



Distr. GENERAL

FCCC/KP/CMP/2009/19 12 November 2009

Original: ENGLISH

CONFERENCE OF THE PARTIES SERVING AS THE MEETING OF THE PARTIES TO THE KYOTO PROTOCOL Fifth session Copenhagen, 7–18 December 2009

Item 11 (a) of the provisional agenda Review of implementation of commitments and of other provisions of the Kyoto Protocol Report of the administrator of the international transaction log under the Kyoto Protocol

Annual report of the administrator of the international transaction log under the Kyoto Protocol

Note by the secretariat*

Summary

This fifth 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 (CMP) on the activities of the ITL administrator from November 2008 to October 2009.

This report also contains information on transactions of Kyoto Protocol units, as requested by the CMP at its fourth session.

The CMP, by its decision 12/CMP.1, requested the Subsidiary Body for Implementation (SBI) to consider, at its future sessions, the annual reports of the ITL administrator. The SBI may wish to take note of the information contained in this report and provide guidance to the secretariat and Parties, as necessary, concerning the implementation of registry systems.

^{*} This document was submitted late in order to include information on the latest progress in this work.

CONTENTS

			Paragraphs	Page
I.	INTR	RODUCTION	1–6	3
	A.	Mandate	1–3	3
	B.	Scope of the note	4–5	3
	C.	Possible action by the Subsidiary Body for Implementation	6	3
II.	FOU! INTE	RK UNDERTAKEN SINCE THE PUBLICATION OF THE RTH ANNUAL REPORT OF THE ADMINISTRATOR OF THE ERNATIONAL TRANSACTION LOG UNDER THE KYOTO TOCOL	7–57	4
	A.	Summary of work undertaken	7–10	4
	В.	Independent assessment of national registries and go-live activities		4
	C.	Implementation activities	26–33	8
	D.	Operational activities	34–46	10
	Б. Е.	Registry System Administrators Forum	47–48	14
	F.		47-40	14
	1.	Activities of the working groups under the RSA Forum and Change Advisory Board	49–52	16
	G.	Interactive exercise	53–57	17
III.	ORG	ANIZATIONAL ARRANGEMENTS AND RESOURCES	58–77	18
	A.	Resource requirements and expenditure	59–65	18
	B.	Income to support the activities of the administrator of the international transaction log	66–71	20
	C.	Actions to optimize the cost structure of the international transaction log	72–73	22
	D.	Proposals to optimize the cost structure of the international transaction log	74–77	22
		<u>Annexes</u>		
I.	Registry s	status as at 31 October 2009		25
II.		international transaction log fee payments for the biennium 2008–200 October 2009	9	26
III		international transaction log fee payments for the biennium 2010-201 October 2009	1	27
IV		of transactions proposed to the international transaction log ovember 2008 to 31 October 2009		28
V.		of Kyoto Protocol units subject to transactions proposed to the internation log from 1 November 2008 to 31 October 2009	tional	30

I. Introduction

A. Mandate

- 1. The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), by its decision 13/CMP.1, requested the secretariat to establish and maintain an international transaction log (ITL) in order to verify the validity of transactions proposed by registries established under decisions 3/CMP.1 and 13/CMP.1. The ITL is essential for the implementation of the mechanisms under Articles 6, 12 and 17 of the Kyoto Protocol.
- 2. The Conference of the Parties (COP), by its decision 16/CP.10, requested the secretariat, as the administrator of the ITL, to report annually to the CMP on organizational arrangements, activities and resource requirements and to make any necessary recommendations to enhance the operation of registry systems.
- 3. The CMP, by its decision 12/CMP.1, requested the Subsidiary Body for Implementation (SBI) to consider, at its future sessions, the annual reports of the ITL administrator, with a view to requesting the CMP to provide guidance, as necessary, in relation to the operation of registry systems.

B. Scope of the note

- 4. This fifth annual report of the ITL administrator provides information on the implementation of the ITL and its operational status, including the facilitation of cooperation with registry system administrators (RSAs) through the activities of the Registry System Administrators Forum (RSA Forum) and the independent assessment of registry systems. This annual report also contains, for the first time, information on transactions in the ITL, as requested by the CMP at its fourth session. ¹
- 5. This report covers the reporting period from 1 November 2008 to 31 October 2009.

C. Possible action by the Subsidiary Body for Implementation

6. The SBI may wish to take note of the information contained in this report and request the CMP to provide guidance to the secretariat and Parties, as necessary, concerning the implementation of registry systems.

¹ FCCC/KP/CMP/2008/11, paragraph 67.

II. Work undertaken since the publication of the fourth annual report of the administrator of the international transaction log under the Kyoto Protocol

A. Summary of work undertaken

- 7. The ITL administrator established the RSA Forum and its working groups to coordinate the management and technical activities of the registry system. The ITL administrator continued to convene the RSA Forum to guide the work of the working groups.
- 8. The ITL administrator conducted the interactive exercise during the thirtieth session of the SBI, as requested by the CMP at its fourth session, demonstrating how the ITL functions with other registry systems, including the registry of the clean development mechanism (CDM), and demonstrating the full conformity of the ITL with relevant decisions, including the key checks defined in the technical standards for data exchange between registry systems (DES).
- 9. The first annual assessment of activities of national registries and accounting of Kyoto Protocol units were completed successfully. The work included training sessions for the assessors, the establishment of supporting tools, the overall coordination of the assessment process and an in-depth analysis of experiences in the first year, aiming at improving the assessment process.
- 10. The ITL administrator continued to support the 'business as usual' operations of the ITL. Detailed information on the operational activities and ITL operational performance are provided in this report.

B. Independent assessment of national registries and go-live activities

1. Initial assessment activities

- 11. Initialization is the formal process by which the ITL administrator verifies that a registry has fulfilled the technical requirements set out in the DES. Initialization is a prerequisite for a registry to commence operations with the production environment of the ITL.
- 12. As at 1 November 2008, 36 national registries had completed the initialization process. The ITL administrator continued to support initialization activities, which led to two additional initial independent assessment reports being issued during the reporting period; the initial independent assessment report for Australia was issued on 19 December 2008 and the initial independent assessment report for Croatia was issued on 30 April 2009. As at 31 October 2009, 38 initial independent assessment reports had been issued, as shown in annex I to this document.

2. Go-live activities

13. During the reporting period, the secretariat ITL team supported the go-live process of the registry of Australia (19 December 2008), which was the thirty-fifth registry to be linked to the ITL in production, as shown in annex I.

3. Annual assessment activities

14. The standardized testing and independent assessment reporting process mentioned in decision 16/CP.10, paragraph 5 (a) (hereinafter referred to as the SIAR process) expands on the initial independent assessment of national registries by defining the process to be followed by RSAs when reporting annually on changes in the national registry and providing information on accounting of Kyoto Protocol units, and defining the activities to be carried out by assessors when reviewing reported changes and accounting information. The outcome of the SIAR process is forwarded to expert review teams (ERTs) during the annual review process under Article 8 of the Kyoto Protocol.

² FCCC/KP/CMP/2008/11, paragraph 70.

³ Decision 24/CP.8.

