to be step ahead at present. He then suggested talking more about on-site technology and the importance of its adaptability and proper application as it will be beneficial to all.
- **Dr. Mohamed Hosny (Former Chairman of The Saeed - Red Sea Development Company)** following up on the comments raised by Eng. Ramy, and later by Dr. Ghaddar and Dr. Tarabieh expressed that he is happy with the program but he sees nothing about Hassan Fathy’s work and applied principals and explained that we cannot move to the desert at present with the technology that currently exists in the market – He later added that we do not have to re-invent the wheel. He explained his wish to see the Egyptian vernacular back and to clearly see the Egyptian component in this program. He mentioned that the CSP for

example was invented here in Maadi by a German American Engineer and questioned what did us as Egyptians do to follow up? He later explained that Hassan Fathy's principals didn't become architecture for the poor but for the rich. He stressed that one of the most important goals of this program is to build and promote the use of cheap technologies. "*We want the graduates to think simple and think cheap*". He commended the program and posed the concern on the current water crisis and concluded that more graduates are needed to invent cheap solutions. "*To adapt not adopt – blind folded*".

- **Dr. Aly Abdel-Rahman (Governor of Giza)** mentioned that he recalls how the AUC campus was during the early phases of design and when he met with the design team in Boston and took the responsibility of the structural design of such a huge campus. Although there were varying architects on this campus, the term green was not mentioned. However now he can see the principals of green on this campus are everywhere: the proportion of windows in the buildings to the overall area of the facade lends itself to the green principals, the court yards used in most of the buildings, the heavy lattice, concrete lattice ...etc. save energy. He added that we want this program to focus on saving energy and to spread the notion of saving energy in the long term. Green building cost more in the beginning but it pays on the long run.
- **Dr. Amr Serag El-Din (Professor, Mechanical Engineering Department)** suggested that energy engineers should work very closely with architects and give them advice to come up with solutions not only regarding renewable energy but also on energy conversations, and energy management. In Egypt we have adopted large glass facades which is good for Europe not us. We should look for technologies that are adaptable to us. He added that we should provide students with enough encouragement to come-up with their own ideas instead of just giving them information.
- **Dr. Mostafa El-Demerdash (Head of The Permanent Committee for Initiating the first Code of Recycling and Former Head of The Housing and Building Research Center)** pointed out that we need to differentiate between green architecture and green construction. A house is a multi-disciplinary approach including its architecture, construction, insulated materials and their integration with the renewable energy; you have to consider it as a whole unit in order to reach the term green construction. He also added that the program should talk about the meaning of sustainability because it is vague and shouldn't be confused with the word green.

- **Dr. Mohamed Hosny (Former Chairman of The Saeed - Red Sea Development Company)** replied that one of his professors Dr. Fikry Hassan went to Gournah, he even bought a house there and for reinforcement of the bricks, he used an idea which was invented by the locals there which is using "*molokhia*" stokes for bearing bricks instead of steel or fiber glass. He discovered that the silicon in "*molokhia*" stokes makes an excellent bonding for the bricks. He added that his company was developing 360 km of desert road where there was no water and if you are lucky to hit water it is in a bad quality and you need to desalinate it? But he asked the architect to design the rest houses and gas stations as greenhouses and sought the help of a solar company to provide him with a solar solution. The question is how and for how much? And could it be done? The answer is "Yes" but we should look for cheap ideas and cheap solutions that can be done.
- **Eng. Amr Soliman (Owner and Founder of Dar Maamar Group)** referred to the idea that there might be a conflict between the business camp and the technician camp. As the technician camp never understood why the business camp wanted them to build green buildings while the architects lie in the middle. He suggested that we should add a Diploma for the (non-Pro-Green camp) from businessmen, investors and real-estate developers to make the linkage between them and let the business people understand the language of green.
- **Dr. Ahmed Sherif (Professor of Architecture Engineering)** pointed out the importance of collaboration to create mechanisms between architects and engineers to work well. He proposed that we should understand the precedent and add to it the engineering discipline to calculate a new product that doesn't look exactly like Hassan Fathy's products but to perform like Hassan Fathy's ideas. I can see what we are doing is hitting the target of this program. He also tackled another important point which is the social acceptability issue and how to develop skills to be engaged with the community?
- **Dr. Nesreene Ghadar (Professor, AUB and Pro-Green PI)** explained that when they developed the program they asked themselves who are their audience? And who are the students who are willing to take the course? Basically, they are looking for engineers or practitioners who have been in the field for a long time or who want to make a diversion or create new innovative cheap solutions. She expressed that with all this inputs she is hoping that all the students taking this Diploma will leave their marks and they will bring their problems to the educators so we can tackle them and benefit the undergraduates. Later, she added that the course is targeting not only engineers but scientists, businessmen,

