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UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

**Subsidiary Body for Scientific and Technological Advice**

**Thirty-seventh session**

**Doha, 26 November to 1 December 2012**

Item 12(a) of the provisional agenda

**Methodological issues under the Kyoto Protocol**

**Carbon dioxide capture and storage in geological formations as clean development mechanism project activities**

**Views on issues referred to in decision 10/CMP.7,  
paragraph 4**

**Submissions from Parties, intergovernmental organizations and  
admitted observer organizations**

1. The Subsidiary Body for Scientific and Technological Advice invited Parties, intergovernmental organizations and admitted observer organizations to submit to the secretariat, by 13 August 2012, their views on the eligibility of carbon dioxide capture and storage (CCS) project activities involving transport of carbon dioxide from one country to another or which involve geological storage sites that are located in more than one country; and on the establishment of a global reserve of certified emission reduction units for CCS project activities, in addition to the reserve referred to in decision 10/CMP.7, annex, paragraph 21(b).<sup>1</sup>
2. The secretariat has received one such submission from a Party. In accordance with the procedure for miscellaneous documents, this submission is attached and reproduced\* in the language in which it was received and without formal editing.
3. In line with established practice, the two submissions from admitted observer organizations have been posted on the UNFCCC website.<sup>2</sup>

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<sup>1</sup> FCCC/SBSTA/2012/L.8, paragraph 3.

\* These submissions have been electronically imported in order to make them available on electronic systems, including the World Wide Web. The secretariat has made every effort to ensure the correct reproduction of the texts as submitted.

<sup>2</sup> Available at <[http://unfccc.int/parties\\_observers/ngo/submissions/items/3689.php](http://unfccc.int/parties_observers/ngo/submissions/items/3689.php)>.

**FCCC/SBSTA/2012/MISC.12**

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**Submission under Bonn Conclusions | August 2012**

**Carbon dioxide capture and storage in geological formations as Clean Development Mechanism activities | SBSTA**

**I. Overview**

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This submission contains the views of the Australian Government on the eligibility of carbon capture and storage (CCS) project activities under the Clean Development Mechanism (CDM) which involve the transport of carbon dioxide from one country to another or which involve geological storage sites that are located in more than one country (transboundary CCS), pursuant to paragraph 105 of the conclusions of the Subsidiary Body for Scientific and Technological Advice (SBSTA) on this issue (FCCC/SBSTA/2012/2).

This submission builds on Australia's previous submission to the SBSTA at its thirty-sixth session,<sup>1</sup> and provides further guidance on issues the Secretariat could consider in preparing its technical paper pursuant to paragraph 106 of SBSTA's conclusions. In summary, Australia considers that:

- Transboundary CCS project activities should be accepted as eligible CDM project activities to further encourage emission reduction; and
- The CDM modalities and procedures, including those agreed at Durban in decision 10/CMP.7 (CCS Modalities and Procedures), should form the basis for consideration of governance options for transboundary CCS project activities and associated obligations.

**II. Drivers for transboundary CCS project activities**

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Transboundary CCS project activities may involve projects that transport carbon dioxide from one country to another (transboundary transport) or involve geological storage sites that are located in more than one country (transboundary storage). Drivers for transboundary CCS project activities include:

- Physical drivers, such as lack of suitable storage capacity within the country generating the emissions;
- Economic drivers, such as cross-border storage solutions being the most economically viable; and
- Environmental drivers, such as the availability of more environmentally sustainable cross-border storage solutions.

The inclusion of transboundary CCS projects in the CDM will encourage further emission reductions through the use of CCS technology.

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<sup>1</sup> Submission contained in FCCC/SBSTA/2012/MISC.8/Add.2

### **III. Australia's experience**

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In Australia's federal system of government, responsibility for regulation of potential CCS sites is divided between state and territory governments (for onshore areas and near-shore waters) and the Commonwealth (for offshore areas beyond three nautical miles). Australia has recent experience in considering how to expand the domestic CCS regulatory regime, to allow for CCS projects that involve both transboundary transport and transboundary storage across multiple Australian jurisdictions.

