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MEETING OF THE PARTIES TO THE KYOTO PROTOCOL**

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Report of the administrator of the international transaction log under the Kyoto Protocol

**Annual report of the administrator of the
international transaction log (2005)**

Note by the secretariat *

Summary

This first annual report of the administrator of the international transaction log (ITL) provides information to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP) covering the period from the tenth session of the Conference of the Parties until the end of October 2005.

In particular, the report provides information on the development and operation of the ITL and the facilitation of cooperation among registry system administrators.

The COP/MOP may wish to refer the consideration of the information contained in this report to the Subsidiary Body for Scientific and Technological Advice and provide guidance, as necessary, to the secretariat concerning the fulfilment of its functions as the ITL administrator.

* This document has been submitted late in order to include information on the latest progress in this work.

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I. Introduction

A. Mandate

1. The Conference of the Parties (COP), by its decision 19/CP.7, requested the secretariat to establish and maintain the international transaction log (ITL) to verify the validity of transactions undertaken by registries established under decisions 17/CP.7 and 19/CP.7.
2. The COP, by its decision 16/CP.10, requested the secretariat, as administrator of the ITL, to report annually to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP) on organizational arrangements, activities and resource requirements and to make any necessary recommendations to enhance the operation of registries systems.
3. Decision 16/CP.10 further specified a number of requests to the secretariat, in its role as ITL administrator, including in relation to the development of procedures and practices implemented by registry systems,¹ the publication of current versions of the data exchange standards, the facilitation of cooperation among registry system administrators, interaction with other processes under the Kyoto Protocol, in particular the review process under Article 8, and the public availability of up-to-date information on registry systems.

B. Scope of the note

4. This first annual report of the administrator of the ITL provides information to the COP/MOP on progress made towards implementing the ITL. It covers the period from the tenth session of the COP until the end of October 2005. In particular, the report provides information on the development of the ITL and the facilitation of cooperation among registry system administrators (RSAs) through the planned RSA Forum.

C. Possible action by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol

5. The COP/MOP may wish to refer the consideration of the information contained in this report to the Subsidiary Body for Scientific and Technological Advice (SBSTA) and provide guidance, as necessary, to the secretariat concerning the fulfilment of its functions as ITL administrator.

II. Technical activities

A. Development activities

6. The secretariat has issued a request for proposal (RFP) on the ITL. This document, which has been prepared in accordance with United Nations financial rules and procedures, calls for proposals to develop and operate the ITL.² Proposals may be submitted by suitable vendors for both the development and operation, or for only one of these work components. The RFP was sent to 14 companies which had responded to an earlier, open call by the secretariat for expressions of interest in the upcoming work. In

¹ The collective term "registry systems" refers to the national registries of Parties included in Annex I to the Convention with commitments inscribed in Annex B to the Kyoto Protocol, the clean development mechanism (CDM) registry implemented by the CDM Executive Board, the ITL, and any supplementary transaction logs (STLs) established by Parties. The only STL currently foreseen is the Community Independent Transaction Log (CITL) implemented under the European Union emissions trading scheme.

² These roles are hereinafter referred to as those of the "developer" and "operator", as appropriate. The services applicable to these roles may be supplied by a single contractor or separate contractors.

order to give potential vendors sufficient time to prepare proposals, submissions are to be received by 23 December 2005.

7. The RFP contains detailed specifications for the development of the ITL, including the technical specification of the data exchange standards and a specification of the core and periphery software for the ITL, and for the tasks required in order to complete the work. The specifications of the ITL have previously been shared with Parties.³ Further revisions of the software specification are to be shared with Parties and through the RSA Forum.

