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Matters relating to the mechanisms under 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

The eleventh 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 in the period from 1 October 2014 to 30 September 2015. The report also contains information on transactions of Kyoto Protocol units, as requested at CMP 6, as well as information on the outcomes of the 17th Registry System Administrators Forum, which took place on 17 and 18 September 2015 in Bonn, Germany. The CMP, by 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 to provide guidance to the secretariat and Parties, as necessary, concerning the implementation of registry systems.

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Contents

	<i>Paragraphs</i>	<i>Page</i>
I. Introduction	1–7	3
A. Mandate	1–3	3
B. Scope of the note	4–5	3
C. Possible action by the Subsidiary Body for Implementation	6–7	3
II. Work undertaken since the publication of the tenth annual report of the administrator of the international transaction log under the Kyoto Protocol.....	8–61	4
A. Summary of work undertaken.....	8–10	4
B. Implementation activities.....	11–19	4
C. Operational activities	20–39	5
D. Independent assessment of national registries and go-live activities.....	40–45	11
E. Registry System Administrators Forum.....	46–49	12
F. Working group on the second commitment period.....	50–55	13
G. Security working group	56–60	14
H. Working group on combatting criminal activity in registry systems	61	14
III. Organizational arrangements and resources	62–73	14
A. Resource requirements and expenditure	63–70	15
B. Income to support the activities of the administrator of the international transaction log.....	71–72	17
C. Actions and proposals to optimize the cost structure of the international transaction log.....	73	19
Annexes		
I. Registry status as at 30 September 2015		20
II. Scale of fees and status of international transaction log fee payments for the biennium 2014–2015 as at 30 September 2015.....		21
III. Number of transactions proposed to the international transaction log from 1 October 2014 to 30 September 2015		22
IV. Number of Kyoto Protocol units subject to transactions proposed to the international transaction log from 1 October 2014 to 30 September 2015.....		24

I. Introduction

A. Mandate

1. The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), by decision 13/CMP.1, paragraph 38, requested the secretariat to establish and maintain an international transaction log (ITL) 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 decision 16/CP.10, paragraph 6(m), requested the secretariat, as the ITL administrator, 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 decision 12/CMP.1, paragraph 11, 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 eleventh annual report of the ITL administrator to the CMP 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. The report also contains information on transactions of Kyoto Protocol units.
5. The reporting period covered by this report is 1 October 2014 to 30 September 2015.

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 to request the CMP to provide guidance to the secretariat and Parties, as necessary, concerning the implementation of registry systems. In particular, the SBI may wish to provide guidance to RSAs and the ITL administrator regarding whether voluntary cancellations of Kyoto Protocol units, valid for the first commitment period of the Kyoto Protocol, should continue to be allowed after carry-overs related to the first commitment period have been completed (see para. 54 below).
7. The SBI may also wish to take note of the concerns expressed by RSAs with regard to the need for and feasibility of reporting on the serial numbers of unit blocks as part of the report on the additional period for fulfilling commitments under the first commitment period of the Kyoto Protocol (see para. 55 below).

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

A. Summary of work undertaken

8. The ITL administrator has continued to convene the RSA Forum and to coordinate the work of its working groups.

9. The activities related to the seventh annual assessment of national registries and accounting of Kyoto Protocol units were only partially completed, as only five Parties have submitted their national inventory reports (NIRs) for 2014. The completed activities included the evaluation of the standard electronic format (SEF) reports and the generation of the standard independent assessment reports (SIARs) on the basis of the availability of NIRs. As a result, five SIAR assessments were completed during the reporting period.

10. The ITL administrator has continued to support the operations of the ITL. Detailed information on its operational activities and performance is provided in chapter II.C below.

B. Implementation activities

1. International transaction log releases

11. During the reporting period, there were three releases of ITL software. The first release, as specified in the tenth annual report of the ITL administrator,¹ containing the implementation of several provisions of the Doha Amendment,² the integration of the new clean development mechanism (CDM) carbon dioxide capture and storage projects³ and support for the modalities for expedited eligibility,⁴ was deployed in November 2014. The second release, deployed in May 2015, was in support of the technology refresh of the ITL infrastructure (see para. 17 below). The third release, deployed in June 2015, contained several security-related fixes and improvements to the ITL software.

2. Standard electronic format reporting tool releases

12. By decision 15/CMP.1, annex, paragraph 11, Parties included in Annex I to the Convention (Annex I Parties) were requested to submit a SEF report, including information on emission reduction units, certified emission reductions (CERs), temporary CERs, long-term CERs, assigned amount units and removal units from their national registry transferred or acquired in the year preceding the reporting year, on an annual basis.

13. The ITL administrator has implemented a new software application to enable the preparation of the SEF reports on the basis of the reporting requirements for the first⁵ and second⁶ commitment periods of the Kyoto Protocol. The new SEF reporting tool has been tested with the support of RSAs. The ITL administrator released the initial version of the new SEF reporting tool to RSAs in January 2015, which was used by Annex I Parties and the secretariat to generate and compare the SEF reports in 2015.

¹ FCCC/SBI/2014/INF.18, paragraph 10.

² Decision 1/CMP.8.

³ Decision 10/CMP.7.

⁴ Decision 7/CMP.9.

⁵ Decision 14/CMP.1.

⁶ Decision 2/CMP.8, paragraph 5, and FCCC/SBSTA/2015/L.13.

14. Another version of the SEF reporting tool, implementing the requirements of the true-up period⁷ of the first commitment period of the Kyoto Protocol, was prepared during the reporting period. That version of the tool was provided to RSAs in September 2015 and will be used for the upcoming true-up period reporting and assessment processes.

3. International transaction log operational procedures

15. Following the discussions on change management at previous RSA Forums, the ITL administrator provided RSAs with a new draft change management procedure in April 2015. A key aspect of the new procedure is to enable the greater involvement of RSAs in the overall change management process. After incorporating the feedback from RSAs, the final version of the updated procedure was presented at the 17th RSA Forum.

16. Following the request made by SBI 42,⁸ the ITL administrator and RSAs reviewed and updated the common operational procedure for the handling of security incidents in order to enable the resolution of any actual, suspected or potential breaches of confidentiality, availability or integrity of the information assets. A draft update of that procedure was presented at the 17th RSA Forum and was shared thereafter with RSAs for final review.

4. International transaction log technology maintenance

17. During the reporting period, a major and necessary technology refresh of the ITL infrastructure was conducted to update and renew its hardware and software components, including the operating system and third-party software. The operation took place in two phases, whereby four database servers were replaced in January 2015, followed by the replacement of six application servers in May 2015. The migration activities were planned with a view to maximizing business data safety while continuing to guarantee the availability of the service. The migrations were carried out without any loss of data and with an overall availability decrease of less than 0.15 per cent in the reporting period.

18. Following the technology refresh activities, the annual security audit of the ITL system was scheduled and conducted in September 2015 in order to ensure that the system was not subject to any security vulnerability and to verify that recommendations from the previous audit had been satisfactorily implemented.