- 15. During the SIAR process, the following elements of a Party's annual submission are assessed:
 - (a) Changes in national registries made in accordance with section I G of the annex to decision 15/CMP.1;
 - (b) Information on Kyoto Protocol units and transactions of these units, provided in the standard electronic format (SEF) tables for reporting Kyoto Protocol units, in accordance with decision 14/CMP.1 and paragraphs 10 and 11 of the annex to decision 15/CMP.1;
 - (c) Reports of discrepancies, notifications, non-replacements, invalid units, and the calculation of the commitment period reserve, as required by paragraphs 12–20 of the annex to decision 15/CMP.1;
 - (d) Availability of public information through the user interface of the national registry, as required by paragraphs 44–48 of the annex to decision 13/CMP.1;
 - (e) The implementation of recommendations made by previous ERTs related to the national registry.
- 16. The SIAR process is divided into two parts and leads to the production of two standard independent assessment reports (SIARs). The SIAR, Part I, covers the completeness of the submission, while the SIAR, Part II, covers the substantive analysis of the national registry information provided in the annual submission. The deadlines for the SIAR process and the completion of the SIAR, Parts I and II are linked to the following key stages in the annual review process under Article 8 of the Kyoto Protocol:
 - (a) Annual submissions, including information on the relevant national registry and Kyoto Protocol units and transactions, are due by 15 April each year;
 - (b) A draft of the SIAR, Part I, is sent to the Party within four weeks of the annual submission being made;
 - (c) The Party has two weeks to comment on the draft of the SIAR, Part I, after its receipt;
 - (d) A draft of the SIAR, Part II, is sent to the Party, along with the final draft of the SIAR Part I, at least 10 weeks before the review of the annual submission;
 - (e) The Party has three weeks to comment on the draft of the SIAR, Part II, after its receipt;
 - (f) The final version of the SIAR, Parts I and II, are sent to the Party and forwarded to the ERT at least seven weeks before the review of the Party's annual submission;
 - (g) The SEF comparison report, which compares the data provided by each Party with the ITL records, and the ITL reports on discrepancies, notifications, non-replacements, reconciliations and projects under Article 6 of the Kyoto Protocol, are provided to the Party within 15 days of the submission of the SEF tables. Parties are encouraged to submit their SEF tables by 1 February each year to allow assessors to provide feedback and request clarification, identify and request the correction of inconsistencies and request resubmission within the deadlines of the annual review process under Article 8 of the Kyoto Protocol.
- 17. In order to encourage cooperation and optimize the ITL budget, the ITL administrator invited all RSAs in January 2009 to participate in the SIAR process as assessors. So far, only six RSAs (two from Austria, one from Ireland, one from Japan, one from Spain and one from the Russian Federation) have accepted the invitation and volunteered to participate, while the vast majority could not commit to carry out assessments. Therefore, the secretariat had to use additional resources, including two service providers and one external consultant, to support the 2009 SIAR process. The secretariat will continue to encourage and promote the engagement of RSAs in the SIAR process, with a view to stimulating the sharing of information

FCCC/KP/CMP/2009/19

Page 6

on national registry reporting and review, thus improving the quality of national registry information in annual submissions and optimizing ITL project costs.

- 18. To prepare RSAs, service providers and the external consultant for carrying out the assessments, the ITL administrator organized and conducted two workshops in Bonn, Germany, on the SIAR process. The first workshop was held on 23–24 March 2009 and the second was held on 21–22 April 2009. The objectives of these workshops were to provide an overview on the SIAR process and its timelines, to develop guidance on each section of the SIAR, Parts I and II, to remove any ambiguities regarding the roles and responsibilities of each stakeholder and to achieve a common understanding with the assessors in order to enable high-quality and consistent assessments.
- 19. A representative of the ITL team presented the SIAR process at the sixth meeting of inventory lead reviewers (LRs) that took place on 16–17 March 2009. The LRs welcomed the information presented and noted that the SIAR will greatly facilitate the review of the information reported under Article 7, paragraph 1, of the Kyoto Protocol and the overall review process. The LRs invited the secretariat to prepare before the next meeting of LRs information on the experiences and lessons learned in the use of this review tool by ERTs. The LRs also invited the secretariat to explore ways to make publicly available on the UNFCCC website information on the work of the RSA Forum related to the support of the SIAR process.
- 20. In 2009, 33 Parties submitted the SEF tables providing information on Kyoto Protocol units for the year 2008. All of the submissions of the SEF tables were consistent with the ITL records, after Parties amended their SEF tables to adhere strictly to the SEF specifications.
- 21. The majority of the submissions of the SEF tables for the year 2009 were submitted by Parties on 15 April 2009, as shown in figure 1.

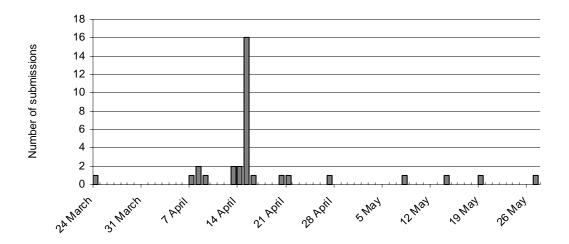


Figure 1. Number of submissions of tables in the standard electronic format received between 24 March and 27 May 2009

22. Thirty-seven national inventory reports (NIRs), which include the information on the national registry and Kyoto Protocol units assessed under the SIAR process, were submitted between 1 April and 27 May 2009, as shown in figure 2. The timing of the deadlines for the submission of NIRs and the SEF tables led to significant effort peaks during the SIAR process, which is driven, as noted in paragraph 16 above, by the deadlines of the review process under Article 8 of the Kyoto Protocol.

Minutes of the sixth meeting of lead reviewers are available at http://unfccc.int/files/national_reports/annex_i_ghg_inventories/review_process/application/pdf/sixth_meeting_of_inventory_lead_reviewers.pdf.

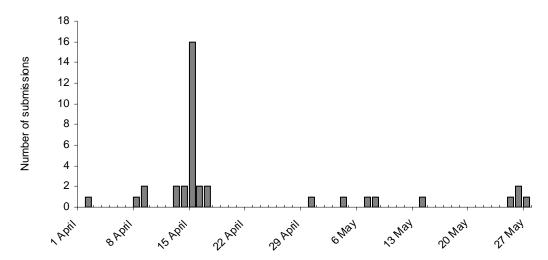


Figure 2. Number of national inventory report submissions received between 1 April 2009 and 27 May 2009

- 23. Over 160 issues (on average more than four issues per submission) were identified and resolved during the 2009 assessment cycle. Forty-five per cent of these issues were related to the availability of public information, approximately 25 per cent were related to the reporting of changes in the national registry, while the remaining 30 per cent were regarding various other items under review, such as discrepancies, the availability of the calculation of the commitment period reserve or how the Party has addressed recommendations made by the previous ERT.
- 24. The SIAR process in 2009 was generally successful, in spite of limited experience with the process, the intricate communications between numerous stakeholders, complexities inherent in the SIAR process due to the broad scope of the assessments and the detailed technical and functional knowledge of registry systems and Kyoto Protocol units that is required. The following major issues were identified during the 2009 assessment cycle:
 - (a) A few submissions of SEF tables were formatted incorrectly. The Parties concerned corrected their submissions to meet the specifications and the resubmissions were found to be consistent with the ITL records. These problems should not occur during the 2010 assessment cycle, as Parties now have an understanding of the specifications;
 - (b) Most Parties submitted their SEF on 13, 14 and 15 April 2009, as shown in figure 1. Parties should try to submit their SEF and NIR in advance of the deadline, to ensure that the deadlines of the annual review process under Article 8 of the Kyoto Protocol are met in case inconsistencies are found in the SEF tables, which may require extensive investigation;
 - (c) The information related to changes in national registries was, in general, not reported clearly in the submissions, leading to unnecessary time being spent to determine whether a change occurred in the registry. The secretariat intends to resolve this issue before the next assessment cycle by clarifying and improving the reporting guidance for registries and bringing this to the attention of RSAs during the RSA Forums;
 - (d) The public information to be provided in accordance with decision 13/CMP.1 by Parties through the national registry user interface was generally incomplete and clarification was often requested by the assessors. The secretariat intends to elaborate additional guidance for RSAs regarding the reporting of public information through a national registry user interface;

- (e) Two NIRs were submitted in an official language of the United Nations other than English; however, in accordance with the agreed SIAR process, all submissions should be in English. The submission of information on the registry and Kyoto Protocol units in a language other than English was problematic, as the assessors could not always understand the submissions in the other official languages of the United Nations. This issue should be attenuated with the
- 25. After the completion of all of the assessments in August 2009, an analysis of the SIAR process in 2009 was carried out, aimed at identifying areas where adjustments and improvements are needed. This analysis led to the following modifications:

increased participation of RSAs in subsequent assessment cycles.

- (a) The documentation related to the SIAR process was revised and updated, including the SIAR procedure itself, the supporting templates and the reporting and assessment guidance documents. Explanations were revised and clarified, removing ambiguities and new guidance was created to assist Parties in providing public information;
- (b) The SIAR working group was reconvened and met on 23 October 2009 to review the updated documentation. The outcome of this work was presented at the tenth RSA Forum;
- (c) The supporting tools for the SIAR process were revised and improved.

