

## **SUBMISSION BY SLOVENIA ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES**

**This submission is supported by Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Serbia, Turkey and Ukraine**  
Ljubljana, 27 June 2008

**Subject: Carbon dioxide capture and storage as clean development mechanism activities**

**Views on issues relevant to the consideration of carbon dioxide capture and storage (CCS) in geological formations as CDM project activities**

### **I. Introduction**

1. SBSTA 27<sup>1</sup> invited Parties, intergovernmental organizations and accredited nongovernmental organizations to submit to the secretariat, by 16 June 2008, their views on, and including but not limited to, technological, methodological, legal, policy and financial issues additional to those referred to in the last round of submissions (September 2007), and in particular reflecting the informal discussions that took place during the twenty-seventh session of the SBSTA. The EU welcomes this opportunity to submit its views.
2. This submission should be considered in conjunction with our previous submissions, most recently that of September 2007<sup>2</sup>.
3. At SBSTA 28, the EU proposed a pilot phase approach to facilitate capacitybuilding, knowledge-sharing and learning-by-doing as an attempt to move the discussions forward. We would like to take this opportunity to elaborate in greater detail on this proposal.

### **II. Demonstration of CCS technologies**

4. In order to meet the 2°C objective, it will be essential for greenhouse gas emissions to peak within the next 10 to 15 years, followed by substantial global emission reductions of at least 50% by 2050 compared to 1990. This implies substantive cuts in emissions from *inter alia* coal-fired power generation in industrialized and developing countries, which can potentially be realised by the diffusion and deployment of CCS. It is crucial that developing countries explore the technologies in parallel to industrialized countries.

<sup>1</sup> FCCC/SBSTA/2007/16

<sup>2</sup> FCCC/SBSTA/2007/MISC.18/Add.1

5. At the G8 Energy Ministers meeting on 8 June in Aomori, Japan, Energy Ministers “strongly supported” the recommendation that “twenty large-scale CCS

demonstration projects need to be launched globally by 2010, taking into account varying national circumstances with a view to supporting technology development and cost reduction for the beginning of broad deployment of CCS by 2020.”

6. The CDM is an appropriate means of promoting genuine technology cooperation and technology transfer. Through the CDM and its link into the EU ETS, the carbon market could be one among several means of supporting the demonstration, diffusion and deployment of CCS in the first commitment period and providing useful insights for discussions on CCS deployment post-2012. The prospect of gaining CERs from a CDM project can provide limited seed financing for projects of this nature, and thus contribute to their economic feasibility.

7. Our previous submission outlined activities in the EU to promote the demonstration of CCS. It also outlined the EU-China cooperation on Near Zero Emissions Coal (NZEC). The European Commission, UK and China are currently considering *inter alia* the cost and financing aspects of demonstrating CCS at commercial scale in China. The European Commission has committed itself to stepping up the CCS cooperation with China and extending it to other developing country partners. The CDM could form a significant part of the financial package for such capacity building and technology transfer activity.

### **III. Pilot Phase Proposal**

8. The EU has proposed a pilot phase approach for the demonstration of CCS in developing countries. In our view, this could offer a way to build practical capacity and close knowledge gaps while contributing to the worldwide demonstration and diffusion of this potentially important mitigation technology. This approach can serve as a test phase to expand knowledge relevant to the areas of concern of some Parties expressed, *inter alia* at SBSTA27, regarding methodological and practical implications, environmental impacts and market effects. The advantage of having a pilot phase is the opportunity to incentivise project developers to suggest methodologies and build a broad base of experience from which to draw lessons.

9. Principal features of the pilot phase are:

- limited duration;
- a maximum of x projects,;
- a maximum creditable tonnage of y Mt/annum per project during the pilot phase e.g. a maximum volume of CERs allowed into the market as a result of the pilot while still enabling large-scale demonstration projects to reap the benefits of carbon financing;
- crediting which starts after registration, according to EB procedures;
- a window of opportunity to register projects in the first commitment period of the Kyoto Protocol (i.e. before 2013);
- evaluation of pilot phase at the earliest appropriate opportunity.

10. Furthermore, although the aim is zero seepage, accounting rules for CCS projects under the CDM should be consistent with the current approach under the Kyoto Protocol, i.e. the net quantity of CO<sub>2</sub> stored (including any seepage) should be reflected in the accounting scheme. The EU is of the view that the best way to avoid very complex accounting schemes for long-term seepage is to ensure that there is a very high level of confidence of permanent storage of CO<sub>2</sub>. While there are different ways to

make private entities liable for any seepage from the reservoir, the EU believes that the ultimate liability for any seepage emissions needs to be either with the host country or the country using the CERs.