8. The selected developer will be required, with input from the ITL administrator, to ensure that the requirements are complete, coherent and consistent. The developer will design and develop the ITL software, support the deployment of the software in the data centres of the operator, conduct testing in conjunction with the operator and the ITL administrator, prepare technical and operational documentation, and conduct training with the operator and ITL administrator. The development schedule set out in the RFP calls for versions of the ITL to be released and deployed in the data centre of the operator by 31 August 2006 and 31 October 2006. Each version is to undergo acceptance testing by the operator and the ITL administrator. A live production environment for the ITL will be made available when the connection of the first registry or the CITL has been approved.

9. In addition, the developer will provide a backup help desk service and will support the operator in initializing the connections of registries and STLs to the ITL. After the ITL has been established, the developer will commence a long-term phase of its contract to provide maintenance and support to the ITL, including for minor changes and upgrades, on an ongoing basis until 2015.

10. The RFP contains specifications for the detailed testing to which the ITL software is to be subjected. Tests are to be carried out initially by the developer. Upon deployment of each version of the ITL software in the data centre of the operator, the operator and the ITL administrator will conduct tests to ensure that the ITL performs as intended under varying conditions and time frames and in its ultimate location and hardware environment. Test plans, cases and scripts will be prepared by the developer and reviewed by both the operator and ITL administrator.

11. Documentation relating to the ITL testing, including test results and the acceptance criteria used, are to be shared through the RSA Forum and will be made public through the UNFCCC web site, as appropriate. The results will also be reported to the COP/MOP, at its second session, through the second annual report of the ITL administrator to the COP/MOP.

12. The ITL administrator also plans to subject the development of the ITL to technical peer review by a third party with the necessary technical expertise. This peer review is to focus on the software code of the ITL in order to assist the ITL administrator in ensuring that the ITL meets required specifications.

B. Operational activities

13. The RFP issued by the secretariat also contains detailed specifications for the operation of the ITL, including the specifications of the ITL infrastructure and network and the support to be provided for the ITL, the ITL administrator and administrators of registries and STLs.

14. The selected operator will be required, inter alia:

- (a) To establish the ITL infrastructure, at both a primary data centre and a secondary data centre (to which operations are to be transferred in the event of problems), and necessary internal network connections within and between the data centres;

³ See <http://unfccc.int/meetings/workshops/other_meetings/items/3167.php>.

- (b) To deploy, test and accept versions of the ITL, in cooperation with the developer, in:
 - (i) A live production environment, in which the validity of live transactions proposed by registries may be verified on a 24 hours a day, 7 days a week basis;
 - (ii) An initialization environment, in which registries and STLs will conduct their initialization testing to ensure that they conform to the data exchange standards (before their connections to the live production environment are activated);
 - (iii) Ad hoc test environments, in which changes and upgrades to the ITL, registries or STLs will be tested (for example, to implement modifications in the data exchange standards);
- (c) To ensure the required performance, availability, resilience and security of ITL operations and, in the event of problems arising on the primary data centre, ensure that ITL operations are transferred from the primary to secondary sites in a timely manner;
- (d) To elaborate network specifications required by registries and STLs, configure external networks and manage security and authentication certificates.

15. Furthermore, the operator is to establish a service desk as the focus of all operational issues for both the ITL administrator and the administrators of registries and STLs. This service desk is to be backed up by the developer as required. Staff of the service desk will, inter alia:

- (a) Monitor ITL systems and internal and external networks, address problems as they arise and escalate significant issues to the ITL administrator in order that further action may be taken;
- (b) Conduct low-level data administration, including reconciliation of data between the ITL and registries, and manage static data and statistical reporting;
- (c) Respond to requests and queries submitted by administrators of registries and STLs (by e-mail, telephone and facsimile) and manage the resolution of problems;
- (d) Undertake day-to-day liaison with administrators of registries and STLs;
- (e) Support and schedule testing and initialization processes;
- (f) Report to the ITL administrator on contractor and system performance, in accordance with a service level agreement to be agreed with the ITL administrator.