C. Implementation activities

1. Standard electronic format

- 26. The CMP, at its fourth session, welcomed the completion of the work on specifications for the reporting of Kyoto Protocol units in the SEF and requested the ITL administrator to continue its work on SEF in collaboration with RSAs, including the provision of two coordinated testing cycles in 2009, if required, to enable the automation of SEF reporting by Parties to the Convention that are also Parties to the Kyoto Protocol with commitments inscribed in Annex B to the Kyoto Protocol.⁵ The secretariat therefore continued to coordinate the following activities:
 - (a) Planning, organization and support of a coordinated testing cycle in February 2009;
 - Mock submissions of the SEF tables as a final quality assurance measure before the first (b) official submission.
- Information reported by Parties in the submissions of the SEF tables for 2009, covering the calendar 27. year 2008, is available in the annual compilation and accounting report and on the UNFCCC website. 6

2. International transaction log data warehouse

- 28. The data warehouse team of the secretariat implemented the following features to facilitate the submission of SEF tables and the review process:
 - (a) The use of the SEF application, which was delivered to Parties, ensures a uniform reporting format and comparable submissions;
 - (b) An importing tool that allows the submitted SEF to be downloaded onto the information systems of the secretariat;
 - The copy of ITL transactional data to the secretariat's information systems allows generation (c) of the SEF comparison report;

FCCC/KP/CMP/2008/11, paragraphs 64 and 66.

http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/4771.php>.

- (d) The use of the SEF comparison report and the reports on discrepancies, notifications, reconciliations and projects under Article 6 of the Kyoto Protocol by assessors during the SIAR process;
- (e) Ad hoc procedures that allow assessors to access the list of transactions contributing to a cell value in the SEF tables. This list can subsequently be given to the Party concerned in order to help resolve issues when values reported in the SEF tables by the Party differ from those reported by the ITL.

3. International transaction log releases

29. During the reporting period, two upgrades of the ITL software took place which improved the usability of the administrator application and the performance of the ITL. In addition, these upgrades implemented changes that were decided under the change management procedure, such as the generic web service support and the handling of out-of-sequence messages. These improvements have increased the capacity of the ITL to handle incidents in the registry system. In addition to the upgrades, two maintenance releases have been deployed to fix coding errors.

4. Registry testing support

- 30. Use of the registry testing environment has been extended by enabling RSAs to engage in sandbox testing, sandbox testing allows RSAs to validate and verify their registry without coordination with the ITL operator or other RSAs. The introduction of sandbox testing resulted in less stringent coordination requirements and helped RSAs to schedule their testing efforts.
- 31. Following the ninth RSA Forum, the ITL administrator established a tracking tool for problems in the registry systems. This tracking tool used in problem management is maintained by the secretariat ITL team and allows RSAs and registry developers to track problems in registries following incidents in production. This tracking tool provides RSAs with the necessary transparency on incidents caused in the registry and allows them to ensure that the underlying problem is resolved properly. The tracking of production problems is important for ensuring the reliable and efficient operation of registry systems. During the reporting period, 30 problems in registries were identified and seven were resolved. Twenty-three problems were classed as related to a major loss of function of the system concerned while seven problems were classed as related to a minor loss of function. Also, 29 out of the 30 problems were related to incorrect behaviour of the registry system concerned with regard to the DES specifications. The ITL administrator follows each problem in close collaboration with RSAs.

5. International transaction log service desk

32. The ITL service desk received an increased number and larger variety of requests after the European Union emissions trading scheme (EU ETS) went live in October 2008. In order to meet this increased demand and cope with the greater complexity of requests, the internal procedures of the ITL service desk have been updated. Internal procedures that have undergone major improvements include contact management, reconciliation, certificate management and registry software migration from one software vendor to another.

6. Support of communication tools

33. The ITL administrator continued to contribute to the development of a new submission portal that ensures that annual submissions made under Article 8 of the Kyoto Protocol are submitted securely. The submission portal has been used by authorized Parties to submit, as part of their NIR, the SEF tables and the information on the national registry, as required by decision 15/CMP.1.

D. Operational activities

1. Registry testing

34. Structured registry testing has continued in the registry and registry developer environments. As at 31 October 2009, 354 issues have been registered following developer tests for registries and 320 issues have been resolved. The rate of new issues in the registry developer environment is decreasing; currently there are between five and 12 new issues each month.

2. <u>International transaction log operations</u>

35. The number of transactions proposed to the ITL in production has significantly increased during the reporting period owing to the EU ETS go-live, as shown in figure 3.

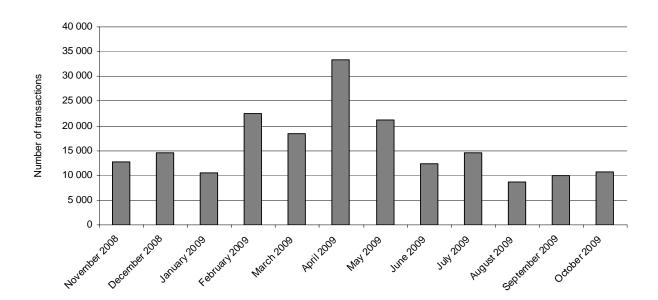


Figure 3. Number of transactions proposed during the reporting period

- 36. The transaction termination ratio, which is defined as the number of terminated transactions (i.e. discrepant transactions) divided by the number of transactions proposed in a given time frame, is a good indicator of the level of internal checking performed by a registry to ensure that the transactions it proposes and its data records are accurate. The workload of the ITL service desk increases as the transaction termination ratio increases because RSAs often contact the service desk to ask the reason for termination of a transaction. It is therefore important that internal checking procedures be implemented to keep this ratio low. The change in this ratio during the reporting period is shown in figure 4.
- 37. The transaction cancellation ratio, defined as the number of cancelled transactions (i.e. transactions that are not finalized within 24 hours) divided by the number of proposed transactions in a given time frame, is a good indicator of the extent of communication problems within the registry system, as messages that cannot be delivered often cause a transaction to be delayed and subsequently cancelled. The number of support requests made to the ITL service desk increases as the transaction cancellation ratio increases because staff at the service desk contact RSAs regarding each delayed transaction and the staff attempt to finalize the transaction manually. Changes in this ratio during the reporting period are shown in figure 4. The significant number of transactions cancelled in February 2009 was caused by the loss of 761 messages by a national registry in a single incident. The configuration problem that caused the incident has been resolved.

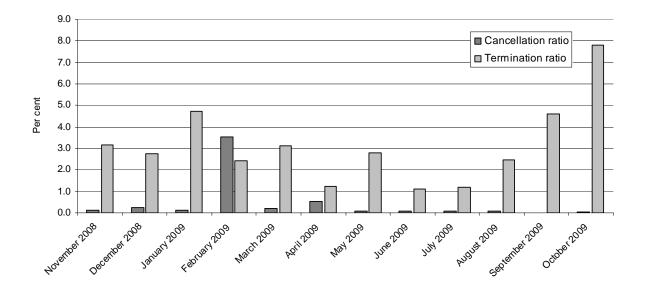


Figure 4. Changes in transaction cancellation and termination ratios over time

38. The inconsistent reconciliation ratio, which is defined as the number of inconsistent reconciliations divided by the number of reconciliations initiated in a given time frame, is a good indicator of the capacity of registries to maintain accurate Kyoto Protocol unit holdings. The number of support requests on the service desk increases as the inconsistent reconciliation ratio increases because a significant amount of time and effort is required to resolve these inconsistencies manually. Changes in this ratio during the reporting period are shown in figure 5.

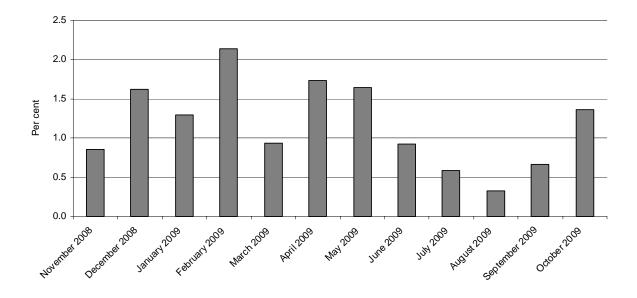


Figure 5. Changes in the inconsistent reconciliation ratio over time

39. Unavailability of the ITL prevents registries from performing their transactions and should be kept to a minimum. The unavailability of the ITL is composed of its planned outage, where RSAs are informed ahead of time of any down time and unplanned outages. As at 30 September 2009, the ITL availability for the period October 2008–September 2009 was 99.63 per cent. During this period planned outages lasted 3,784 minutes and unplanned outages lasted 1,926 minutes.

