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Item 4 (b) of the provisional agenda

## METHODOLOGICAL ISSUES

### GUIDELINES UNDER ARTICLES 5, 7 AND 8 OF THE KYOTO PROTOCOL

#### **Possible technical standards for national registries, the clean development mechanism registry and the transaction log under the Kyoto Protocol**

##### **Submissions from Parties**

1. The Conference of the Parties (COP), by its decision 19/CP.7, requested the Subsidiary Body for Scientific and Technological Advice (SBSTA) to develop technical standards for the purpose of ensuring the accurate, transparent and efficient exchange of data between national registries, the clean development mechanism (CDM) registry and the transaction log, with a view to recommending to the COP, at its eighth session, a decision on this matter, for adoption by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its first session, to facilitate the early development and establishment of national registries, as well as of the CDM registry and transaction log (FCCC/CP/2001/13/Add.2).
2. By the same decision, the COP also requested the Chair of the SBSTA, with the assistance of the secretariat, to convene inter-sessional consultations with Parties and experts for the purposes of, inter alia, preparing draft technical standards for consideration by the SBSTA.
3. Such consultations took place immediately prior to the sixteenth session of the SBSTA. A paper was prepared by the chair of the consultations on possible technical standards.<sup>1</sup> At its sixteenth session, the SBSTA noted that the paper had been prepared, under the authority of the Chair of the SBSTA, for comments by Parties.
4. The secretariat has received four submissions. In accordance with the procedure for miscellaneous documents, these submissions are attached and reproduced\* in the language in which they were received and without formal editing.

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<sup>1</sup> See [http://unfccc.int/sessions/workshop/020602/pap\\_chair.pdf](http://unfccc.int/sessions/workshop/020602/pap_chair.pdf)

\* 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.

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PAPER NO. 1: AUSTRALIA

**Informal paper by the chair of the intersessional consultations on registries 13 June 2002**

**Comments by Australia**

**General comments**

Australia is pleased to provide comments on the informal paper by the chair of the intersessional consultations on registries. We believe that the paper represents a significant advancement in the development of technical standards for national registries, the clean development mechanism registry and the transaction log. We have some comments that we hope will contribute to the refinement and further development of this important body of work, mainly related to areas where we believe that caution may be needed to avoid stepping beyond the mandate of the Marrakesh Accords and pre-empting decisions that should ultimately be made by Parties with regard to non-core elements of this work program.

Regarding future work, we believe that an important issue for consideration is the initial provision of information to the transaction log. In order to perform the function of identifying discrepancies, the transaction log will need to store information for each Annex I Party including:

- The initial assigned amount. The transaction log will need to record this information prior to issuance of the assigned amount.
- The commitment period reserve, including updated figures where applicable.
- Reviewed LULUCF inventory data. The transaction log will need to record this information prior to issuance of any resulting RMUs.
- The cap on additions to and subtractions from assigned amount resulting from forest management under Article 3.4.
- Verified abatement and sequestration figures from CDM projects

In addition to Party-specific information, the transaction log will need to store information of a general nature, such as banking restrictions on RMUs, ERUs and CERs, and the limit on additions to assigned amount resulting from afforestation and reforestation under Article 12. Australia is of the view that the correct and transparent recording of such information is vital to the smooth functioning of the transaction log, national registries and the emissions trading system.

**Specific comments on the Annex**

Footnote 7: We suggest deleting this footnote. Any projects other than those under Articles 12 and 6 would not be linked to specific units. For example, while sinks activity may be measured on a project basis for inventory purposes, this would not flow through to the issuance of RMUs, because RMUs would be issued on the basis of net sequestration within an activity under Article 3.3 or 3.4, and so there would be no way to link specific RMUs to specific projects. Furthermore, it should be assumed that each Party might implement internal procedures within its own registry as it deemed appropriate, and that specifying when this may or may not happen is beyond the mandate of the technical standards.

Footnote 10: We would not support the elaboration of account types beyond the level of detail given in para 21 of the Annex to draft decision -/CMP.1 (*Article 7.4*).