19. Secure communications via digital e-mail certificates were introduced by the ITL service desk in July 2015 as an optional security measure to promote authentication, integrity and confidentiality of communications between the ITL service desk and RSAs.

C. Operational activities

1. Support for registry testing

20. During the reporting period, the ITL administrator supported the functional testing for the second commitment period of the Kyoto Protocol for two national registries.⁹

⁷ A 100-day period after final emissions have been reported for the commitment period, during which Parties have the opportunity to undertake final decisions necessary to achieve compliance with their commitments under Article 3, paragraph 1, of the Kyoto Protocol.

⁸ FCCC/SBI/2015/10, paragraph 45.

⁹ In accordance with annex H to the Data Exchange Standards, version 1.1.11, which contains functional test suites covering modalities, rules and guidelines for emissions trading under Article 17 of the Kyoto Protocol.

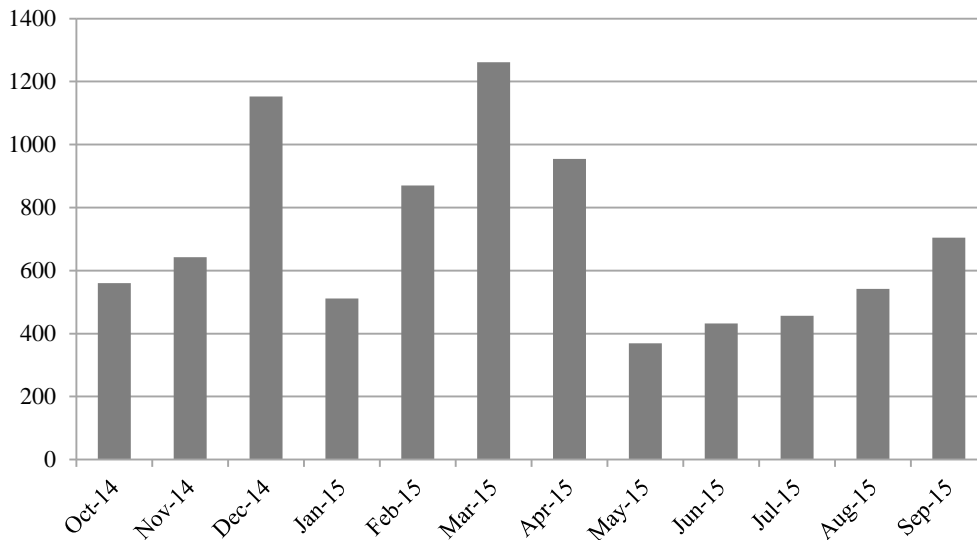
2. International transaction log disaster recovery testing

21. The annual disaster recovery testing of the ITL was executed in July 2015 in collaboration with the European Union Emissions Trading System (EU ETS) support teams and with the participation of three registries. The testing was successful and the time to failover, that is the time within which the ITL service is restored on the secondary site after a simulated disaster takes place on the primary site, was 190 minutes, where the recovery time objective for such a situation is 180 minutes. The exceeded time to failover was due to a condition inherent to the technology refresh activities, and the respective findings have been incorporated into the disaster recovery plan to ensure compliance with the recovery time objective in the future.

3. Transaction data and analysis

22. The volume of activity in the ITL can be measured through various transactional and operational metrics. Figure 1 shows the number of transactions proposed to the ITL in the production environment¹⁰ each month during the reporting period. Furthermore, the breakdown by registry of the number of transactions and the number of Kyoto Protocol units subject to transactions proposed to the ITL from 1 October 2014 to 30 September 2015 are shown in annexes III and IV, respectively.

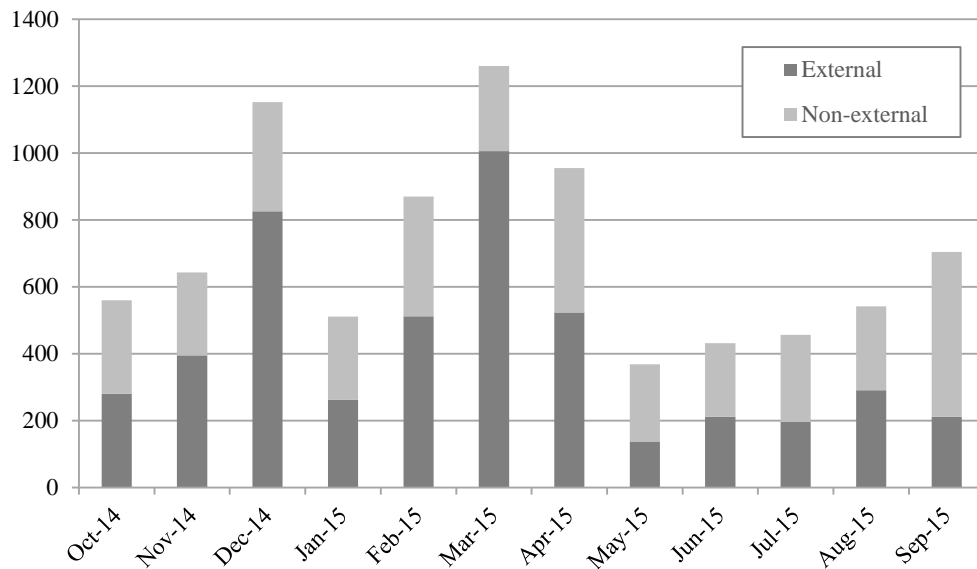
Figure 1
Number of transactions proposed to the international transaction log from 1 October 2014 to 30 September 2015



23. There are two types of transaction in the registry systems and the ITL: external transactions and non-external transactions. External transactions are transactions in which the units involved leave the originating registry and arrive in a different registry. Non-external transactions are transactions in which the units stay in the same registry. Figure 2 shows the evolution of the breakdown of external and non-external transactions in the ITL from 1 October 2014 to 30 September 2015.

¹⁰ The live system of the ITL used to support emissions trading under the Kyoto Protocol.

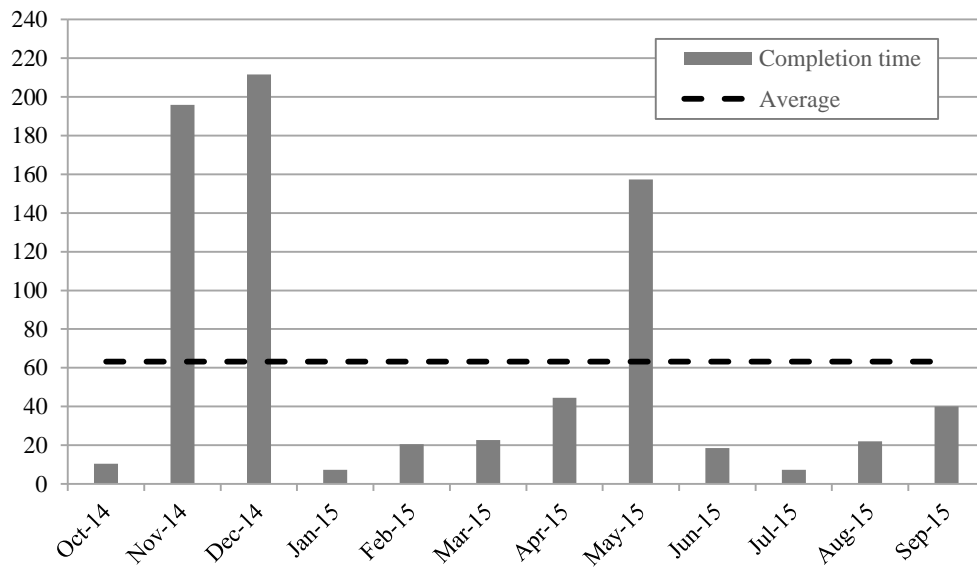
Figure 2
Number of external compared with non-external transactions from 1 October 2014 to 30 September 2015