40. During the reporting period, transactions proposed in production were completed in the time frames displayed in figure 6. The transaction completion time includes the travel time of messages through the registry network and the processing time in the registries, ITL and Community Independent Transaction Log (CITL) if an EU ETS registry is involved.

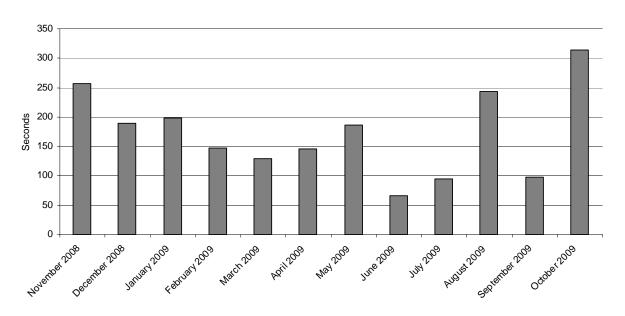
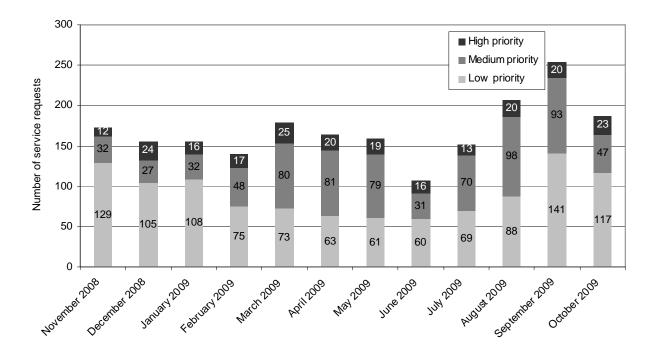


Figure 6. Completion of transactions time over time

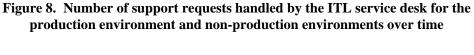
3. International transaction log service desk

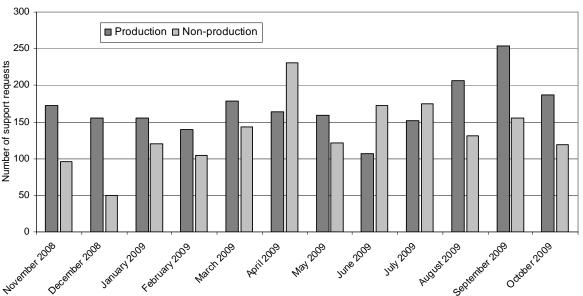
- 41. The ITL service desk is the focal point for all support provided to RSAs regarding the operation and testing of the registries. Furthermore, the ITL service desk carries out the technical activities related to the initialization and go-live processes, under the supervision of the secretariat. The ITL service desk provides continuous support to RSAs from 8 p.m. on Sunday until midnight on Friday based on Universal Time.
- 42. Figure 7 shows the changes in the number of support requests handled by the ITL service desk on the ITL production environment during the reporting period, by priority. High priority support requests are related to the unavailability of the ITL and are raised when the processing of transactions from one or more registries cannot be performed. Medium priority support requests are related to the performance or the stability of the ITL, which may impact transaction processing. Low priority support requests relate to information items or performance issues where transaction processing is not directly affected.

Figure 7. Number of support requests handled by the international transaction log service desk on the international transaction log production environment



43. Figure 8 shows the changes in the number of support requests handled by the ITL service desk for the production environment and non-production environments.





4. Support of communication tools

- 44. The RSA extranet is the central location for sharing all technical and planning information among RSAs. It contains all meetings documentation for the RSA Forum, working groups, an up-to-date contact list of RSAs, operational procedures documentation, technical and organizational documentation, planning documents and frequently asked questions. As at 31 October 2009, RSA extranet support was available to 227 users. The RSA extranet is composed of more than 3,700 web pages and contains approximately 25 gigabytes of supporting documents.
- 45. The secretariat ITL team maintains the web pages on the UNFCCC website relating to the registry systems under the Kyoto Protocol. These web pages contain information about the ITL; registry functions; the registry initialization process; initial independent assessment reports; registry status, including the information made publicly available by the ITL administrator pursuant to decision 16/CP.10; and the list of initialized and live registries.
- 46. In March 2009, the ITL administrator published the information requested by decision 16/CP.10 regarding the operational status of each registry system, discrepancies and inconsistencies, required actions specified in notifications sent by the ITL that have not been completed in the specified time frame and aggregated information on unit holdings in each registry at the end of the calendar year. This information is publicly available on the UNFCCC website.⁸

E. Registry System Administrators Forum

- 47. The ITL administrator uses the RSA Forum to coordinate the technical and management activities of RSAs and to provide a platform to RSAs to cooperate with each other and provide input to the development by the ITL administrator of common operational procedures, recommended practices and information sharing measures for registry systems, in accordance with decision 16/CP.10.
- 48. Participation in the RSA Forum is open to all administrators of national registries, the CDM registry, supplementary transaction log administrators (such as the CITL) and ITL vendors. The ITL administrator

⁸ Available at http://unfccc.int/kyoto_protocol/registry_systems/registry_status/items/4433.php.

Available at http://unfccc.int/kyoto_protocol/registry_systems/items/2723.php.

invites a number of participants from Parties to the Kyoto Protocol that are not included in Annex I to the Convention (hereinafter referred to as non-Annex I Parties) to participate. Although these Parties are not required under the Kyoto Protocol to implement registry systems, the participation of such experts is intended to increase the transparency of the RSA Forum and to share experiences with registry systems under the Kyoto Protocol with experts implementing similar systems for environmental policy purposes in non-Annex I Parties. Table 1 provides an overview of the three meetings of the RSA Forum organized by the secretariat during the reporting period.

Table 1. Meetings of the Registry System Administrators Forum during the reporting period

Meeting	Date	Location	Key objectives
Eighth	18 November 2008	Bonn, Germany	To share information on the status of registry systems and their connection to the ITL, CITL and CDM registries
			 To discuss the results of the EU ETS go-live EU ETS which took place in October 2008
			 To share information and experiences on the live environments of the ITL, CITL and national registries
			 To share information on common operational procedures, such as reconciliation, terms of use, and change and release management procedures
			 To inform RSAs on the status of various working groups under the RSA Forum and discuss the outcome of these working groups.
Ninth	18–19 March 2009	Bonn, Germany	 To inform RSAs on the annual review of national registries and the various processes supporting this review
			 To share information on the status of the ITL service desk and the procedures it supports
			 To share information on the performance of the ITL
			 To inform RSAs on the status of working groups and change requests
			 To present to RSAs possible changes to the DES in order to reduce common production issues
			• To inform RSAs on the status of the budget of the ITL
Tenth	28–29 October 2009	Berlin, Germany	To share information on the performance of the ITL and future improvements
			 To explain to RSAs the issue of fragmentation in registry systems
			 To inform RSAs of the outcome of the annual review of Kyoto Protocol units and national registries
			 To present to RSAs the process aimed at reviewing the methodology used to collect ITL user fees

Abbreviations: CDM = clean development mechanism, CITL = community independent transaction log,
DES = technical standards for data exchange between registry systems, EU ETS = European Union emissions trading system,
ITL = international transaction log, RSA = registry system administrator.

⁹ Decision 16/CP.10, paragraph 6 (c).

F. Activities of the working groups under the RSA Forum and Change Advisory Board

- 49. During the reporting period, the secretariat and RSAs continued to work with the working groups in the areas of reconciliation, change management and the SIAR process. The work performed by the working groups and the Change Advisory Board is outlined below:
 - (a) The **reconciliation** working group focused on the procedural aspects of the periodic comparison of Kyoto Protocol unit holdings and transactions between the ITL, the supplementary transaction log (currently the CITL) and the registries. The reconciliation working group met three times during the reporting period to take into account the experience gathered during the operation of the ITL and the technological improvements made to the ITL in its past releases. As a result, the reconciliation working group successfully managed to produce an updated procedure that allows inconsistencies between the ITL, CITL and registries to be dealt with more efficiently and reduces the need for manual interventions on the various systems, thereby reducing the potential for errors. In addition, the working group recommended changes to the DES to allow the further streamlining of reconciliation handling in the registry system;
 - (b) The standard independent assessment report working group met once during the reporting period to complete its work; the purpose of this work was to extend the common operational procedures for the initial independent assessment reports to annual reporting and reviews, aligning them with the annual review process under Article 8 of the Kyoto Protocol, in accordance with decisions 15/CMP.1 and 22/CMP.1;
 - (c) The **Change Advisory Board** (CAB), established in accordance with the change management procedure, met four times during the reporting period and considered the changes described in table 2.