Para 5: We think it would be helpful to set some sort of benchmark for the performance of the transaction log and registries; however, we are wary of mandating maximum times for all cases. In the case of automated checks by the transaction log, we are of the view that these should be carried out without delay, and that these should be as quick as permitted by the system. We therefore tend towards the “in real time” option. In the case of responses from national registries, however, we believe that in some instances human judgement may be required. For example, when one or both Parties wish to proceed with a transaction for which the transaction has identified a discrepancy, the Parties may take more than 24 hours to investigate the discrepancy and come to a decision. We would prefer to allow the transacting Parties some degree of discretion regarding the timing of their responses.

NB: A further issue with regard to the time between the receipt by the transaction log of the initial message and the completion or termination of the transaction is the status of the units involved, during the transaction. That is, where a subsequent transaction is initiated involving units that are also involved in a prior, but incomplete, transaction, the transaction log would need to follow an established procedure regarding the validity of one or both transactions.

Table 7: We are unconvinced of the need for steps 1 and 2, and steps 5 and 6 in this procedure, and suggest deleting them. These go beyond the requirements of the Marrakesh Accords, which we regard as sufficient to ensure the transparency of the system. While there will evidently be a need for communication between registries, it is not necessary to mandate the way in which this will be conducted. These steps do not enhance the transparency of the system, there is no scope to review them, and Parties may prefer a different mode of communication at such times.

Para 10 (b) and (c): We think that these paragraphs go beyond the mandate for work on technical standards given in decision 19/CP.7, in that they refer to the way in which each Party manages its registry rather than to the accurate, transparent and efficient exchange of data. We think that the important issue in this regard is that the transaction log is able to identify discrepancies that result from such infringements, and inform the acquiring and transferring registries of the discrepancies. With regard to issuance, we draw attention to our general comments above, about the information that the transaction log would need to hold in order to identify discrepancies related to issuance and addition to assigned amount.

Para 12(b) and Table 9: The requirement for messages of enquiry of publicly accessible information goes beyond the requirements in the Marrakesh Accords and may have significant resource implications. We suggest deleting it.

PAPER NO. 2: CANADA

**Informal Paper on Technical Standards for Registries and the  
Transaction Log**

**Comments by Canada**

**General Comments**

Canada is please to provide comments on the informal paper prepared by the Chair of the intersessional consultation on registries. Generally, we believe that the technical standards presented provide a solid foundation for further discussion at the next intersessional consultation as well as at CoP 8. During those meetings we believe that Parties should focus their efforts on refining the technical standards and addressing many of the issues raised in the footnoting. To that end, we have provided specific comments relating to our assessment of the possible technical standards.

Following CoP 8 we believe that further international standards may need to be developed. First and foremost our priority would be in relation to “virtual” security standards to protect data and prevent unauthorized data manipulation. We look forward to exploring with other Parties whether common standards for “physical security” also need to be elaborated, such as protocols for file protection/back-up etc. We do not believe that communications standards to promote computer language compatibility are necessary as common data elements should be sufficient to facilitate the accurate, efficient and transparent exchange of data between operating systems or software platforms.

Over the longer term, and following the completion of all technical standards, it may be worthwhile for Parties to consider the utility of a Beta-testing phase to ensure that the registry/transaction log infrastructure operates as intended. If Parties agree to such a phase, its relationship to the substance and timing of the pre-commitment period review will also require consideration.

In terms of process, we note that further elaboration of issues related to registries and the transaction log will demand expertise beyond that characteristic to many involved in the negotiation process heretofore. With that in mind, we believe that Parties may wish to consider establishing a network of designated registry administrators or registry experts. Not only would such a network ensure that an appropriate amount of expertise is accorded to the work program, but it would also allow experts to learn from each other’s experience in registry development.

**Specific**

Para 2: We note that, aside from the Party of origin, all elements are in numeric rather than alphabetic or alphanumeric notation. We believe that it may be worthwhile to explore possible benefits of alpha notation for some other elements. For example, alphabetic notation may allow for the easier visual recognition of a specific element (eg. “A” for AAU vs. “1”). In a single digit, it would also allow for a greater number of distinctions (24 for alpha vs. 9 for numeric – assuming I and O are not included in the alphabetic list).