The Gorgon Carbon Dioxide Injection Project is an example of a domestic transboundary transport project. It is currently on track to be Australia's first, and the world's largest, commercial scale permanent carbon dioxide geological storage operation. A mixture of reservoir carbon dioxide and methane gas will be produced from geological formations beneath the continental shelf, offshore north western Australia, in federal government waters. The gas mixture will be transported by a subsea pipeline (90 to 160 km) to Barrow Island (which is under Western Australian State Government jurisdiction) where the carbon dioxide will be separated from the methane. The separated carbon dioxide will then be compressed and injected into geological formations beneath Barrow Island. Project specific state legislation was enacted to allow the carbon dioxide storage element of the project to proceed (*Barrow Island Act 2003 (WA)*). Other aspects of the project are regulated under existing petroleum regulatory regimes. The Western Australian State Government and the Australian Government have agreed with the project operators that these governments will accept the long term liability for the stored carbon dioxide following project closure and when a number of conditions in relation to the behaviour of the stored carbon dioxide are met.

The Gippsland Basin in south eastern Australia extends from offshore to onshore. Prospective storage formations have been identified that straddle the federal and state jurisdictions. Amendments to Australian federal and state legislation will be required to allow transboundary storage to take place. Even though it may be a number of years before projects are storage ready, the Australian Government and state governments are already considering options for amendments to legislation to enable transboundary storage. In doing so they are dealing with many of the same issues under consideration in the context of transboundary CCS in the CDM.

### **IV. Eligibility of transboundary CCS projects activities in the CDM**

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In adopting Modalities and Procedures for CCS in the CDM at Durban, the Parties established comprehensive governance arrangements and standards for CCS project activities being undertaken as CDM projects. In developing its technical paper, the Secretariat could consider using the CCS Modalities and Procedures as a starting point for its analysis, and then identify issues that are unique to transboundary projects, which may require additional Modalities and Procedures.

As set out in Australia's previous submission, it is essential that the roles and responsibilities of all host Parties and project participants are clearly defined in relation to:

- The elements of Appendix B in the CDM CCS Modalities and Procedures;

- Arrangements for approval of transport infrastructure and storage sites;
- Mechanisms for effective consultation and information sharing;
- Measures to address any transboundary issues which may arise, consistent with international obligations such as under the London Convention and Protocol<sup>2</sup> and the Basel Convention<sup>3</sup>;
- Arrangements for project regulation during the operational phase; and
- Mechanisms to address any transboundary seepage paths and potential impacts, consistent with the recommendations for measurement and reporting of CCS-related emissions, including cross-border CCS operations, in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

This list could provide a reference for enabling the identification of all issues unique to transboundary projects. The analysis could then consider how to address any issues that are not adequately covered by the CCS Modalities and Procedures, including through additional Modalities and Procedures.

As a guiding principle, where the existing CCS Modalities and Procedures establish a standard that must be satisfied for a CCS project to proceed, then the same standards should be applied to transboundary projects. It should be the responsibility of host Parties to determine how to achieve this standard within the context of the transboundary activity. In many cases, this may not require significant elaboration on the CCS Modalities and Procedures.

For example, paragraph 8(d) of the CCS Modalities and Procedures requires that host Parties have in place timely and effective remedial measures to stop or control any unintended seepage. Based on Australia's experience, to satisfy this requirement for projects involving transboundary storage, host Parties may need regulations that specifically deal with the transboundary nature of the project. This could include measures to ensure that there is a single regulator that can respond to time critical events, potentially with the authority to give directions in multiple jurisdictions and have officers entitled to cross national borders. However, it is a matter for the host Parties and project participants to determine how to meet the requirements in the CCS Modalities and Procedures. Additional Modalities and Procedures are not necessarily required.

Amendments to the CCS Modalities and Procedures may be required for transboundary CCS projects in order to reflect the involvement of multiple host Parties undertaking different aspects of the project activity. For example, there would need to be provision for all relevant Designated National Authorities (DNAs) to provide Letters of Approval (LOAs). Similarly, it may be the case that host Parties would only be required to meet the requirements set out in the CCS Modalities and Procedures decision that are relevant to the activities taking place in their respective jurisdictions.