Table 2. Changes considered by the Change Advisory Board during the reporting period

Proposed change	Date proposed	Status
Generic web service support	20 October 2008	Completed
Update the reconciliation procedure	13 November 2008	Completed
Update annex E of the data exchange standards to include references to relevant decisions	11 February 2009	Completed
Manage out-of-sequence messages in the registry system	13 February 2009	Completed
Clarify client and server timeouts	13 February 2009	Ongoing
Undo voluntary cancellations ^a	8 May 2009	Completed
Extend the use of AcceptMessage web service operation	8 June 2009	Ongoing
Limit the number of unit blocks per transaction	9 June 2009	Ongoing
Revise the flow of transaction messages	29 June 2009	Ongoing
Revise the check 3016 description ^b	3 July 2009	Completed
Remove check 5210 ^c	7 July 2009	Completed
Defragment the registry system	22 August 2009	Ongoing
Update annex H of the data exchange standards to establish a foundation test suite	31 August 2009	Ongoing

^a As a result of this change, a new common operational procedure has been established.

^b This check description in the data exchange standards is 'Transactions for which a supplementary transaction log discrepancy has been previously identified cannot be accepted or rejected'.

^c This check description in the data exchange standards is 'A transaction cannot contain many-to-many relationships between replaced and replacing blocks'.

- 50. Several voluntary cancellations performed erroneously by legal entities and the follow-up requests sent by RSAs to the secretariat to reverse the effect of such cancellations resulted in a change request being proposed to the CAB. The CAB considered three options, each maintaining the integrity of accounting of Kyoto Protocol units and, following a cost-benefit analysis, the option chosen served as a foundation for the establishment of a new agreed procedure to reverse voluntary cancellations.
- 51. In addition to the work performed by the existing working group during the reporting period, the establishment of an **incident and problem management** working group was proposed during the ninth RSA Forum to tackle incident management and problem management in the registry system as a whole. The secretariat carried out the preparatory work, which it is hoped will enable the incident and problem management working group to complete its work in the first half of 2010.
- 52. Table 3 shows the working groups active during the reporting period under the RSA Forum, the number of members in each group and the number of meetings held since their establishment.

Table 3. Working groups established under the Registry System Administrators Forum in the reporting period

Working group	Objective	Members	Meetings held
Change management	To elaborate on how change is managed in the registry system	8	10
Reconciliation	To elaborate on the common operational procedure for reconciliation	8	7
Standard independent assessment report	To implement the procedure that registries must follow during their annual assessment	8	4
Standard electronic format	To elaborate detailed specifications in accordance with decision 14/CMP.1	7	4

G. Interactive exercise

- 53. The CMP, by its decision 12/CMP.1, requested the ITL administrator to facilitate an interactive exercise demonstrating the functioning of the ITL with other registry systems and the full conformity of the performance of the ITL with relevant decisions and specifications for the ITL, and to include information on this exercise in its annual report to the CMP. ¹⁰
- 54. The CMP, at its fourth session, requested the ITL administrator to conduct a second interactive exercise at the thirtieth session of the SBI, ¹¹ which would include the CDM registry and representative national registries and would demonstrate, inter alia, the ability of the ITL to automatically perform the key checks defined in the DES.
- 55. The main objectives of the second interactive exercise were to demonstrate the overall functionality and connectivity of the ITL with registry systems, and to enable the interaction of participants with the user interface of the ITL, national registries and the CDM registry. The use of the German national registry, based on the Community Registry software of the European Commission, in addition to the Austrian registry and the CDM registry, ensured that registries used in the demonstration were representative. The key checks defined in the DES were demonstrated by providing the participants with real-time access to the ITL log files. Moreover, an application was made available by the secretariat to demonstrate other checks that are part of the

¹⁰ The information on the first interactive exercise is available in document FCCC/KP/CMP/2008/7, paragraphs 47–51.

¹¹ FCCC/KP/CMP/2008/11, paragraph 70.

DES in addition to those demonstrated during the hands-on activities performed by participants during the exercise.

- 56. The second ITL interactive exercise was conducted on 6 June 2009. It was prepared, conducted and supported by the ITL team members and three RSAs, including the RSA of the CDM registry. The secretarait would like to express its gratitude to the RSAs of Austria and Germany who helped to make this second interactive exercise a success. The exercise was divided into the following three parts:
 - (a) A presentation on the Kyoto Protocol transactions and the registry system;
 - (b) A demonstration of the ITL, national registries and the CDM registry;
 - (c) A hands-on exercise.
- 57. Twenty-six participants from the following Parties attended the exercise: Algeria, Australia, Austria, Canada, China, Czech Republic, France, Germany, Honduras, Italy, Japan, Poland, Slovakia, Spain, Sweden, Thailand and Ukraine.

III. Organizational arrangements and resources

58. The functions of the ITL administrator are performed by the Reporting, Data and Analysis programme of the secretariat. This programme is also responsible for the substantive work of the secretariat relating to other aspects of emissions trading and the accounting of assigned amounts under the Kyoto Protocol, as well as those relating to the submission, analysis and review of information submitted by Parties under the Convention and its Kyoto Protocol, and the intergovernmental negotiations on national communications, inventories, assigned amounts, registry systems and policy instruments.

A. Resource requirements and expenditure

- 59. The resource requirements for activities relating to the ITL and the ITL administrator to be funded from supplementary sources for the bienniums 2006–2007, ¹² 2008–2009 ¹³ and 2010–2011 ¹⁴ were identified in the proposed programme budget for each of these bienniums.
- 60. The SBI, at its thirtieth session, recommended a draft decision for adoption by the CMP at its fifth session, containing the following key elements related to funding for the ITL during the biennium 2010–2011:¹⁵
 - (a) The ITL budget will be calculated in euros and fees will be paid in euros. As the bulk of the ITL expenditure is in euros, this will ensure stable funding for the ITL by protecting its income and expenditure against exchange rate fluctuations;
 - (b) The level of the working capital reserve has been established at 8.3 per cent of the estimated expenditure for the ITL. This measure should further contribute to the stable funding for the ITL, as it provides protection against the late payment of ITL fees;
 - (c) To facilitate the budgeting of ITL user fees by Parties, the user fee for 2011 will be the same as the user fee for 2010;
 - (d) Parties should be notified at least four months in advance of the deadline for payment of their user fees for 2010 and 2011.
- 61. The CMP, by its decision 11/CMP.3, requested the Executive Secretary to provide a breakdown of the expenditures on the development and operation of the ITL with a view of optimizing the cost structure. Table 4 shows the expenditure of the ITL in the biennium 2008–2009, by object of expenditure.

¹³ FCCC/SBI/2007/8/Add.2.

¹⁴ FCCC/SBI/2009/2/Add.3.

¹² FCCC/SBI/2005/8/Add.2.

¹⁵ FCCC/SBI/2009/8/Add.1, pages 21–23, paragraphs 6–16.

Table 4. Expenditure of the international transaction log for the biennium 2008–2009 as at 30 June 2009

(United States dollars)

Expenditure	
Staff	1 812 209
Travel	65 940
Contractual services	3 044 221
Operational expenses	119 493
Acquisitions of furniture and equipment	2 886
Fellowships, grants, other	19 245
Programme support costs	652 598
Total	5 716 591

62. Table 5 shows the breakdown of expenditure expected for contractual services in 2008–2009 as a percentage of the costs ¹⁶ for this item in 2008 and 2009. Implementation services are services performed by the developer and operator of the ITL to support the implementation activities outlined in this report. Operation services are activities performed by the developer and operator of the ITL to sustain all operations of the ITL, such as maintaining the infrastructure and operating the ITL service desk. Operation procedure services cover the expenditures required to deliver the services related to common operational procedures pursuant to decision 16/CP.10. Consultancy expenditures are incurred when the secretariat needs to consult experts in specific fields. As the focus of the activities of the ITL administrator shifted from implementation to operation, the cost of implementation services decreased and the cost of operation services increased.