Footnote 2: You may wish to define the meaning of “elements for internal purposes”. We view these as being elements additional to those minimum elements necessary to facilitate the exchange of data between registries. Additional elements could include those related to internal controls and/or those related to a DET system.

Footnote 6: We do not believe that scope for distinctions between LULUCF activities should go beyond the distinctions contained in 11/CP.7. We therefore suggest the deletion of “at minimum”.

Footnote 7: We do not believe that projects other than CDM and JI would need to be identified and note that the Marrakech Accords do not contain projects besides those under Articles 12 and 6. We therefore suggest the deletion of this footnote.

Para 4: We note the reference to a “transaction record” in this paragraph but the absence of further elaboration of the specific elements/format of the transaction record. This contrasts to numbering and messaging where more detail is provided.

Para 5: We support the “real time” option as the preferred timing for messaging and note that this option appears to be most in the spirit of “efficient” exchange of data. However, we suggest that the other options [1 hour][24 hours][x time] be retained as a maximum time threshold. Such a threshold could be used as a benchmark to terminate transactions where messaging does not occur within the threshold time and/or be used as a gauge for registry malfunction in the event that a registry generates a number of delays beyond that threshold.

Footnote 10: We question the need to include specific reference to “brokers”, as these and other private actors would be covered by the reference to legal entities. We do not believe that “strengthening targets” is the best way to characterize cancellation for purposes beyond LULUCF sources and application of the restoration rate. Indeed, units may be cancelled for environmental philanthropy, excess issuance of CERs, and transfers to Parties/entities outside the Kyoto regime. We therefore suggest this be revised to read “other purposes.” Finally, we note that the CDM registry guidelines include a “pending account” in addition to the cancellation and retirement accounts.

Footnote 13: We concur with the utility of a date element in the transaction field and recommend that the standard metric format be used. We understand that ISO has developed a standard for this purpose (ISO 8601) that uses the format YYYY. MM. DD, with leading 0's for values under 9 (i.e. January 5, 2002 would be 2002-01-05. The Secretariat may wish to confirm this.

Tables 3 & 7: In cases involving transfers between registries, it might be worthwhile to have the transaction number include both the party of origin (transferring registry) and the recipient party (acquiring registry) in format 2A as well (i.e. by ISO 3166-1 country code). This field could be set as “00” for transactions not involving another registry.

Para 7: We believe that the technical standards should also include provisions for managing block transactions in cases where the relevant serial numbers are not consecutive.

Para 9: We note that options have been proposed for security (i.e internet commerce vs. international bank transfers). To assist Parties in determining their preference, we suggest that the secretariat undertake further investigation so as to provide Parties with more information regarding the stringency of security measures employed in these two cases.

Para 10(b)(c): We do not believe that measures need to be put in place to ensure no infringement upon the CPR and the LULUCF CDM cap. We emphasize that the Marrakech Accords already include adequate provisions related to infringement, i.e., in the case of infringement, units implicated in the infringement will be notified and recorded as discrepancies and cannot be used for compliance with Article 3.1. We therefore recommend the deletion of paras 10(b)(c). That said, we do believe that the transaction log will need to encompass adequate provisions to ensure that accurate detection, notification and recording of all discrepancies listed in Para 42 of the annex to 19/CP.7. Language to this effect could be included in para 10 of the draft technical standards.

Para 12: We recognize that 19/CP.7 and 17/CP.7 include provisions for publicly accessible information in relation to emissions trading and CDM and JI projects. However, we question the need for a specific messaging function. Firstly, it is not clear that such information will need to be accessed through a specific messaging request. Indeed, information could be accessed through a regular internet site maintained by Parties (in the case of national registries), and the Secretariat (in the case of the CDM registry). Such an internet site could be separate from the registry/transaction log infrastructure needed for transactions. Second, given the number of potential searches by the public, a specific messaging request could generate a myriad of messaging records. To that end, we note that the Marrakech Accords certainly did not mandate a messaging/recording function for public accessibility of information and we believe that the technical standard should retain that spirit.