etc.” We want people to think innovatively. Together we can have the global skills that we are looking for.”

- **Dr. Eng. Mohammed Mostafa El-Khayat (Managing Director of Technical Affairs, New and Renewable Energy Authority NREA)** commented that “as a chair person for a committee in the league of Arab states - I think the diploma is aligned with the targets for the Arab league and we need to be fully prepared for this future”. He mentioned that his latest book already spoke about green cities or in other words "Cities of the sun and he is fully confident that these cities will happen and this diploma will prepare engineers and designers to build these cities. He suggested that the diploma should include a course which discusses the subject of carbon capture uses and sequestration. He added that light technologies are very important as it is more than just using “saving” lamps. Diploma graduates should be trained to integrate technologies and green policies and to find creative green policies to push the market to tackle issues in that matter. He added that educators should not forget another major green element such as energy storage.
- **Dr. Mahmoud Hosny (CEO of Kemet Company)** stressed that there must be more emphasis on innovation. The final project is two credits which is too little. We should give more weight to innovation in this program.
- **Dr. Ehab Abdel-Rahman (Associate Provost for Graduate Studies and Research)** replied that there are three courses on research skills, development and innovation. He also mentioned that in the sustainable development program they are encouraging the students to work together in their final project and we can adapt the same idea here where an architect, engineer and others can come up with an idea for the same project that can complement each other. He added that he agrees with Eng. Amr Soliman that developing a diploma on Green technologies for the business sector would be a great idea.
- **Eng. Mamdouh Raslan (Head of The Holding Company for Water and Waste Water)** showed that he is really glad to have such a diploma. He added that many of the skilled senior engineers who worked in the holding company left and went to the gulf. Their goal now is to attract people to come back and work in this sector. They hired several young engineers, but the gap between the seniors and the novice engineers was huge. Therefore, the holding company started to work on training courses like the one with Cairo University where for the first time they financed a Bachelor degree in waste water. Having this diploma will help to add more educated people to the water and



wastewater sector. He added that we need to educate the public about green concept and that courses taught in this diploma should differ from other courses taught in other universities in Egypt. He stressed the point of how to address the problems encountered in operations and maintenance. And, that the students should come and sit with them to find the problems encountered and then think for practical solutions.

- **Dr. Ossama Hosny (Professor, Construction Engineering)** in response to Eng. Ramy's question about what is required from the advisory board members clarified that there will be one to two formal meetings per year (such as this meeting) to get feedback from the board members on the program and their suggestion on the different courses to be taught and the modification required to meet industry needs. He added that some occasional emails might also be sent to the members to update them on program progress and ask for their feedback on some important issues.
- **Dr. Nesreene Ghadar (Professor, AUB and Pro-Green PI)** inquired about everyone's suggestions about the tuition of the courses.
- **Dr. Ehab Abdel-Rahman (Associate Professor of Physics, Associate Provost for Graduate Studies and Research)** stressed the point that the Pro-Green team members don't want to work in a separate island by themselves. But in the contrary, they seek the help and the expertise of all of their knowledgeable guests and this is the job of the advisory board input. We need to design something that people will use.
- **Dr. Ossama Hosny (Professor, Construction Engineering)** concluded the comments. He acknowledged all the people who supported the program and without their support this program would have never seen the light. He also expressed how productive and beneficial the discussion was. It revealed how much the members are convinced and valued the program. Then he adjourned the meeting by thanking the members for attending and bringing their expertise to this gathering. Finally, he announced that the meeting minutes will be circulated and it will be great if everyone sends his feedback on the program in the next few weeks.