11. Projects for inclusion in the pilot phase would be designed, developed and then submitted to the Executive Board in the usual manner and then considered for approval by the EB. They should also be assessed according to the normal additionality criteria. Projects approved and registered would then be admitted to the pilot phase and verified in the normal way before the issuance of CERs. Project proponents are invited to submit methodologies and Project Design Documents (PDDs) from the full range of technological options for capture, transportation and storage to facilitate the demonstration of a diversity of situations in a range of geographical locations.

12. In the view of the EU, a decision at CMP 4 should set out provisions for the technical, methodological, policy and legal issues (including liability) are to be tackled in the pilot phase, taking into consideration past submissions by Parties and the synthesis reports prepared by the Secretariat. The decision should mandate the EB to register a limited number of projects for a pilot phase of a limited duration, to be credited under the CDM and report in its Annual Report on progress under the pilot phase to facilitate Parties' further consideration of the pilot.

13. On the policy issues, notably market impact, liability, accounting and physical boundaries, the EU believes that the proposed pilot phase could act as a suitable environment in which to gain relevant experience.

#### **IV. Assessment of CCS methodologies by the CDM Executive Board**

14. The EU suggests that the EB should consider CCS methodologies and projects, judging them against the following provisions:

- i. Methodologies should require a thorough risk assessment of the storage site and operation, including an assessment of all potential seepage paths and environmental impacts, using detailed site characterization and simulation based on the methodology and requirements of the 2006 IPCC GHG Guidelines, the general advice on site selection in the IPCC Special Report on CCS, and available industry best practice;
- ii. The monitoring plan should be consistent with the methodological advice in 2006 IPCC GHG Guidelines and relevant parts of the IPCC Special Report as well as available best industry practice;
- iii. The PDD should contain credible demonstration of the expectation that CO<sub>2</sub> within the reservoir will reach a stable distribution in the long term, entailing zero seepage to the atmosphere;
- iv. Designated Operational Entities would be required to have appropriate expertise to assess the technical aspects and the regulatory and liability aspects relevant to CCS to enable them to discharge their validation and verification functions in accordance with the requirements of relevant baseline and monitoring methodologies, IPCC and available industry best practice;
- v. Project participants should set out in the PDD how they plan to address long-term responsibility for monitoring for any seepage from the reservoir, long-term liabilities and accounting for any seepage, and any remediation required as well as procedures for the proper and safe sealing and abandonment of the reservoir.

15. In our previous submission, we set out our views on dealing with these and other

issues. Our views reflect the planned practice in the EU, which builds on the 2006 IPCC GHG Guidelines. These Guidelines form the basis for recent amendments to the London and OSPAR Conventions to allow and regulate CO<sub>2</sub> geological storage and are the basis upon which the European Commission has developed a regulatory framework (currently passing through the legislative process in the EU) to enable CCS in the EU and its inclusion in the EU Emissions Trading Scheme. The principles and methodologies provided by these Guidelines, and the subsequent regulatory frameworks, will ensure environmentally safe CCS to be undertaken, with the aim of zero seepage.

## **VI. Learning for the future**

16. The pilot phase can provide Parties with important information to enable them to take informed choices in shaping the post-2012 regime. Furthermore, it could provide an important capacity-building for and impetus to the global demonstration of CCS that is necessary in order to accurately assess the potential contribution of this technology to mitigation efforts.

17. It will be important to evaluate the pilot phase and draw appropriate lessons. An assessment of the success of the pilot phase, including the technical and methodological issues, environmental impacts, market impact and issues at policy level, should be conducted by an appropriate international body, composed of selected internationally recognised experts with input from non-Annex I and Annex I experts, after a given number of years of operation. It will be necessary to draw up strict criteria for this evaluation, including a definition of methodologies, validation, registration, monitoring and verification. The evaluation of the pilot phase should take place once a selection of projects is up and running. It should be completed at the earliest appropriate opportunity and should form the basis for CMP guidance to the EB on the modalities of any further inclusion of CCS in the CDM.

## **VII. Conclusions and recommendations**

18. The EU believes that there are several advantages to the implementation of a pilot phase approach for further deployment of CCS projects in developing countries. We believe the CDM can contribute to such a pilot phase. We hope that this approach can provide confidence and control for Parties to enable the discussions in SBSTA to move to practical experience, capacity-building and knowledge sharing that Parties have

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requested. Experience in the pilot phase will enable project proponents, host governments and Parties to build institutions and practical and institutional capacity, learn about potential impacts, and ensure that the right systems are in place for the avoidance of undesirable impacts.

19. In conclusion, the EU may support, as part of a full range of mitigation technologies, geological CCS CDM projects provided that the necessary technical, economic and regulatory framework exists to provide maximum environmental integrity and safety and with the objective of avoiding any seepage. We propose a pilot phase approach as a means to move forward on this issue. We are looking forward to hearing Parties views on the modalities of the pilot and to agreeing a decision at CMP4 in Poznan that can enable the inclusion of CCS projects into the CDM, subject to

conditions such as those outlined above.