

THIRTY-EIGHTH CONSULTATIVE MEETING
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CO₂ SEQUESTRATION IN SUB-SEABED GEOLOGICAL FORMATIONS (LP)

**Report on the International Workshop on Offshore CO₂ Storage
(Austin, Texas, United States, 19 to 21 April 2016)**

Submitted by Nigeria

SUMMARY

Executive summary: This document describes the outcomes of the International Workshop on Offshore CO₂ Storage which was held in Austin, Texas, United States from 19 to 21 April 2016

Action to be taken: Paragraph 12

Related documents: None

Introduction

1 The world of offshore Carbon Capture and Storage (CCS) gathered together from 19 to 21 April, 2016 at the Bureau of Economic Geology (BEG) at the University of Texas, Austin, Texas, United States for a workshop on offshore geological CO₂ Storage.

2 Under the leadership of Mr. Tim Dixon (OECD/IEAGHG), who also initiated and ensured Nigeria's invitation, the workshop was organized by the Gulf Coast Carbon Centre, the IEAGHG, and the South African National Energy Development Institute. The Workshop was supported by the Carbon Sequestration Leadership Forum (CSLF). Over 50 people attended from 13 countries, including from seven developing countries.

3 The workshop was organized in response to a recommendation for international knowledge-sharing outlined in the CSLF Final Report on Technical Barriers and R&D Opportunities for Offshore, Sub-Seabed Storage of CO₂ which was finalized in September 2015. Further information about this report can be found at <http://www.cslofforum.org/publications/documents/OffshoreStorageTaskForceFinalCombinedReport.pdf>.

4 The aims of the workshop were to undertake a global needs assessment for offshore geological CO₂ storage, to initiate a discussion about the various aspects of offshore transport and storage, and to build an international community of parties interested in offshore storage. This was achieved by bringing together those who are undertaking offshore CCS to share knowledge with those who are interested in this activity, and by facilitating countries to identify their specific issues, challenges, opportunities, and then to identify synergies, common gaps and goals, and define common action items. There was a pre-workshop survey to assess the status and needs assessment survey for each country.

Outcomes

5 Experts shared their knowledge and experiences on the first day, with the current state of knowledge from Brazil, Japan (RITE), the Netherlands (TNO), Norway (Statoil) and the United Kingdom (Shell). These "How To...." talks covered storage assessments, CO₂-EOR, transport options, risk management, monitoring, environmental impacts, infrastructure and regulations. Of particular interest were the subsea engineering solution being developed by Aker Solutions to take gas-processing systems off the platforms and onto the seabed, and the potential for shipping with hubs.

6 Other countries then presented their status and needs, including Australia, China, Ghana, the Republic of Korea, Mexico, Nigeria, South Africa and the United States. Information was also provided on the Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP) initiative and the CGS Baltic programme, both undertaking regional storage assessments. It was notable that although each country is in very different stages of pursuing offshore CCS, these countries also share common interests as outlined in this report.

7 Participants formed breakout groups to discuss issues around themes identified by the workshop, including technology transfers, infrastructure, funding and finance, moving from pilot to larger-scale projects, and regulations. This activity resulted in development of a list of recommendations on areas to be addressed and actions to be taken. Common issues included how to assess storage potential, and the many aspects of reuse of existing offshore infrastructure.

8 In summary, the list of recommendations included:

- .1 international collaboration and funding mechanism for a demonstration project;
- .2 development of a test programme and pilot project for infrastructure developments;
- .3 workshops and training on a range of topics including: storage resource assessment, funding sources for early stages of CCS resource assessment in developing countries, platform infrastructure and transport infrastructure issues and developments, and comparing specific aspects across projects such as environmental monitoring;
- .4 assistance with access to existing key information sources, and a common language on storage; and
- .5 creation of an "Offshore Network" or other means of continuing the momentum from this workshop.

9 The workshop concluded with demonstrations and posters of offshore work featuring several of the United States Department of Energy's recently funded studies, and included a demonstration of the P-cable monitoring system and its results from the Gulf of Mexico. Of note was that the UNFCCC's Climate Technology Centre Network (CTCN) supported attendees from Ghana and Nigeria, and this was possibly the first activity on CCS supported by CTCN. There was great interest from all the developing country attendees in the CTCN (IEAGHG and The University of Texas are members of the Network) and a separate session was devoted to introducing developing countries to the work of the CTCN.

10 Overall, it was clear that each country is at a different stage on the path to offshore CCS, but with common interests. The enthusiasm from attendees suggested they considered the workshop a success. There was common recognition that there is a nexus of interests and needs converging in progressing CCS offshore, and that momentum was being created towards international collaboration, not just in knowledge-sharing, but towards pilot and demonstration projects.

11 Collaboration between the CCS Team and that of the London Convention and Protocol communities and GESAMP was emphasized by Nigeria and it was so recorded in the main report of the meeting. If developing countries access the fund made available through UNFCCC Climate Technology Centre (CTC), it can serve as a way of meeting up with technology experts and build up knowledge of Contracting Parties from developing countries to implement the disposal of CO₂ waste streams under the London Protocol.

Action requested of the governing bodies

- 12 The governing bodies are invited to note the information provided and in particular:
- .1 the support provided by IEAGHG;
 - .2 that Nigeria is available to share the lessons learnt as may be needed;
 - .3 encourage the Secretariat to work more closely with the UNFCCC (CTCN) and the IEAGHG in this regard; and
 - .4 that the workshop identified the London Protocol as the primary global instrument that can be used to regulate CCS.