PAPER NO. 3: DENMARK ON BEHALF OF THE EUROPEAN COMMUNITY AND ITS MEMBER STATES AND OF CZECH REPUBLIC, HUNGARY, POLAND AND SLOVAKIA

**COMMENTS ON “POSSIBLE TECHNICAL STANDARDS FOR NATIONAL REGISTRIES, THE CLEAN DEVELOPMENT MECHANISM REGISTRY AND THE TRANSACTION LOG UNDER THE KYOTO PROTOCOL”**

Copenhagen, 16. August 2002

Denmark on behalf of the European Community and its Member States, Czech Republic, Hungary, Poland and Slovakia hereby submit views on the paper produced by the Chairman of the intersessional consultations on registries. The Chairman’s paper provides an excellent basis for developing the technical standards for registries.

The EU and the other Parties mentioned above welcome the opportunity to offer our views on this important subject, which needs to be further developed as agreed in Bonn in June 2002 in order to facilitate the set-up of National Registries, the CMD Registry and the ITL and the start of regional/domestic trading schemes as well as the scheme under the Kyoto Protocol as scheduled.

Comments have been invited on four questions included in the Chairman’s paper, and the submission is structured accordingly, however question 1 and 2 is answered *jointly*.

**1. General introductory comments**

While the EU recognises that there is limited experience with regard to the construction of registries among the Parties to the protocol as well as within the EU, a general framework for performance related standards should be elaborated in the COP 8 decision.

The COP 8 decision should establish key performance standards and the basic structure of these standards, as well as some specific standards, which may be revised or elaborated. The EU and the other Parties mentioned above favour a system comprising both mandatory and indicative standards. Mandatory standards must be observed and may be set as a minimum standard or an absolute standard. Indicative standards elaborate an ideal level of performance and may be set with mandatory standards, or alone.

The following principles should apply to technical standards for registries and be reflected in the COP 8 decision:

- Standards with respect to Message Exchange Protocols, Number Elements and Message Formats should be mandatory and exhaustive.
- Performance Standards with respect to the overall accuracy and efficiency of the system should be elaborated and differentiated with respect to the different registries involved:
  - A. Standards with respect to the ITL should be comprehensive and mandatory and set at a high level. The overall accuracy, efficiency and transparency of the trading system is defined by the performance of the ITL
  - B. Standards with respect to the CDM Registry should also be mandatory and set at a high level



- C. In areas necessary for efficient and accurate exchange of data, mandatory standards with respect to key features of the National Registries should be elaborated. These standards should include specifications, which are necessary to guarantee a high level of performance of the ITL. The EU and the other Parties mentioned above also consider that indicative standards should be available to facilitate improvement in the National Registries performance overall. The COP 8 decision should outline key standards and include a provision stating that these may be revised and elaborated in accordance with a procedure to be established post COP 8.

The EU and the other Parties mentioned above propose that the COP 8 decision mandates the elaboration of standards in accordance with these principles in the following areas;

- Security
- Availability
- Response
- Reliability
- Data storage
- Internal Technical Testing Verification and Reporting
- Legal Standards

The EU and the other Parties mentioned above believe that the technical specifications for the ITL should be elaborated as a matter of priority, and the need for this technical specification should be explicitly reflected in the COP 8 decision. Hence, it is a matter of priority to inform decisions made by Parties with regard to designing their respective National Registries. Technical Standards will need to evolve with reference to this technical specification, and consultations on specifications for the ITL should be a major feature of the post COP 8 agenda.

2. **Technical assessment of possible standards contained in the Annex (of the Chairmans paper), developed with the assistance of experts, including with regard to their sufficiency for the purposes of a decision by COP 8**
3. **areas relating to a decision by COP 8 on technical standards which are likely to need further technical specification after that session**

#### **B) Number elements**

The proposed standards relating to the format of serial numbers assigned to units, transaction numbers and messages for the issuance, transfer and carry over of units and enquiries are uncontroversial. However minor technical amendments and clarifications might be needed for certain of these standards. Suggestions on amendments are described in the attached annex to this submission

Subject to these amendments, the proposed format should form the basis for a decision on technical standards at COP 8. Nevertheless the COP 8 decision should mandate the adoption of additional elements as required after COP 8.