Table 5. Breakdown of expenditure for contractors and consultants in 2008–2009 *(per cent)*

2008	2009
43	11
52	72
1	1
1	12
3	4
	43

- 63. Operation services expenditures are mostly related to infrastructure services (more than 50 per cent of operation services expenditures), operation of the ITL service desk (more than 20 per cent), registry developer support (more than 10 per cent), software maintenance (10 per cent) and support to registry initialization and reinitialization, connectivity changes and recertification.
- 64. The CMP, at its fourth session, requested the ITL administrator to report on planned activities and the related resource requirements with a view to ensuring that adequate means are available to perform these activities.¹⁷

¹⁷ FCCC/KP/CMP/2008/11, paragraph 72.

_

¹⁶ For the purpose of this calculation, expenditures initially budgeted in 2008 and 2009 are considered.

- 65. In the biennium 2010–2011, the focus of activities will shift from implementing registry systems to ensuring that these systems continue to operate reliably. For 2010 and 2011 the planned staffing level is composed of three P-4 positions, two P-3 positions and two full-time positions at the General Service level. These members of staff will perform the following activities of the ITL administrator:
 - (a) Development activities:
 - (i) Initializing and performing go-live events for the remaining national registries;
 - (ii) Completing the development activities for the ITL data warehouse;
 - (iii) Continuing to support future changes to the DES and releases of the ITL as a result of the operational experience and changes adopted under the common operational procedures of the change management and release management;
 - (iv) Improving the common operational procedure of the SIAR process based on the lessons learned and feedback received following the first assessment cycle;
 - (v) Upgrading the hardware and software in the ITL infrastructure, as necessary;
 - (vi) Migrating the RSA extranet to a new platform, as the software that is currently used approaches end of life;
 - (vii) Any work arising from the member States of the European Community maintaining their respective national registries in a consolidated system from 1 January 2011 onwards; the European Community and its member States expressed its intention to do this during the ninth RSA Forum.
 - (b) Operational activities:
 - (i) Continuing to support the live operations and test activities of the ITL system and the registry systems in all supported environments;
 - (ii) Performing disaster recovery testing and security audits on the ITL system;
 - (iii) Performing all activities to support the operational procedures, including change management, and the implementation of the common operational procedure for the initial independent assessment reports and problem management for registries;
 - (iv) Continuing to facilitate cooperation among RSAs through the RSA Forum, its working groups and registry developers;
 - (v) Continuing to support the obligations of the ITL administrator in accordance with all relevant decisions.

B. Income to support the activities of the administrator of the international transaction log

- 66. As of 31 October 2009, USD 1,915,095 in ITL fees had been received from Parties for 2007, USD 4,396,605 for 2008 and USD 4,574,818 for 2009. The ITL fees received for 2007 differ from the corresponding figures reported in the fourth annual report of the ITL administrator, as a late payment of fees for 2007 was received at the end of 2008 after the publication of the report.
- 67. Of the budgeted fees, 23.4 per cent, or USD 584,905, is outstanding for 2007, 2.7 per cent or USD 121,455 is outstanding for 2008 and 3.6 per cent or USD 170,923 is outstanding for 2009 leading to a cumulative shortfall of USD 877,283 for the period 2007–2009. This cumulative shortfall is lower than the shortfall reported in the fourth annual report of the ITL administrator owing to the late payment of ITL fees for 2007 as mentioned in paragraph 66 above.

68. A total of EUR 216,925 was received from Parties as 2010 ITL fees. The secretariat would like to express its gratitude to Parties that have paid their fees and urge Parties that have not paid to do so without further delay in order to ensure the continuing operation of the ITL. The status of fees as at 31 October 2009 is shown in table 6.

Table 6. Fees for international transaction log activities in the period 2007–2009 and cumulative shortfall as at 31 October 2009

(United States dollars)

	2007	2008	2009
Fees budgeted	2 500 000	4 518 060	4 745 741
Fees received	1 915 095	4 396 605	4 574 818
Shortfall	584 905 (23.4 %)	121 455 (2.7%)	170 923 (3.6%)
Cumulative shortfall	584 905	706 360	877 283

69. Delays in receiving ITL fees from Parties have already been noted in previous annual reports of the ITL administrator. The situation has not improved in 2009, as only 60 per cent of ITL fees were received by April 2009. Figure 9 shows the ITL fees received for 2009 in 2008 and 2009 as at 31 October 2009 and the cumulative percentage of resource requirements, by month.

1 600 100 User fees received 90 1 400 Percentage of total resource (thousands of United States dollars) 80 requirements Amount of user fees received 1 200 70 1 000 60 800 50 40 600 30 400 20 200 10

Figure 9. User fees for 2009 received in 2008 and 2009

70. The establishment of a working capital reserve equivalent to 8.3 per cent of the resource requirements for 2010 and 2011, in addition to budget optimizations and tight cost control on the project, will help minimize the impact of delays in payments of ITL user fees. These measures, combined with the decision to manage the

¹⁸ FCCC/KP/CMP/2006/7, FCCC/KP/CMP/2007/5 and FCCC/KP/CMP/2008/7.

FCCC/KP/CMP/2009/19

Page 22

ITL budget in euros, have led to an ITL that is now self-sustaining, given the current funding level, expenditure and methodology to collect ITL user fees.

71. In accordance with decision 11/CMP.3, one national registry was suspended from using the ITL services in 2009 due to non-payment of the fee for 2008.

C. Actions to optimize the cost structure of the international transaction log

- 72. The CMP, at its fourth session, recognized the importance of the various ITL testing environments and requested the ITL administrator to work in collaboration with the RSAs to optimize the costs of maintaining these environments.¹⁹
- 73. In order to reduce ITL costs, the secretariat has taken the following actions that have not affected the level of service to registries:
 - (a) The type of digital certificates used within the registry system has been reviewed.

 Digital certificates that are as secure as previous certificates but are more cost-effective are now installed upon renewal of expired certificates;
 - (b) Support, go-live and coordination activities are carried out by secretariat staff rather than contractors:
 - (c) The number of secretariat staff in charge of the ITL has been reduced by one member of staff at the Professional level and one full-time member of staff at the General Service level as a result of the shift in focus of the activities from implementation to operation;
 - (d) Key improvements in the DES, such as handling of out-of-sequence messages, combined with enhancements in the ITL software, including its administration application, have helped to limit costs relating to the ITL service desk by reducing the number of incidents and facilitating their resolution.

D. Proposals to optimize the cost structure of the international transaction log

- 74. The secretariat is seeking ways to optimize further the ITL cost structure and is currently considering the following measures:
 - (a) Further enhancing the registry systems, the DES and the common operational procedures in order to reduce support and service costs;
 - (b) Maximizing the participation of RSAs during the implementation of the SIAR process. Ideally, RSAs should be fully in charge of the implementation of this process.
- 75. A large share of the expenditures related to the ITL service desk are for manual interventions performed when transactions are delayed or discrepant and reconciliations are delayed or inconsistent. A few registries are responsible for the majority of discrepant transactions and inconsistent reconciliations. Figure 10 shows the percentage of discrepancies and inconsistencies caused by the top six registries. For example, registry 2 in figure 10 caused 29.2 per cent of all discrepant transactions and 10.3 per cent of all inconsistent reconciliations. In total, these six registries caused 89.8 per cent of all discrepancies and 82.4 per cent of all inconsistent reconciliations.

¹⁹ FCCC/KP/CMP/2008/11, paragraph 65.