24. Transactions proposed to the ITL end in one of three statuses: terminated, cancelled or completed.

25. The transaction completion time includes the latency incurred by the travel time of messages through the registry network and the processing time within registries, the ITL and the European Union Transaction Log (EUTL) if an EU ETS registry is involved in the transaction. The monthly averages of the transaction completion time from 1 October 2014 to 30 September 2015 are displayed in figure 3.

Figure 3
Monthly averages of transaction completion time in seconds from 1 October 2014 to 30 September 2015

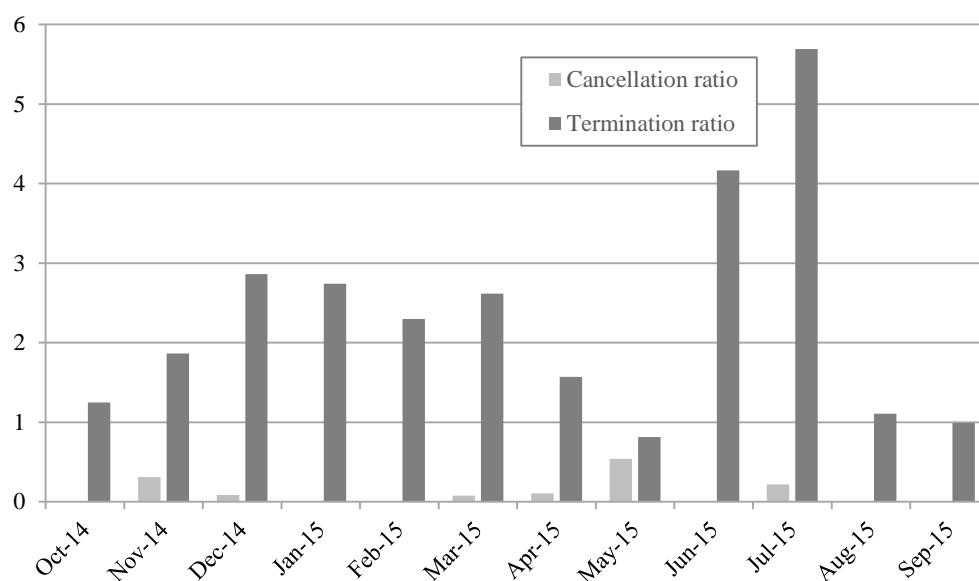


26. The longer completion times observed in November and December 2014 were due to connectivity issues experienced with a number of registries. In May 2015, a technical issue after the migration to the new application servers of the ITL also resulted in an increased average completion time, which was resolved shortly thereafter.

27. Transactions that are not compliant with ITL specifications in the Data Exchange Standards (DES) are terminated when they are proposed to the ITL. The transaction termination ratio is obtained by dividing the number of terminated transactions by the number of transactions proposed in a given time frame. This ratio can be considered as an indicator of the level of internal checking performed by registries to ensure that the proposed transaction and its data records are accurate. The evolution of the ratio from 1 October 2014 to 30 September 2015 is shown in figure 4.

28. When a transaction has not progressed in its workflow for 24 hours, it is cancelled in the ITL through the ITL transaction clean-up mechanism. The transaction cancellation ratio is obtained by dividing the number of cancelled transactions by the number of proposed transactions in a given time frame. This ratio can be considered as an indicator of the extent of communication problems in registry systems. Figure 4 provides the transaction cancellation ratios from 1 October 2014 to 30 September 2015.

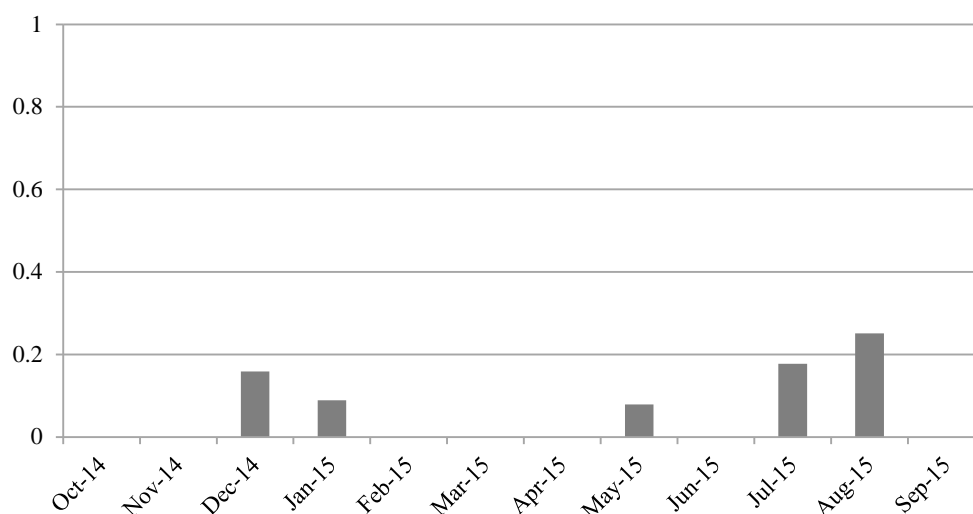
Figure 4
Transaction cancellation and termination ratios from 1 October 2014 to 30 September 2015
 (per cent)



29. The increased termination rates observed in June and July 2015 resulted from transactions proposed by national registries containing ineligible units applicable to the first commitment period of the Kyoto Protocol to be transferred between national registries.

30. The reconciliation process in the ITL ensures that registries keep an accurate record of their Kyoto Protocol unit holdings. The occurrence of a reconciliation inconsistency indicates a discrepancy between the ITL amounts and the records of the registry. The inconsistent reconciliation ratio is obtained by dividing the number of inconsistent reconciliations by the number of reconciliations initiated in a given time frame. It is an indicator of the capacity of registries to maintain accurate records of their Kyoto Protocol unit holdings. Figure 5 shows the inconsistent reconciliation ratios from 1 October 2014 to 30 September 2015.

Figure 5
Inconsistent reconciliation ratios from 1 October 2014 to 30 September 2015
(per cent)



31. The unavailability of the ITL prevents registries from performing their transactions. The ITL can be unavailable due to planned maintenance windows, of which RSAs are informed in advance, and unplanned outages caused by operational incidents. The availability of the ITL in the period from 1 October 2014 to 30 September 2015, taking into account unplanned outages, was 99.76 per cent.