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<sup>2</sup> International Maritime Organisation, Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 and 1996 Protocol thereto.

<sup>3</sup> Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal 1989.

There may also be merit in considering how transboundary CCS projects could use existing options for documenting the project design and agreed arrangements between host Parties and project participants. Such options include the Project Design Document (PDD), LOAs as well as the other documents to be adopted by the Executive Board as outlined in paragraph 4 of the CCS Modalities and Procedures.

## **V. International law and frameworks**

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Transboundary transport of carbon dioxide needs to be consistent with international obligations such as the London Protocol and Basel Convention. The onus should be on the host Parties to determine whether a proposed project is consistent with international law, prior to DNA approval.

## **VI. Options for CCS project activities and obligations**

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### **Eligibility**

Consistent with the objectives of the CDM, only projects involving capture of carbon dioxide by a non-Annex I Party should be eligible for transboundary CCS project activities in the CDM. However, consideration should be given to allowing transport and geological storage to take place in Annex I Parties, to avoid excluding a range of potentially viable mitigation opportunities. In developing the technical paper, the Secretariat could consider how such arrangements could be accommodated within the CDM rules.

### **Transport**

In developing its technical paper, the Secretariat could consider: how to characterise the involvement of a country that is only involved in the transport of carbon dioxide (for example, where a pipeline passes through a jurisdiction that is not involved in the capture, injection or storage); and, whether they would also need to be a host Party to the CDM project. It may be the case that there is already international law that governs such operations, and therefore it would not be necessary to duplicate arrangements within the CDM.

### **Assignment of liability**

The CCS Modalities and Procedures provide for the transfer of liability (as defined in paragraph 1(j)) from the project participants to the host Party once the conditions in paragraph 25 of Appendix B of the CCS Modalities and Procedures are satisfied. In developing its technical paper, the Secretariat could consider how liability for transboundary CCS projects may transfer when there is more than one host Party.

### **Obligation to address a net reversal of storage**

The obligations for addressing non-permanence in Section K of the CCS Modalities and Procedures should be the basis for addressing any net reversal of storage from transboundary CCS projects. Under the CCS Modalities and Procedures, the project participants bear the primary obligation to address a net reversal of storage.

In the LOA, a host Party can specify if they accept the obligation to address a net reversal of storage, in the event that the project participants fail to comply with their obligation. If the host Party does not accept the obligation, it falls to Parties which hold CERs for the CCS project activity in the accounts of their national registries.

In developing its technical paper, the Secretariat could consider arrangements to enable multiple host Parties to take on the obligation to address a net reversal of storage. In order to preserve the environmental integrity of the CDM it is essential that the arrangement between host Parties is clear, so that there is no prospect of host Parties refusing to take action due to disagreement over their respective obligations. One way to support the environmental integrity of the CDM is upheld, while maintaining host Parties' flexibility, would be to specify in the Modalities and Procedures a limited range of options for how the obligation to address a net reversal could be shared. For example, host Parties could agree to make up any net reversal on a 50/50 basis, a 70/30 basis, or having one host Party taking sole responsibility for 100 per cent of the obligation. It is important that the obligation is framed in a way that is unambiguous and not subject to interpretation. Situations where the responsibility changes depending on events or circumstances associated with the net reversal (such as whether the regulator had been negligent, or if there is a natural disaster), should be avoided.

**Environmental and socio-economic impacts and remedial measures to address them; and monitoring requirements in the context of transboundary CCS project activities.**

The CCS Modalities and Procedures establish standards that must be satisfied for a CCS project to proceed. It should be the responsibility of host Parties to determine how to meet the requirements within the context of a transboundary activity.

**Dispute resolution**

In the event that there is a dispute between host Parties and /or project participants, it should be the responsibility of those involved to determine how such a dispute should be resolved. For example, before the commencement of a Project, project participants could consider entering into contractual arrangements that specify agreed mechanisms to resolve disputes. Host Parties could also consider agreeing arrangements for resolving potential disputes

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