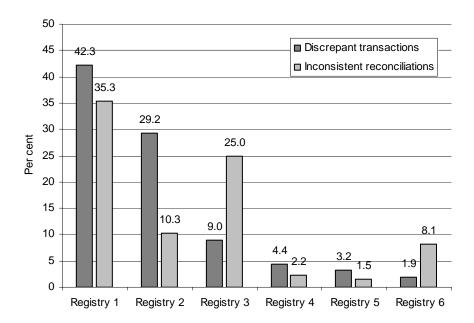
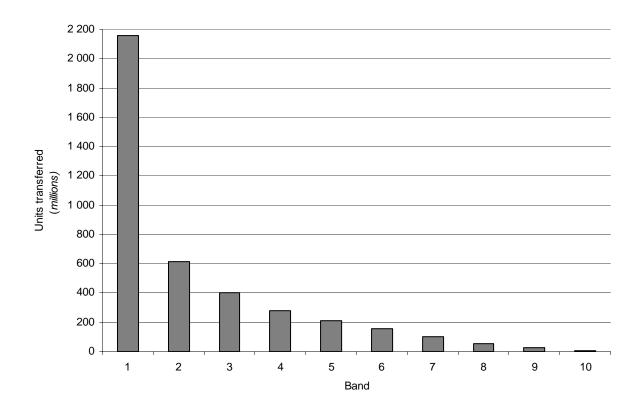


Figure 10. Discrepant transactions and inconsistent reconciliations for the top six registries

- 76. The CMP, at its fourth session, requested the ITL administrator to compile sufficient information on transactions in the ITL and provide it in the annual reports of the ITL administrator to the CMP for 2009 and 2010. The information on the number of transactions and number of units involved in transactions is available in annex IV and annex V.
- 77. The number of Kyoto Protocol units transferred in each transaction varies significantly between transactions. Figure 11 shows the distribution of the number of units transferred per ten per cent transaction bands. For example, the top 10 per cent transactions (according to the number of units contained in these transactions) transferred 2,156,158,045 units while the next 10 per cent transactions transferred 615,837,798 units, and so on.

²⁰ FCCC/KP/CMP/2008/11, paragraph 67.

Figure 11. Distribution of number of Kyoto Protocol units transferred, grouped per ten per cent bands



Annex I
Registry status as at 31 October 2009

	Date independent assessment report	Date of live connection to the international
Registry	was issued	transaction log
Australia	19 December 2008	19 December 2008
Austria	12 July 2007	16 October 2008
Belgium	7 December 2007	16 October 2008
Bulgaria	10 April 2008	16 October 2008
Canada	12 June 2008	Not available
Croatia	30 April 2008	Not available
Clean development mechanism registry	Not applicable	14 November 2007
Czech Republic	1 August 2007	16 October 2008
Denmark	16 October 2008	16 October 2008
Estonia	12 November 2007	16 October 2008
European Community registry	1 February 2008	16 October 2008
Finland	16 November 2007	16 October 2008
France	9 November 2007	16 October 2008
Germany	23 November 2007	16 October 2008
Greece	27 September 2007	16 October 2008
Hungary	8 August 2007	11 July 2008
Iceland	3 January 2008	Not available
Ireland	19 September 2007	16 October 2008
Italy	5 December 2007	16 October 2008
Japan	9 July 2007	14 November 2007
Latvia	13 November 2007	16 October 2008
Liechtenstein	7 December 2007	21 October 2008
Lithuania	29 October 2007	16 October 2008
Luxembourg	7 December 2007	16 October 2008
Monaco	9 April 2008	Not available
Netherlands	19 September 2007	16 October 2008
New Zealand	27 July 2007	3 December 2007
Norway	27 September 2007	21 October 2008
Poland	5 December 2007	16 October 2008
Portugal	24 October 2007	16 October 2008
Romania	30 April 2008	16 October 2008
Russian Federation ^a	12 November 2007	4 March 2008
Slovakia	13 September 2007	16 October 2008
Slovenia	25 October 2007	16 October 2008
Spain	8 October 2007	16 October 2008
Sweden	9 November 2007	16 October 2008
Switzerland	8 August 2007	4 December 2007
Ukraine	10 December 2007	28 October 2008
United Kingdom	16 August 2007	16 October 2008

^a Live operation of the registry was suspended in 2009.

Annex II

Status of international transaction log fee payments for the biennium 2008–2009 as at 31 October 2009

(United States dollars)

		2008			2009	
Party	Budgeted	Received	Outstanding	Budgeted	Received	Outstanding
Australia	18 060	18 060	0	110 201	110 201	0
Austria	70 290	70 290	0	71 680	71 290	390
Belgium	87 345	87 345	0	89 072	89 072	0
Bulgaria	1 575	1 575	0	1 606	1 606	0
Canada	201 420	201 420	0	205 402	205 402	0
Croatia	0	0	0	45 870	0	45 870
Czech Republic	22 275	22 275	0	22 715	22 715	0
Denmark	58 545	58 545	0	59 702	59 682	20
Estonia	1 260	1 260	0	1 285	1 285	0
European Community	118 890	118 890	0	121 241	121 241	0
Finland	44 685	44 685	0	45 568	45 543	25
France	472 365	472 365	0	481 704	481 704	0
Germany	679 635	679 635	0	693 073	693 073	0
Greece	47 205	47 205	0	48 138	48 138	0
Hungary	19 350	19 350	0	19 733	19 733	0
Iceland	32 670	32 670	0	33 316	33 316	0
Ireland	35 280	35 280	0	35 978	35 978	0
Italy	402 480	402 480	0	410 437	410 437	0
Japan	661 500	661 500	0	674 579	674 579	0
Latvia	1 440	1 440	0	1 468	1 468	0
Liechtenstein	8 325	8 325	0	8 490	8 490	0
Lithuania	2 475	2 475	0	2 524	2 524	0
Luxembourg	6 750	6 750	0	6 883	6 883	0
Monaco	8 010	8 010	0	8 168	8 168	0
Netherlands	148 410	148 410	0	151 344	151 336	8
New Zealand	42 525	42 525	0	43 366	43 366	0
Norway	102 690	102 690	0	104 720	104 720	0
Poland	39 690	39 690	0	40 475	40 451	24
Portugal	41 760	41 760	0	42 586	42 586	0
Romania	5 535	5 535	0	5 644	5 644	0
Russian Federation	121 455	0	121 455	123 856	0	123 856
Slovakia	4 995	4 995	0	5 094	5 094	0
Slovenia	7 605	7 605	0	7 755	7 755	0
Spain	235 170	235 170	0	239 820	239 820	0
Sweden	84 870	84 870	0	86 548	86 518	30
Switzerland	122 175	122 175	0	124 591	124 591	0
Ukraine	33 030	33 030	0	33 683	33 683	0
United Kingdom	526 320	526 320	0	536 726	536 726	0
Total	4 518 060	4 396 605	121 455	4 745 041	4 574 818	170 223

 $\frac{\text{Annex III}}{\text{Status of international transaction log fee payments for the biennium 2010–2011}}{\text{as at 31 October 2009}}$

(Euros)

		2010			2011	
Party	Budgeted	Received	Outstanding	Budgeted	Received	Outstanding
Australia	70 609	0	70 609	70 609	0	70 609
Austria	45 482	0	45 482	45 482	0	45 482
Belgium	56 517	0	56 517	56 517	0	56 517
Bulgaria	1 019	0	1 019	1 019	0	1 019
Canada	130 330	0	130 330	130 330	0	130 330
Croatia	32 062	0	32 062	32 062	0	32 062
Czech Republic	14 413	14 413	0	14 413	0	14 413
Denmark	37 882	0	37 882	37 882	0	37 882
Estonia	815	815	0	815	0	815
European Community	76 928	0	76 928	76 928	0	76 928
Finland	28 914	0	28 914	28 914	0	28 914
France	305 647	0	305 647	305 647	0	305 647
Germany	439 762	0	439 762	439 762	0	439 762
Greece	30 544	0	30 544	30 544	0	30 544
Hungary	12 521	0	12 521	12 521	0	12 521
Iceland	21 139	0	21 139	21 139	0	21 139
Ireland	22 828	22 828	0	22 828	0	22 828
Italy	260 427	0	260 427	260 427	0	260 427
Japan	428 028	0	428 028	428 028	0	428 028
Latvia	932	932	0	932	0	932
Liechtenstein	5 387	0	5 387	5 387	0	5 387
Lithuania	1 601	0	1 601	1 601	0	1 601
Luxembourg	4 368	0	4 368	4 368	0	4 368
Monaco	5 183	0	5 183	5 183	0	5 183
Netherlands	96 029	0	96 029	96 029	0	96 029
New Zealand	27 516	27 516	0	27 516	0	27 516
Norway	66 446	66 446	0	66 446	0	66 446
Poland	25 682	0	25 682	25 682	0	25 682
Portugal	27 021	0	27 021	27 021	0	27 021
Romania	3 581	0	3 581	3 581	0	3 581
Russian Federation	78 588	0	78 588	78 588	0	78 588
Slovakia	3 232	0	3 232	3 232	0	3 232
Slovenia	4 921	4 921	0	4 921	0	4 921
Spain	151 168	0	151 168	151 168	0	151 168
Sweden	54 916	0	54 916	54 916	0	54 916
Switzerland	79 054	79 054	0	79 054	0	79 054
Ukraine	21 372	0	21 372	21 372	0	21 372
United Kingdom	340 559	0	340 559	340 559	0	340 559
Total	3 014 423	216 925	2 797 498	3 014 423	0	3 014 423