32. The ITL started to receive units applicable to the second commitment period of the Kyoto Protocol in April 2013, when the first issuance of second commitment period CERs was made in the CDM registry. As at 30 September 2015, such CERs had been issued for 616 CDM projects, for a total of 158,327,281 units.

33. Out of the 158 million units of second commitment period CERs issued, more than 48 million units were held by 18 national registries.

34. Those national registries (the CDM registry excluded) proposed to the ITL a total of 671 transactions with the second commitment period units by the end of the reporting period. Out of 671 transactions, 566 were successful. The high termination ratio of transactions with those units is mostly due to mismatches between the commitment period of the accounts and that of the units, and to the use of first and second commitment period units in the same transaction proposal, which is not allowed by the DES.

4. International transaction log service desk

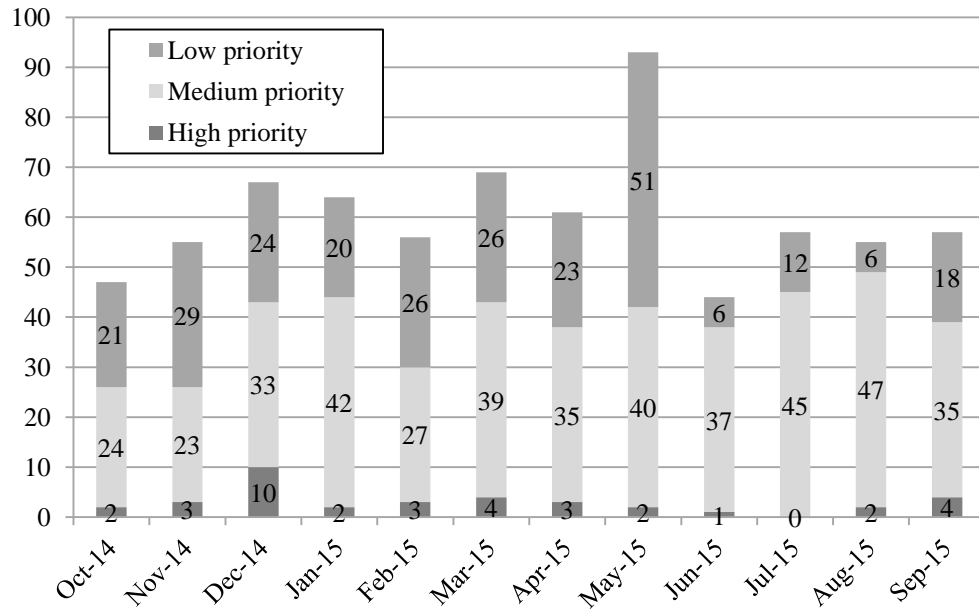
35. The ITL service desk is the focal point for all support provided to RSAs in the operation and testing of registries. The ITL service desk also carries out the technical activities related to the initialization and go-live processes under the supervision of the ITL administrator. The ITL service desk provides continuous support to RSAs from 8 p.m. on Sundays until midnight on Fridays on the basis of Coordinated Universal Time.

36. Figure 6 tracks the number of support requests handled by the ITL service desk during the reporting period, categorized by priority. High-priority support requests are initiated 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 affect transaction processing. Low-priority support requests are

related to information items or performance issues that do not directly affect transaction processing.

Figure 6

Number of support requests handled by the international transaction log service desk from 1 October 2014 to 30 September 2015



37. The increased number of low-priority support requests observed in May 2015 was the result of a bulk renewal of digital certificates necessary for the operation of registry systems.

5. Change management activities

38. The ITL administrator has established a change management procedure since the go-live of the ITL. The procedure is followed when making changes to the ITL software and to the procedures governing different processes.

39. In the reporting period, there were four ITL change requests, a list of which is provided in table 1.

Table 1
Changes submitted for the international transaction log from 1 October 2014 to 30 September 2015

<i>Change title^a</i>	<i>Date proposed</i>	<i>Status as at 30 September 2015</i>
RSNCM 58 – Check 5259 – Retirement disallowed after end of true-up ^b	25 August 2015	Approved
RSNCM 57 – Check 5318 – Time frame for carry-over ^b	25 August 2015	Approved
RSNCM 56 – Check 5121 – External transfers disallowed at end of true-up ^b	25 August 2015	Approved
RSNCM 54 – SIAR 2015 updates	12 January 2015	Approved

Abbreviation: SIAR = standard independent assessment report.

^a The documents contain the prefix RSNCM, which refers to registry systems network change management.

^b Approved on 7 October 2015.

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

1. Annual assessment activities

40. The process of creating the SIARs, mandated by decision 16/CP.10, paragraph 5(a), expands on the initial independent assessment of national registries. It defines the process to be followed by RSAs when reporting annually on changes in the national registries and providing information on accounting of Kyoto Protocol units, and guides the activities to be carried out by assessors when reviewing reported changes and accounting information. The final SIARs are forwarded to expert review teams for consideration as part of the review of national registries, in accordance with decision 16/CP.10, paragraph 6(k).

41. In accordance with decision 16/CP.10, paragraphs 5(a) and 6(c), the ITL administrator has continued to encourage and promote the engagement of RSAs in the SIAR process, with a view to stimulating the sharing of information on national registry related reporting and review, thus improving the quality of the information on national registries in the annual submissions and optimizing the ITL cost structure. In April 2015, the ITL administrator postponed its invitation for RSAs to participate in the SIAR process as assessors owing to the unavailability of the NIRs, which include essential information required to prepare the SIARs.

42. Before the registry assessment by the SIAR assessors, the Party submits an NIR and a SEF report to the secretariat. In 2015, 37 Parties submitted their annual SEF report with information on units applicable to the first commitment period of the Kyoto Protocol for 2014. Four Parties submitted their SEF report with information on units for the second commitment period of the Kyoto Protocol for 2013, while six Parties did so for 2014. Sixteen submissions of the first commitment period SEF tables were initially found to be inconsistent with the ITL records. Corrections were provided by the Parties concerned and the resubmissions were in line with the ITL records. Five NIRs containing information on changes to the national registries and Kyoto Protocol units assessed under the SIAR process were submitted during 2015.

43. The following issues regarding the assessed registries were identified:

(a) Some Parties did not fully comply with the requirement to make information publicly accessible as specified in decision 13/CMP.1, annex, paragraphs 44–48;

(b) Some Parties did not fully explain how the recommendations arising from the previous annual review had been addressed.

44. Those issues were addressed in the recommendations provided by the assessors in the final SIARs.

2. Go-live activities

45. In the reporting period, the ITL administrator supported the go-live activities of Monaco's national registry. As at 30 September 2015, all 37 national registries and the CDM registry were connected to the ITL.

E. Registry System Administrators Forum

46. The ITL administrator convenes the RSA Forum to coordinate the technical and management activities of RSAs and to provide a platform for RSAs to cooperate with each other and to provide input to the development of common operational procedures, recommended practices and information-sharing measures for registry systems, in accordance with decision 16/CP.10.

47. Participation in the RSA Forum is open to all national registry administrators, the CDM registry administrator and the EUTL administrator. A number of experts from Parties to the Kyoto Protocol that are not included in Annex I to the Convention are also invited to attend.