The EU also wants to flag a potential problem concerning regional economic organisations in the use of the ISO 3166-1-country code system. Instead of a country code, the ISO Maintenance Agency has reserved the code element "EU" for the European Union, and extended the scope of this reservation to cover any application of ISO 3166-1 that needs a coded representation of the name European Union.

### **C) Message exchange**

The Message Exchange Protocols suggested in the Annex to the informal paper are adequate insofar as they outline the necessary steps in a transaction procedure. The EU notes that there is a trade off between ensuring accuracy through the number of messages proposed and the overall efficiency of the system.

However, the EU and the other Parties mentioned above believe that efficiency and accuracy and security of the system would be enhanced by requiring all messages to be routed through the transaction log, as this will reduce the number of connections required in the system overall (only one link per registry is needed), and avoid the possibility that registries act without reference to the transaction log. If multiple links between all registries are established, the risk of errors increases, as registries may accidentally process information without reference to the transaction log.

The message formats outlined in Tables 4-8 relating to transactions and transfer of units would need to be adapted accordingly.

Additional Message Exchange Protocols are desirable to enable updating of information held by the registry at a Party's option. These protocols should be referred to in the COP 8 decision and should be elaborated post COP 8 in tandem with the development of the ITL technical specification. These messages should include messages, which would enable the updating of the list of entities authorised to trade, and a party's option with respect to the commitment period reserve. The additional protocols might also include messages enabling the cancellation of transactions by the ITL, where there has been no response by registries within a mandatory response period. In addition other Message Formats may need to be developed, f.i. to facilitate automatic tests.

The EU and the other Parties mentioned above suggest that the Message Formats are made mandatory to ensure the efficiency of the system and to facilitate and support the design and establishment of the National Registries. If additional Message Exchange Protocols are established as suggested (to enable updating of information held by a registry etc) The COP 8 decision should mandate the adoption of additional message formats accordingly.

Concerning the availability of the registries, the EU and the other Parties mentioned above believe that no minimum standards are necessary for National Registries. However a mandatory standard of 24-hours/365 days availability should be adopted for the ITL and the CDM Registry.

Furthermore it might be needed to specify a maximum waiting time with respect to the ITL for pending responses from National Registries to ensure the efficiency of the transactions and the registries in general e.g. if a response to a ITL message is not received within f.i.1, 24 or 48 hours the pending transaction should automatically be cancelled.

As for the use of serial numbers when exchanging messages between registries and between registries and the ITL, the EU and the other Parties mentioned above believe, that the serial numbers shall consists not only but at least of the proposed elements contained in the annex of the technical paper.

### **D) Data quality**

Suggested standards on security and data storage as elaborated in the technical paper are not as yet a sufficient basis for a decision at COP 8.

Security should be handled similarly to transfers in other transfers-systems with a high level of security including f. i. encryption and firewalls – and that weak links should be prevented in order not to compromise the entire system.

As IT-technology evolves over time, setting specific technical standards in a decision adopted by the COP could hinder a fast updating of the standard in the future. Instead the EU and the other Parties mentioned above suggest that high level detailed qualitative standards should be defined and adopted by COP 8 and that the COP 8 decision should mandate the further elaboration of technical standards in an ongoing process engaging technical expertise to proceed with their application.

However, the EU and the other Parties mentioned above want to stress the importance to settle on one given security standard promptly in order not to hinder the design and development of National Registries. With respect to the undoubted development of IT-technology in the future, the questions of security standards should also be a subject to an ongoing process for further elaboration as mentioned above.

Additional standards with respect to the availability, reliability, resilience of registries and the ITL, and the backup of data need to be specified.

