



**DRAFT**  
**Minutes of the CSLF CCS in Academic Community Task Force**  
**Beijing, China**  
**Monday, 19 September 2011**

## **LIST OF PARTICIPANTS**

Brazil:	Marcelo Ketzer (Co-Chair), Beatriz Espinosa
China:	Xiaochun Li, Jingrui Niu, Shu Wang
Saudi Arabia:	Abdulmuhsen Alsunaid
United States:	Christopher Babel, Robert Gentile, John Grasser, Jeffrey Jarrett, Fatiha Occhialini
IEA GHG:	Tim Dixon (Co-Chair)
CSLF Secretariat:	Adam Wong, Matt Gerbert

### **1. Welcome and Review of Task Force Activities**

Co-Chair Marcelo Ketzer of Brazil welcomed the attendees to the fifth meeting of the CCS in the Academic Community Task Force. Dr. Ketzer introduced himself, along with Co-Chair Tim Dixon of IEA GHG. Participants present for the Task Force meeting then introduced themselves. Dr. Ketzer expressed his apologies for the missing parts to the Task Force's recent report. He also expressed regret that neither he nor Mr. Dixon were able to attend the last Task Force meeting in Edmonton in May 2011. Ameena Camps of the IEA GHG served as acting chair for that meeting.

### **2. Review and Approval of Minutes from Task Force Meeting in Edmonton**

Dr. Ketzer noted that the last Task Force meeting in Edmonton was productive. The minutes for the previous meeting were approved with no changes.

### **3. Review of the CCS in Academic Community Task Force Report**

Co-Chair Ketzer presented a report on the Task Force's last 12 months of work, which was an update to the report presented at the Warsaw meeting in October 2011. This report was prepared by the Center of Excellence in Research and Innovation in Petroleum, Mineral Resources and Carbon Storage (CEPAC) in Brazil. The objective was to combine and map courses, both undergraduate and graduate, from around the world with topics related to climate change and CCS, either economic or technical.

A list of mapped universities and postgraduate programs was displayed in the presentation. Christopher Babel of the United States asked whether the courses were CCS courses, or just had a mention of CCS topics. Dr. Ketzer responded that the courses have a significant amount of focus on CCS, but are not necessarily CCS courses. This was done based on reading and analyzing each course, and not based on the title of the course. Climate change was also considered if it was a CCS issue.

Dr. Ketzer noted that the number of courses containing topics on CCS and climate change in America's post graduate programs is limited, and that the major existent courses are

not compulsory in the academic programs. In addition, in the Americas, compulsory courses in the surveyed universities are mostly related to environmental subjects (such as climate change) and they belong to environmental programs. Jeffrey Jarrett of the United States mentioned that West Virginia University in the United States has a carbon management degree. Robert Gentile of the United States asked how the schools were surveyed, as he believed that some other schools in the United States do have courses, such as the Massachusetts Institute of Technology, University of Montana, and University of Nevada. Dr. Ketzer stated that the project found courses via websites, and that the delegate of the respective country is the one who should try to fulfill the gaps. Mr. Babel believed that the report was missing lots of schools in the United States, as many schools participate in the Regional Carbon Sequestration Partnerships (RCSPs) in the United States. However, he noted that there is a difference between participating in RCSPs and teaching a class. Dr. Ketzer stressed that it is important to have good contacts with the delegates. He agreed that there were limitations with the report, as the report cannot check progress and cannot guarantee that courses are valid anymore.

Dr. Ketzer noted that in Europe, topics on CCS and climate change are present in a considerable number of post graduate programs in the surveyed countries. Dr. Ketzer noted that of the surveyed countries in Asia, there were numerous gaps, as only Japan and Korea have been surveyed. He emphasized the need for delegates of each country to pass along the survey for this report. He also stated that more work needs to be done in Africa, as the only country surveyed was South Africa. In addition, while South Africa does have a master's degree with courses regarding climate change and energy modeling, no courses exist in Japan or Korea.

Mr. Dixon thanked Dr. Ketzer and his team for the research and work put into the report and stated that he would like to see the full report posted, as the current report posted by the CSLF Secretariat only has the cover of the reports from Australia and the United Kingdom. In addition, the Chinese Academy of Sciences has sent a report on the results from China. Mr. Dixon stated that he would like the Secretariat to reissue the report to include reports from Australia and, the United Kingdom, and also the new report from China.

#### **4. Review of the CCS in Academic Community Task Force Phase 2**

Mr. Dixon led a discussion on the analysis of the Phase 1 Report. The plan is to put information from the report into a database. The Task Force had previously discussed creating an international website for students. However, the problem exists that some universities may feel bad about not being included if their information is not on a report. An agreement was reached that there should be a disclaimer on the report that this is not a fully inclusive report, and that the CSLF has no control of the content or the policy of the course. The participants all agreed that this would be a good starting point for students looking to find CCS courses, and that the website could be used to keep an update of these courses. The possibility of having a meeting for the academics was also mentioned.

Mr. Dixon then discussed the gaps analysis of the curriculum contents and geographical coverage, as there needs to be a continuing mapping of the countries. The Task Force needs to look at what the CSLF can do to address this issue. He stated that it would be good to finish the report with the current data, and the results of the gap analysis could lead to another report. Dr. Ketzer proposed sending a letter to all CSLF delegates, asking them to ratify and verify the information for their country. This should be done before the next Task Force meeting so that the final report can be presented at the 2012 CSLF

Annual Meeting. Then, an email could be sent to delegates, projects, and stakeholders to announce the report. Mr. Gentile stated that it should be noted to the delegates that this report is not complete, and that they should encourage delegates to review the list and add to the list with their own country knowledge. Mr. Gentile also believed that a lack of CCS projects will result in a lack of CCS courses, as these courses are then absorbed into engineering courses. This can also result in a lack of funding, as many of the CCS professors are funded by industry.

## **5. Closing Remarks / Adjourn**

Mr. Dixon announced that Dr. Camps will replace him as Co-Chair for future meetings, with the next meeting occurring at the next Technical Group Meeting in Bergen, Norway, in June 2012. Mr. Dixon stated that this has been a worthwhile exercise, and the Task Force has added value to the CCS world and that he believes that the CSLF is the right place to issue this. Mr. Dixon thanked the participants for their contributions, especially the CEPAC team headed by Dr. Ketzer.

Dr. Ketzer agreed that the meeting was very successful and has added value to CCS. Dr. Ketzer then adjourned the meeting.