48. The 17th RSA Forum took place in Bonn, Germany, on 17 and 18 September 2015. The key objectives of the meeting were the following:

(a) To provide RSAs with an update on operational status and issues;

(b) To inform RSAs about the new versions of the ITL and SEF software and to propose the work to replace an obsolete web service encoding;

(c) To provide RSAs with feedback from the 2015 ITL user satisfaction survey;

(d) To provide RSAs with updates on change management, contact management, means of secure communication and testing arrangements;

(e) To provide RSAs with an update on the activities and outcomes of the working groups on the second commitment period, security and combatting criminal activity in registry systems;

(f) To discuss with RSAs reporting and assessment requirements under the true-up period of the first commitment period of the Kyoto Protocol;

(g) To inform RSAs about the UNFCCC training programmes for the review of greenhouse gas inventories and supplementary information under the Kyoto Protocol;

(h) To inform RSAs of and seek their feedback on the recent formatting updates in the DES;

(i) To inform RSAs about the new online platform for voluntary cancellations of CERs.

49. All of the above-mentioned objectives were met, with a number of comments and actions noted during the meeting and communicated to the RSAs.

F. Working group on the second commitment period

50. The purpose of the working group on the second commitment period is to assess the impact of decisions made at CMP 7, 8, 9 and 10 on registry systems and the ITL, and to recommend relevant changes to the DES and common operational procedures. The working group on the second commitment period also considers issues related to the transition from the first to the second commitment period of the Kyoto Protocol, such as the processes related to the true-up period.

51. During the reporting period, the working group on the second commitment period met eight times to address the following issues:

- (a) Carry-over transactions with a large number of unit blocks;
- (b) Types of transaction allowed after the end of the true-up period.

52. On the issue of carry-over transactions with a large number of unit blocks, the ITL administrator prepared and supported a specific test that demonstrated that carry-over transactions containing many unit blocks will not cause problems at the time of the carry-over.

53. On the issue of which types of transaction should be allowed or disallowed after the end of the true-up period, the working group recommended the following:

- (a) Transfers and acquisitions of Kyoto Protocol units valid for the first commitment period will not be allowed after 18 November 2015;
- (b) Retirement of Kyoto Protocol units valid for the first commitment period will not be allowed after 18 November 2015;
- (c) Carry-over of Kyoto Protocol units valid for the first commitment period will not be allowed before publication of the final compilation and accounting report of the Party concerned or after its carry-over transactions are complete.

54. The working group also considered whether voluntary cancellations of Kyoto Protocol units valid for the first commitment period should continue to be allowed after carry-overs related to the first commitment period have been completed, but was unable to reach agreement on this matter by the time of the preparation of this report. In addition, the working group could not agree on the destination account for remaining units cancelled after carry-over has been completed (the two options are the voluntary cancellation account or the mandatory cancellation account).

55. In addition, the working group contributed to the elaboration of the template for the report on the true-up period and the assessment template for that report. As part of that elaboration, members of the working group expressed concerns about the need for and feasibility of reporting on serial numbers as part of the true-up period report. Those concerns were reiterated by RSAs at the 17th RSA Forum.

G. Security working group

56. The purpose of the security working group is to further elaborate on options for enhancing information security controls in systems supporting emissions trading under the Kyoto Protocol, as requested by SBI 40.¹¹

57. The ITL administrator and the working group prepared a security questionnaire, which was provided to 37 national registries in October 2014. Twenty-six national registries responded to the security questionnaire by December 2014. Questions specific to the consolidated system of European Union registries (CSEUR) scheme were answered by the European Commission on behalf of the Parties participating in the CSEUR.

58. The ITL administrator provided, on the basis of the responses to the questionnaire, registry-specific feedback to each responding national registry in March 2015. The feedback included references to the control categories that are reported as implemented by RSAs and a specific risk assessment and corresponding recommendations regarding controls incompletely implemented in a national registry.

59. In June 2015, the ITL administrator and the working group provided a document¹² containing the implementation status of information security controls in registry systems and the recommended security implementation actions and their related resource requirements, for consideration by SBI 42.

60. The SBI, on the basis of that document, agreed to request the ITL administrator, in cooperation with the administrators of other registry systems: to develop, establish and maintain requirements for managing inventories related to information assets under the control of RSAs; to review and update the common operational procedure for the handling of security incidents; and to reassess, during the SIAR process in 2016, changes in the business continuity plans of the national registries that reported incomplete implementation of related controls.

H. Working group on combatting criminal activity in registry systems

61. Upon the request of RSAs, the ITL administrator set up a working group to support the exchange of information and enhance collaboration on initiatives to prevent and combat fraud and potential criminal activity in registry systems. The working group established its terms of reference, identified the focus areas for its work and held several meetings during the reporting period. In those meetings, several RSAs delivered presentations on the work that they have undertaken in relation to this matter.

III. Organizational arrangements and resources

62. The functions of the ITL administrator are assumed by the Information Technology Services programme of the secretariat, which is also responsible for software delivery and supporting the information technology infrastructure for the secretariat. Functions related to change management in registry systems, including support for negotiations of accounting rules and checks, have been assumed by the Mitigation, Data and Analysis programme.

¹¹ FCCC/SBI/2014/8, paragraph 72.

¹² FCCC/SBI/2015/INF.2.

A. Resource requirements and expenditure

63. The resource requirements for activities relating to the ITL and the ITL administrator, to be funded from supplementary sources for the bienniums 2006–2007,¹³ 2008–2009,¹⁴ 2010–2011,¹⁵ 2012–2013,¹⁶ 2014–2015¹⁷ and 2016–2017,¹⁸ were identified in the proposed programme budget for each of those bienniums.

64. The budget for the ITL for the biennium 2014–2015,¹⁹ not including the deduction of fees paid by Parties, which were not listed in decision 11/CMP.3, annex II, is EUR 5,481,520, including a working capital reserve of EUR 227,970.

65. The CMP, by decision 11/CMP.3, requested the Executive Secretary to provide a breakdown of the expenditure on the development and operation of the ITL, with a view to optimizing the cost structure. Table 2 shows the expenditure of the ITL in the biennium 2014–2015 by object of expenditure.

Table 2

Expenditure of the international transaction log in the biennium 2014–2015

(euros)

<i>Object of expenditure</i>	<i>As at 30 September 2014</i>	<i>As at 30 September 2015</i>
Staff costs	432 387	1 128 872
Contractual services ^a	1 347 326	2 837 100
Expert groups	15 117	19 704
Travel of staff	0	11 277
Training	0	4 231
General operating expenses	3 031	24 344
Contributions to common services	20 333	126 624
Programme support costs	236 365	539 780
Total expenditure	2 054 559	4 691 932

^a The amount for contractual services includes EUR 468,964 obligated for contractual services until the end of 2015 but not spent in the first nine months of 2015.