 $\frac{Annex\ IV}{Number\ of\ transactions\ proposed\ to\ the\ international\ transaction\ log^a}$ from 1 November 2008 to 31 October 2009

Registry	Acquisition ^b	Transfer ^c	$\mathbf{Forwarding}^{\mathrm{d}}$	Internal transfer ^e	Issuance ^f	Retirement ^g	Cancellation ^h	Total
Australia ⁱ	0	0	0	0	1	0	0	1
Austria	681	1 216	0	1 078	0	1	0	2 976
Belgium	247	339	0	818	0	0	0	1 404
Bulgaria	6	6	0	0	0	0	0	12
Clean development mechanism registry	0	38	1 883	0	507	0	0	2 428
European Community registry	0	0	0	6	1	0	0	7
Czech Republic	669	925	0	1 553	15	0	0	3 162
Denmark	9 120	11 877	0	17 052	0	2	11	38 062
Estonia	19	39	0	156	0	0	0	214
Finland	341	296	0	1 541	0	1	3	2 182
France	11 248	8 503	0	74 673	4	1	16	94 445
Germany	3 438	3 252	0	9 725	2	0	35	16 452
Greece	9	146	0	540	0	1	0	696
Hungary	175	223	0	863	6	0	0	1 267
Ireland	212	103	0	285	0	1	1	602
Italy	452	616	0	4 089	0	0	0	5 157
Japan	434	44	0	0	0	22	10	510
Latvia	23	65	0	238	0	0	0	326
Liechtenstein	3	2	0	5	0	0	0	10
Lithuania	57	175	0	361	1	0	0	594
Luxembourg	53	31	0	34	0	0	0	118
Netherlands	3 537	2 669	0	2 023	0	1	2	8 232
New Zealand	7	15	0	0	6	0	0	28

(continued)

Registry	Acquisition ^b	Transfer ^c	Forwarding ^d	Internal transfer ^e	Issuance ^f	Retirement ^g	Cancellation ^h	Total
Norway	276	53	0	329	0	1	4	663
Poland	651	771	0	3 318	0	0	0	4 740
Portugal	549	555	0	604	0	1	0	1 709
Romania	128	361	0	871	0	1	0	1 361
Russian Federation	0	0	0	0	0	0	0	0
Slovakia	275	431	0	538	0	0	0	1 244
Slovenia	74	58	0	268	0	1	0	401
Spain	1 992	2 420	0	5 121	0	0	1	9 534
Sweden	254	256	0	1 608	0	1	165	2 284
Switzerland	852	2 525	0	0	0	0	174	3 551
Ukraine	0	23	0	0	9	0	0	32
United Kingdom	6 836	4 623	0	9 219	0	1	36	20 715
Total	42 618	42 656	1 883	136 916	552	36	458	225 119

^a Completed transactions of assigned amount units (AAUs), emission reduction units (ERUs), removal units (RMUs), certified emission reductions (CERs), long-term emission reductions and temporary emission reductions have been accounted for.

^b Acquisition from another national registry. See paragraph 30 of the annex to decision 13/CMP.1.

^c Transfer to another national registry. See paragraph 30 of the annex to decision 13/CMP.1.

^d Forwarding from the clean development mechanism (CDM) registry to a national registry. See paragraph 66 (b) of the annex to decision 5/CMP.1. Note that this excludes transfers from the CDM registry to a national registry in support of the Adaptation Fund.

^e Transfer within the registry. See paragraph 30 of the annex to decision 13/CMP.1

See paragraphs 23–29 of the annex to decision 13/CMP.1, paragraphs 64–66 of the annex to decision 3/CMP.1 and paragraphs 36 and 37 of the annex to decision 5/CMP.1. Issuance of ERUs by converting AAUs or RMUs is included.

^g See paragraph 34 of the annex to decision 13/CMP.1.

^h See paragraph 33 of the annex to decision 13/CMP.1.

¹ Australia went live with the international transaction log on 19 December 2009.

Annex V

Number of Kyoto Protocol units subject to transactions proposed to the international transaction log from 1 November 2008 to 31 October 2009

Registry	Acquisition	Transfer	Net transfer ^a	Forwarding	Internal transfer	Issuance	Retirement	Cancellation
Australia	0	0	0	0	0	2 957 579 143	0	0
Austria	43 028 296	33 187 526	- 9 840 770	0	113 310 556	0	31 998 611	0
Belgium	24 760 140	32 530 642	7 770 502	0	134 651 248	0	0	0
Bulgaria	100 005	100 005	0	0	0	0	0	0
Clean development mechanism registry	0	1 830 259	1 830 259	161 431 307	0	136 232 752	0	0
European Community registry	0	0	0	0	6 247 875	10 715 305	0	0
Czech Republic	48 145 054	129 249 772	81 104 718	0	348 567 232	317 899	0	0
Denmark	967 677 191	956 039 572	- 11 637 619	0	1 147 744 846	0	26 546 437	8 212
Estonia	1 497 856	511 142	- 986 714	0	96 301 571	0	0	0
Finland	14 971 464	13 685 859	- 1 285 605	0	121 015 254	0	35 994 481	30
France	1 008 431 264	976 106 931	- 32 324 333	0	3 578 749 767	348 339	124 058 646	75 973
Germany	358 312 430	305 964 132	- 52 348 298	0	6 454 749 706	143 492	0	266 654
Greece	806 897	4 531 411	3 724 514	0	600 798 136	0	69 854 442	0
Hungary	6 572 113	22 328 614	15 756 501	0	290 993 015	1 145 326	0	0
Ireland	14 680 981	8 079 611	- 6 601 370	0	360 175 126	0	20 381 707	245
Italy	33 235 739	32 783 980	- 451 759	0	1 769 105 152	0	0	0
Japan	128 603 035	8 030 712	- 120 572 323	0	0	0	58 792 339	18 418
Latvia	771 550	14 365 924	13 594 374	0	7 119 593	0	0	0
Liechtenstein	89 110	59 735	- 29 375	0	99 115	0	0	0
Lithuania	2 532 859	6 455 705	3 922 846	0	64 480 487	27 250	0	0
Luxembourg	1 588 434	1 144 466	- 443 968	0	24 554 716	0	0	0
Netherlands	274 386 979	273 990 784	- 396 195	0	2 816 255 168	0	83 512 630	14
New Zealand	402 000	1 091 364	689 364	0	0	496 567	0	0

(continued)

Registry	Acquisition	Transfer	Net transfer ^a	Forwarding	Internal transfer	Issuance	Retirement	Cancellation
Norway	14 275 040	7 396 685	- 6 878 355	0	149 436 132	0	19 342 149	6 520
Poland	25 793 751	30 933 624	5 139 873	0	1 648 666 668	0	0	0
Portugal	31 681 817	30 713 956	- 967 861	0	100 291 243	0	29 908 442	0
Romania	5 863 906	28 391 778	22 527 872	0	636 935 181	0	63 816 826	0
Russian Federation	0	0	0	0	0	0	0	0
Slovakia	11 322 897	37 055 925	25 733 028	0	72 280 406	0	0	0
Slovenia	1 155 487	779 816	- 375 671	0	26 462 986	0	8 860 105	0
Spain	125 215 067	104 992 219	- 20 222 848	0	1 180 973 655	0	0	474
Sweden	7 245 774	15 400 546	8 154 772	0	76 477 479	0	20 101 365	123 065
Switzerland	163 283 048	199 113 462	35 830 414	0	0	0	0	187 163
Ukraine	0	53 729 627	53 729 627	0	0	2 091 888	0	0
United Kingdom	689 914 740	677 599 399	- 12 315 341	0	1 964 006 546	0	265 508 431	566 991
Total	4 006 344 924	4 008 175 183	1 830 259	161 431 307	23 790 448 859	3 109 097 961	858 676 611	1 253 759

^a Net transfer is equal to transfer minus acquisition.