16. The initialization of registry and STL connections to the ITL will be coordinated by the operator, under the management of the ITL administrator. This process has been designed to progress from simple to complex activities and will ensure the capability and suitability of registry systems and their hosting environments through:

- (a) Review of system documentation on registries and STLs;
- (b) Initialization testing to ensure basic connectivity and simple messaging between the ITL and the initializing system;
- (c) Initialization testing for system conformance in the initializing system with all transaction, reconciliation and notification requirements, including site visits to registry and STL locations, as required.

17. After the successful completion of all initialization testing for a registry or STL, the operator will recommend approval of the connection to the ITL administrator. The activation of connections will be coordinated with administrators of registries and STLs.

18. The developer and operator will need to work closely to ensure that the ITL software and the data centre and network infrastructure are complementary. The RFP contains requirements for how these services are to be provided in a joint manner, including the split of responsibilities, provision of training and requirements for liaison. A steering group, consisting of representatives of the ITL administrator, the operator and the developer, is to provide for the coordination, cooperation and consistency between these parties.

19. As stated above, the development schedule set out in the RFP calls for an early version of the ITL to be released and deployed in the data centre of the operator by 31 August 2006. This early version is to allow several administrators of registries and STLs to connect test versions of their systems to the ITL in order to conduct pilot tests of the early ITL software. The scheduling of the pilot testing and the liaison with participating administrators will be undertaken by the service desk of the operator, under the management of the ITL administrator.

20. A full version of the ITL, having passed the required tests and met the required specifications, is to be released and deployed in the data centre by 31 October 2006. This version would be available to registries and STLs to conduct their initialization testing. The scheduling of the initialization testing and the liaison with registry administrator will be undertaken by the service desk of the operator, under the management of the ITL administrator. Initialization testing for a registry or STL may begin only when the first phase of the initialization, the review of system documentation, has been satisfactorily completed. This document review is to begin in the third quarter of 2006.

21. Once the connection of the first registry or the CITL has been approved, the live production environment for the ITL will be made available to which registries and the CITL will maintain their connections on an ongoing basis. The operational arrangements for the ITL are to be maintained until 2015, in order to support emissions trading during the additional period for fulfilling commitments and to provide data, as required, for use in resolving any questions of implementation in relation to the accounting of assigned amounts that arise in the course of the Article 8 review process.

C. Schedule

22. An indicative schedule and key dates, as specified in the RFP, for the development and operation of the ITL is set out below:

- (a) Review of the ITL software specifications with the secretariat
- (b) Development of specifications for the connections between the ITL and registries/STLs
- (c) Start of the programming and testing of the ITL software
- (d) Developer and operator agree on hardware and software design and operational environments
- (e) Deployment and testing of first ITL version (with limited scope) at the operator's data centre
- (f) Establishment of the operator's service desk and scheduling of pilot testing and initialization
- (g) Start of initialization (review of system documentation)

- (h) Deployment and testing of ITL pilot test version at the data centre (by 31 August 2006)
- (i) Pilot testing of the ITL with external registries
- (j) Deployment of ITL initialization version at the data centre (by 31 October 2006)
- (k) Confirmation of initialization schedule and commencement of initialization testing
- (l) Establishment and testing of the ITL live production environment and secondary systems
- (m) Scheduled activation of live connections between the ITL and registries/STLs
- (n) Commencement of long-term ITL support arrangement for the developer and operator

23. The schedule for the development and operation of the ITL has been defined with the aim of having registries and the CITL successfully connected to the ITL by April 2007 (it should be stressed that the timing of the initialization of registry system connections to the ITL will primarily be driven by registry system administrators). This would in particular accommodate the need of European Union Member States to surrender certified emission reductions (CERs) from CDM projects under the European Union emissions trading scheme by 30 April 2007.

24. The precise schedule of the ITL implementation is subject to elaboration with the vendor in the course of the initial planning and preparation of contractual arrangements with the secretariat.