66. Table 3 shows the breakdown of expenditure, as expected, on contractors and consultants for the ITL in the biennium 2014–2015. 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. Software maintenance services are services performed by the developer of the ITL to support the software implementation activities outlined in this report. Operational procedure services cover the expenditure required to deliver services related to the elaboration and execution of the common operational procedures pursuant to decision 16/CMP.10. Consultancy expenditures are incurred when the secretariat needs to consult experts in specific fields.

¹³ FCCC/SBI/2005/8/Add.2.

¹⁴ FCCC/SBI/2007/8/Add.2.

¹⁵ FCCC/SBI/2009/2/Add.3.

¹⁶ FCCC/SBI/2011/2/Add.3.

¹⁷ FCCC/SBI/2013/6/Add.3.

¹⁸ FCCC/SBI/2015/3/Add.3.

¹⁹ Decision 10/CMP.9.

Table 3

Breakdown of expenditure of the international transaction log on contractors and consultants in the biennium 2014–2015

<i>Object of expenditure</i>	<i>Percentage of expenditure on contractors and consultants</i>
Operation services	62
Production and disaster recovery environments	45
Service desk	8
Registry developer support	7
Security and disaster recovery testing	2
Software maintenance services	29
Operational procedure services	1
Consultancies	8

67. CMP 4 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 those activities.²⁰

68. In 2015, the focus of the activities of the ITL was on technical maintenance and continued efforts to ensure that registry systems operate securely and reliably. In addition, the ITL administrator has continued to make arrangements for the support of the true-up period and for the second commitment period of the Kyoto Protocol by the ITL and registry systems.

69. The staffing level was lower than projected in the ITL budget owing to natural staff attrition and recruitment activities, which resulted in lower staff costs in 2014. In late 2014, the recruitments of the Associate Information Systems Officer and the Team Assistant were completed, resulting in staff costs as planned. With those activities, the secretariat has completed all outstanding recruitment. The level of staffing is expected to remain unchanged in 2016.

70. The members of the ITL staff perform the following activities:

(a) Initializing and performing go-live events for the national registries not yet connected to the ITL or potential new national registries;

(b) Supporting future changes to the DES and releases of ITL and SEF software resulting from operational experience and changes adopted under the common operational procedures for change management;

(c) Steering the work of a working group to address technical issues related to the end of the true-up period of the first commitment period and those related to the second commitment period of the Kyoto Protocol, with a view to adopting revised formats for data exchange and/or common operational procedures;

(d) Steering the work of a working group to improve the security of registry systems on the basis of internationally recognized information system security standards;

(e) Steering the work of a working group to combat fraud and criminal activities in registry systems;

(f) Upgrading the hardware and software in the ITL infrastructure, as necessary;

²⁰ FCCC/KP/CMP/2008/11, paragraph 72.

- (g) Administering and maintaining the RSA extranet;
- (h) Continuing to support the live operations and test activities of the ITL system and registry systems in all supported environments;
- (i) Performing an annual disaster recovery test and security audit on the ITL and taking into account the results of that test and audit to enhance the reliability and security of the ITL;
- (j) Performing all required activities to support the common operational procedures;
- (k) Continuing to facilitate cooperation among RSAs through the RSA Forum, its working groups and registry developers;
- (l) Offering training material to RSAs on the general functioning of the ITL and registry systems, the common operational procedures and other relevant knowledge areas;
- (m) Continuing to support the obligations of the ITL administrator in accordance with all relevant decisions of the COP and the CMP.

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

71. As at 30 September 2015, USD 1,963,788 in ITL user fees had been received from Parties for 2007,²¹ USD 4,518,060 for 2008, USD 4,745,041 for 2009, EUR 3,014,423 for 2010, EUR 3,014,423 for 2011, EUR 2,885,010 for 2012, EUR 2,759,483 for 2013, EUR 2,734,992 for 2014 with EUR 5,768 outstanding and EUR 2,682,735 for 2015 with EUR 58,025 outstanding. Two Parties have been credited with advances towards their 2016 ITL fees as a result of the overpayment of their 2015 fees. In addition, two Parties have already paid their 2016 ITL fees. As at 30 September 2015, a total amount of EUR 53,028 in ITL fees had been received for 2016. The secretariat would like to express its gratitude to those Parties that have paid their fees. The scale of ITL fees and the status of fee payments for the biennium 2014–2015 as at 30 September 2015 are shown in annex II. The status of fees as at 30 September 2015 is shown in tables 4 and 5.

Table 4

Fees for international transaction log activities in the period 2007–2009 and cumulative shortfall as at 30 September 2015

(United States dollars)

	<i>2007</i>	<i>2008</i>	<i>2009</i>
Fees budgeted	2 500 000	4 518 060	4 745 741
Fees received	1 963 788	4 518 060	4 745 741
Shortfall	536 212	0	0
Cumulative shortfall	536 212	536 212	536 212

²¹ This figure differs from that in the annual reports of the ITL administrator prior to 2011 because USD 48,693 in user fees for 2007 was received in July 2011.

Table 5
Fees for international transaction log activities in the period 2010–2015 and cumulative shortfall as at 30 September 2015

(euros)

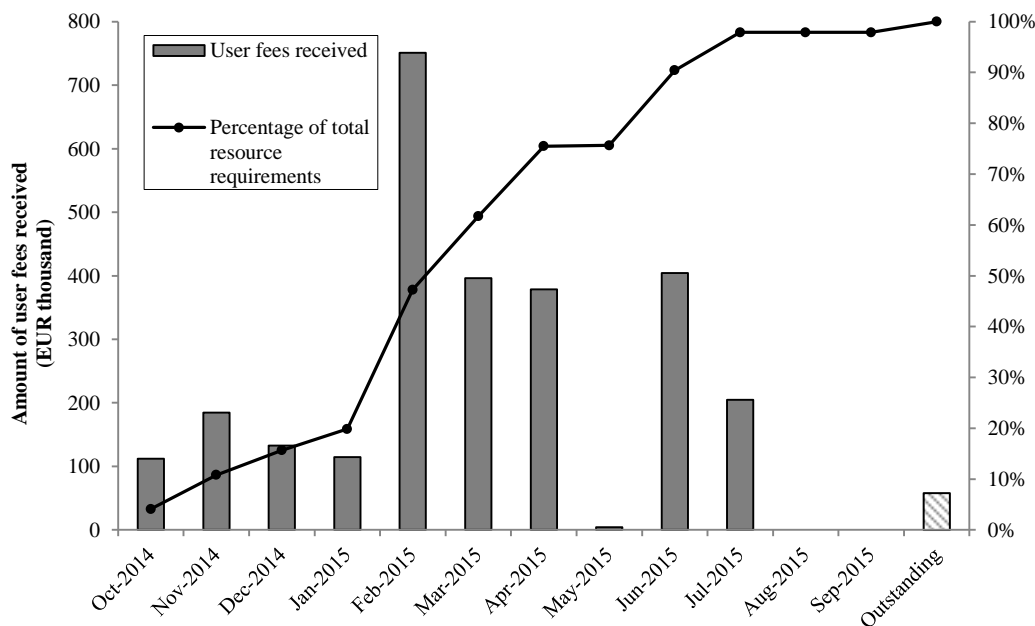
	2010 ^a	2011	2012	2013	2014 ^b	2015 ^b
Fees budgeted	3 014 423	3 014 423	2 885 010	2 885 010	2 740 760	2 740 760
Fees received	3 014 423	3 014 423	2 885 010	2 759 483	2 734 992	2 682 735
Shortfall	0	0	0	125 527	5 768	58 025
Cumulative shortfall	374 812	374 812	374 812	500 339	380 580	438 605

^a The shortfall for 2009 in United States dollars was carried over to 2010 by converting at the average exchange rate of EUR 0.699 applicable on the day of conversion.