#### **E) Public accessibility**

The EU and the other Parties mentioned above have no special remarks to this, except that security standards need to ensure that the ITL and National Registries are protected against hacking, while allowing user accessibility to accounts and public access to account information.

In respect to possible trade-offs between security and public accessibility, EU and the other Parties mentioned above suggest to establish a combination of secure (restricted access) and non-secure (public access) elements of the registries and the ITL.

#### **4. Views on any process for continuing work after COP 8**

If a general system of qualitative standards is adopted, it will be necessary to design and adopt an institutional setting and procedure for their application and interpretation.

Initially this procedure should engage intersessional consultations, mandated to make recommendations to SBSTA for decisions regarding elaboration of key standards in accordance with a framework elaborated in the COP 8 Decision.

Post-COP 8 the details of a more formal procedure for the elaboration and revision of technical standards should be considered, with a view to making recommendations by COP 9. The EU and the other Parties mentioned above suggest that such a procedure should engage a Committee of the ITL, National Registry and CDM Registry administrators.

Intersessional Consultations after COP 8 (and in time a Committee of Registry Administrators as mentioned above) should address the interpretation and application of the mandated qualitative standards and elaborate, and adjust technical standards in response to changes in information technology. The work of the any committee should be governed by specific terms of reference decided by the COP and could supposedly include preparation of good practice guidance and decisions for adoption by the COP/MOP.

Technical standards should specify the tests and monitoring procedures that may be required to ensure compliance with technical standards. The nature of these tests and their relationship to the pending text on reporting and review needs to be considered at the next intersessional consultation. The development of test and monitoring procedures should be mandated as part of COP8-decision to be elaborated further after COP 8.

The EU and the other Parties mentioned above would like to stress the need to provide for a procedure to a quick resolution of technical problems and discrepancies related to the international transaction log, the

CDM Registry and National Registries. These are easily identifiable and resolvable by registry administrators and therefore do not have to be resolved by using the reporting and review process as defined in a decision by COP 8 on the pending parts of the review and reporting text. The EU and the other Parties mentioned above intend to provide a more elaborated proposal on this matter by COP8

#### **4. Possible agenda items for further intersessional consultations on registries prior to SBSTA**

The EU and the other Parties mentioned above suggest the following matters are placed on the agenda for discussion at the next intersessional workshop:

1. The structure and design of performance related standards
2. Additional Messages and according Message Formats
3. Desirable performance standards for National Registries, the CDM Registry and particularly the ITL
4. Performance related standards based on an expert study if possible including possible trade offs between different standards
5. Internal audits, verification and testing of National Registries
6. Consideration of a technical procedure for resolving discrepancies in the transmission of information between National Registries and the ITL, which should be seen in relation to possible reviews triggered by those discrepancies in the pending parts of review, reporting and arbitration procedures
7. Provision on settlement of disputes between National Registries, the CDM Registry and the ITL
8. Provision on monitoring and testing of compliance with standards

## **Annex I**

The suggestions refer to the paragraphs in the informal technical paper by Murray Ward.

1. Paragraph 3, table 2: instead of the wording “Party of origin” the sentence should read: “Party Identifier”.
2. Paragraph 4. The standard date format should be established as follows: dd.mm.yy. (6n).
3. Paragraph 8 table 5. Insert a footnote, that explains that the JI serial number will differ depending on whether the units is accumulated through a track 1 or track 2 project. It is important to distinguish between the 2 different tracks for the purpose of assessment of compliance with CPR.
4. Paragraph 8: Messages 1 and 2: pre-advice and response message. It is believed that they are not essential but support their inclusion to facilitate internal checks prior to the issue of a full instruction.
5. Paragraph 8: Message 6 responses to an instruction We believe that a response to an instruction is necessary to enable an acquiring registry to terminate a transaction in respect of which there is a notification of a discrepancy.
6. Paragraph 11, The EU and the other Parties mentioned above agree with the paragraph, but suggest that a standard might be elaborated to specify secure holding of information.

PAPER NO. 4: MYANMAR

Remark by the review team on the national registries should be made available to the originating nation so that the nation may retain or corrected in the next registries etc..

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