25. The secretariat plans to demonstrate the ITL at the second session of the COP/MOP. This will allow representatives of Parties to view the operation of the ITL and experience its interaction with other registry systems.

III. Activities of the Registry System Administrators Forum

26. In accordance with decision 16/CP.10, the ITL administrator plans to facilitate an RSA Forum to bring together all administrators, as well as appropriate experts from Parties not included in Annex I to the Convention, on an informal basis for the purpose of facilitating and promoting compatibility, accuracy, efficiency and transparency in the operation of registry systems.

A. Forum facilitation

27. The first meeting of the RSA Forum is planned for March 2006. Its objective is to establish the process by which work under the Forum is to continue, including in relation to the determination of priority work areas, approaches and timelines for addressing the work areas, and guidance to the working groups to be established. The first meeting will provide updated information on progress with the implementation of the ITL.

28. It is envisaged that the Forum will need to meet twice a year, although meetings may need to be more frequent during the initial establishment of the ITL and registries, and that specialized working groups would meet more frequently. Several communication tools are planned in support of the work conducted in the context of the RSA Forum, including a depository of information and an extranet to be accessible by registry system administrators.

29. The secretariat wishes to draw technical support for its facilitation of the RSA Forum from the operator of the ITL. This support is to include the analysis and development of procedures, practices and other measures, for consideration in the RSA Forum, and the implementation of central activities under these procedures.

B. Development of procedures

30. The ITL administrator is to develop, in cooperation with the other administrators, procedures and practices that complement the data exchange standards and may be implemented by administrators of all registry systems. These procedures are needed to address both the day-to-day operations of registry systems and the continuation of their technical development, in a coordinated manner, as improvements are identified and new requirements arise. Areas have been identified to date for the development and consistent application, by all administrators, of “common operational procedures”, including:

- (a) Standardized testing and independent assessment reporting;
- (b) Coordinated reconciliation of data between registry systems;
- (c) Coordinated change management in the data exchange standards;
- (d) Initialization and maintenance of secure electronic communications.

31. In addition, where consistent application by all registry systems is desirable but less critical, recommended practices are to be developed. These may cover issues such as system availability and recovery, user access agreements and technical improvements. Other information-sharing measures may be implemented, for example to share information on operational best practices.

IV. Organizational arrangements and resources

32. Effective from 1 January 2006, the functions of the ITL administrator are to be supported by the Reporting, Data and Analysis (RDA) programme under the new structure of the secretariat.⁴ This programme is also responsible for the substantive work of the secretariat relating to the data and information provided by Parties on their implementation of the Convention and the Kyoto Protocol, including the data management systems being implemented in support of the review processes.

33. The functions of the ITL administrator will be supported with the assistance of the developer and operator. Staff of the RDA programme will manage this external work, including through monitoring and review of activities and the provision of guidance and approval, as appropriate, at key stages of the work. The secretariat is currently engaged in a recruitment exercise for these purposes.

34. The resource requirements for the development of the ITL are being provided through contributions to the UNFCCC Trust Fund for Supplementary Activities. As noted by the SBSTA at its twenty-second session, contributions received from or pledged by Parties allow the secretariat, in its function as the administrator of the ITL, to proceed with the development of the ITL. The sufficiency of these contributions may need to be re-assessed in early 2006 in the light of the procurement process to select contractors for the development and operation of the ITL.

35. Resource requirements for the operation of the ITL and the facilitation of the RSA Forum are provided for in the programme budget for the biennium 2006–2007. Any further resource requirements for these purposes would need to be provided through contributions and fees⁵ to the UNFCCC Trust Fund for Supplementary Activities.

⁴ See document FCCC/SBI/2005/8 for more information on the new structure of the secretariat.

⁵ See the draft decision on the programme budget, as recommended by the Subsidiary Body for Implementation, at its twenty-second session, for adoption by the COP at its eleventh session (FCCC/SBI/2005/L.15/Add.1/Rev.1).