^b Canada’s shortfall of EUR 125,527 was not carried over to 2014 and the following years owing to Canada’s withdrawal from the Kyoto Protocol and the resulting disconnection of its registry from the international transaction log.

72. Delays in receiving user fees from Parties have been noted in previous annual reports of the ITL administrator. As at 30 September 2015, EUR 5,768 was still due for 2014 (0.21 per cent of the fees budgeted for 2014) and EUR 58,025 for 2015 (2.11 per cent of the fees budgeted for 2015). Figure 7 shows the user fees received for 2015 in 2014 and 2015 as at 30 September 2015 and the cumulative percentage of resource requirements, by month.

Figure 7
International transaction log user fees for 2015 received in 2014 and 2015 as at 30 September 2015



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

73. The ITL administrator is continuing to seek ways to further optimize the ITL cost structure and is currently considering the following measures:

(a) Optimizing technology refresh, licence and third-party support costs in alignment with the natural end of life cycle of the software and hardware used to run the ITL;

(b) Systematization, documentation and addressing of typical incident, user error and user problem scenarios in order to minimize their reoccurrence and associated remedial costs;

(c) Simplifying registry testing arrangements and registry contact management, with the goal of optimizing the costs associated with those activities;

(d) Using secretariat staff instead of consultants, where possible.

Annex I

Registry status as at 30 September 2015

<i>Registry</i>	<i>Date independent assessment report was issued</i>	<i>Date of live connection to the international transaction log</i>
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
Croatia	30 April 2008	11 December 2009
Clean development mechanism	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 Union	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	6 May 2010
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	30 July 2015
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	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

Annex II

**Scale of fees and status of international transaction log fee payments for
the biennium 2014–2015 as at 30 September 2015**

Party	Scale of fees	2014			2015		
		Budgeted	Received	Outstanding	Budgeted	Received	Outstanding
Australia	2.841	77 854	77 854	0	77 854	77 854	0
Austria	1.588	43 526	43 526	0	43 526	43 526	0
Belgium	1.973	54 071	54 071	0	54 071	54 071	0
Bulgaria	0.036	974	974	0	974	974	0
Croatia	0.079	2 178	2 178	0	2 178	2 178	0
Czech Republic	0.503	13 783	13 783	0	13 783	13 783	0
Denmark	1.323	36 248	36 248	0	36 248	36 248	0
Estonia	0.028	774	774	0	774	774	0
European Commission	2.685	73 584	73 584	0	73 584	73 584	0
Finland	1.009	27 651	27 651	0	27 651	27 651	0
France	10.667	292 360	292 360	0	292 360	292 360	0
Germany	15.350	420 702	420 702	0	420 702	420 702	0
Greece	1.065	29 199	29 199	0	29 199	29 199	0
Hungary	0.437	11 978	11 978	0	11 978	11 978	0
Iceland	0.737	20 201	20 176	25	20 201	20 201	0
Ireland	0.797	21 835	21 835	0	21 835	21 835	0
Italy	9.089	249 121	249 121	0	249 121	249 121	0
Japan	14.939	409 442	409 442	0	409 442	409 442	0
Latvia	0.032	888	888	0	888	888	0
Liechtenstein	0.188	5 158	5 158	0	5 158	5 158	0
Lithuania	0.055	1 519	1 519	0	1 519	1 519	0
Luxembourg	0.153	4 184	4 184	0	4 184	4 184	0
Monaco	0.181	4 957	4 957	0	4 957	4 957	0
Netherlands	3.352	91 866	91 866	0	91 866	91 866	0
New Zealand	0.961	26 333	26 333	0	26 333	26 333	0
Norway	2.319	63 555	63 555	0	63 555	63 555	0
Poland	0.896	24 557	24 557	0	24 557	24 557	0
Portugal	0.943	25 846	25 846	0	25 846	25 846	0
Romania	0.125	3 439	3 439	0	3 439	3 439	0
Russian Federation	2.743	75 189	75 189	0	75 189	37 595	37 594
Slovakia	0.113	3 095	3 095	0	3 095	3 095	0
Slovenia	0.171	4 699	4 699	0	4 699	4 699	0
Spain	5.311	145 564	145 564	0	145 564	145 564	0
Sweden	1.917	52 552	52 552	0	52 552	52 552	0
Switzerland	2.760	75 647	75 647	0	75 647	75 647	0
Ukraine	0.745	20 431	14 688	5 743 ^a	20 431	0	20 431 ^a
United Kingdom	11.887	325 800	325 800	0	325 800	325 800	0
Total	100.000	2 740 760	2 734 992	5 768	2 740 760	2 682 735	58 025

^a Outstanding fees from Ukraine for 2014 and 2015 were received on 15 October 2015.

Annex III

**Number of transactions proposed to the international transaction log
from 1 October 2014 to 30 September 2015**

<i>Registry</i>	<i>Acquisition^a</i>	<i>Transfer^b</i>	<i>Forwarding^c</i>	<i>Internal transfer^d</i>	<i>Issuance^e</i>	<i>Retirement^f</i>	<i>Cancellation^g</i>	<i>Total</i>
Australia	125	20	0	0	1	0	22	168
Austria	6	4	0	2	1	3	6	22
Belgium	24	5	0	217	1	0	4	251
Bulgaria	1	14	0	1	4	0	4	24
Clean development mechanism	0	47	1 469	0	695	0	130	2 341
European Union	1 504	770	0	0	0	0	312	2 586
Croatia	0	0	0	0	2	0	1	3
Czech Republic	28	4	0	0	2	0	2	36
Denmark	9	46	0	0	4	0	13	72
Estonia	1	0	0	0	1	0	1	3
Finland	49	36	0	0	2	0	15	102
France	45	63	0	5	2	9	15	139
Germany	210	184	0	1	3	0	166	564
Greece	1	0	0	0	2	0	2	5
Hungary	2	0	0	0	3	0	1	6
Iceland	1	0	0	0	2	0	1	4
Ireland	2	4	0	0	1	1	1	9
Italy	6	30	0	0	2	0	2	40
Japan	84	18	0	0	2	1	1	106
Latvia	1	0	0	0	3	0	1	5
Liechtenstein	0	1	0	0	2	0	18	21
Lithuania	5	20	0	0	2	0	1	28
Luxembourg	13	1	0	0	1	1	1	17
Monaco	0	0	0	0	1	1	0	2
Netherlands	138	290	0	12	1	0	146	587
New Zealand	157	57	0	0	1	0	168	383
Norway	34	31	0	9	3	0	10	87
Poland	1	1	0	1	2	0	1	6
Portugal	13	45	0	0	4	0	2	64
Romania	1	24	0	0	5	0	6	36
Russian Federation	1	0	0	0	6	0	1	8
Slovakia	1	0	0	0	1	0	1	3
Slovenia	2	0	0	0	2	30	1	35
Spain	25	114	0	52	3	0	18	212
Sweden	35	111	0	21	3	0	60	230
Switzerland	466	897	0	222	2	1	286	1 874
Ukraine	0	3	0	0	3	0	0	6
United Kingdom	181	379	0	5	2	8	64	639
Total	3 172	3 219	1 469	548	777	55	1 484	10 724

Note: Completed transactions of assigned amount units, emission reduction units, removal units, certified emission reductions, long-term emission reductions and temporary emission reductions have been accounted for.

^a Acquisition from another national registry. See decision 13/CMP.1, annex, paragraph 30.

^b Transfer to another national registry. See decision 13/CMP.1, annex, paragraph 30.

^c Forwarding from the clean development mechanism registry to a national registry. See decision 3/CMP.1, annex, paragraph 66(b). Note that this excludes transfers from the clean development mechanism registry to a national registry in support of the Adaptation Fund.

^d Transfer within the registry. See decision 13/CMP.1, annex, paragraph 30.

^e See decision 13/CMP.1, annex, paragraphs 23–29; decision 3/CMP.1, annex, paragraphs 64–66; and decision 5/CMP.1, annex, paragraphs 36 and 37. Issuance of emission reduction units by converting assigned amount units or removal units is included.

^f See decision 13/CMP.1, annex, paragraph 34.

^g See decision 13/CMP.1, annex, paragraph 33.

Annex IV

**Number of Kyoto Protocol units subject to transactions proposed to the international transaction log
from 1 October 2014 to 30 September 2015**

<i>Registry</i>	<i>Acquisition^a</i>	<i>Transfer^b</i>	<i>Net transfer^c</i>	<i>Forwarding^d</i>	<i>Internal transfer^e</i>	<i>Issuance^f</i>	<i>Retirement^g</i>	<i>Cancellation^h</i>
Australia	3 847 159	2 722 392	-1 124 767	0	0	12 904 835	0	38 715 516
Austria	75 491	306 901	231 410	0	35 211 081	10 116 695	52 099 155	3 363 603
Belgium	3 123 630	242 262	-2 881 368	0	18 125 005	1 421 728	0	2 618 855
Bulgaria	34 052	714 602	680 550	0	5 352	4 153 612	0	1 139 128
Clean development mechanism	0	2 406 780	2 406 780	63 332 345	0	129 451 024	0	3 342 274
European Union	102 397 658	130 180 744	27 783 086	0	0	0	0	3 409 929
Croatia	0	0	0	0	0	5 411 963	0	321 791
Czech Republic	629 830	591 822	-38 008	0	0	7 438 341	0	854 663
Denmark	148 838	423 706	274 868	0	0	3 904 897	0	1 713 537
Estonia	3 437	0	-3 437	0	0	494 851	0	2 890 573
Finland	728 959	515 728	-213 231	0	0	17 449 492	0	14 523 879
France	6 474 329	4 257 105	-2 217 224	0	20 605	22 008 899	103 981 843	22 105 559
Germany	18 949 377	10 300 498	-8 648 879	0	12 108	51 156 219	0	13 290 997
Greece	489 753	0	-489 753	0	0	2 342 398	0	299 134
Hungary	1 277	0	-1 277	0	0	2 270 764	0	87 500
Iceland	20 870	0	-20 870	0	0	1 542 761	0	802
Ireland	395 287	390 582	-4 705	0	0	17 901 299	16 886 731	1 610 147
Italy	2 170 095	791 834	-1 378 261	0	0	85 019 500	0	9 747 753
Japan	2 324 820	6 576 913	4 252 093	0	0	255 005 796	243 567 378	11 438 418
Latvia	2 257	0	-2 257	0	0	12 457 753	0	6 224 420
Liechtenstein	0	1 280	1 280	0	0	347	0	225 181
Lithuania	446 097	3 893 466	3 447 369	0	0	5 893 653	0	177 669
Luxembourg	1 031 288	34 072	-997 216	0	0	606 405	1 989 537	233 126
Monaco	0	0	0	0	0	495 221	471 255	0
Netherlands	48 317 662	27 179 481	-21 138 181	0	38 964	2 782 697	0	24 018 962
New Zealand	30 224 282	17 633 628	-12 590 654	0	0	91 795 399	0	24 833 013
Norway	1 355 771	1 956 362	600 591	0	2 336 740	19 105 318	0	11 818 301
Poland	56 812	36 596	-20 216	0	18	27 766 419	0	1 692 255
Portugal	861 453	2 155 228	1 293 775	0	0	54 867 951	0	10 205 673

<i>Registry</i>	<i>Acquisition^a</i>	<i>Transfer^b</i>	<i>Net transfer^c</i>	<i>Forwarding^d</i>	<i>Internal transfer^e</i>	<i>Issuance^f</i>	<i>Retirement^g</i>	<i>Cancellation^h</i>
Romania	121 658	210 810	89 152	0	0	29 440 170	0	11 012 191
Russian Federation	229 507	0	-229 507	0	0	213 949 969	0	20 453 324
Slovakia	5 018	0	-5 018	0	0	1 968 508	0	574 356
Slovenia	6 833	0	-6 833	0	0	7 897 750	7 605 291	1 297 750
Spain	3 816 012	5 276 070	1 460 058	0	197 461	56 197 860	0	3 586 493
Sweden	1 183 954	1 963 889	779 935	0	339 371	27 315 956	0	17 049 729
Switzerland	51 424 322	93 090 355	41 666 033	0	126 576 931	6 576 685	1	2 609 139
Ukraine	0	14 047 630	14 047 630	0	0	14 047 630	0	0
United Kingdom	95 163 452	50 567 284	-44 596 168	0	169 150	19 651 830	2 003 161 745	106 315 678
Total	376 061 240	378 468 020	2 406 780	63 332 345	183 032 786	1 222 812 595	2 429 762 936	373 801 318

Note: Completed transactions of assigned amount units, emission reduction units, removal units, certified emission reductions, long-term emission reductions and temporary emission reductions have been accounted for.

^a Acquisition from another national registry. See decision 13/CMP.1, annex, paragraph 30.

^b Transfer to another national registry. See decision 13/CMP.1, annex, paragraph 30.

^c Net transfer is equal to transfer minus acquisition.

^d Forwarding from the clean development mechanism registry to a national registry. See decision 3/CMP.1, annex, paragraph 66(b). Note that this excludes transfers from the clean development mechanism registry to a national registry in support of the Adaptation Fund.

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

^f See decision 13/CMP.1, annex, paragraphs 23–29; decision 3/CMP.1, annex, paragraphs 64–66; and decision 5/CMP.1, annex, paragraphs 36 and 37. Issuance of emission reduction units by converting assigned amount units or removal units is included.

^g See decision 13/CMP.1, annex, paragraph 34.

^h See decision 13/CMP.1, annex, paragraph 33.