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## **Subsidiary Body for Implementation**

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Item 7(f) of the provisional agenda

**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 ninth 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 2012 to September 2013. This report also contains information on transactions of Kyoto Protocol units, as requested at CMP 6. 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 provide guidance to the secretariat and Parties, as necessary, concerning the implementation of registry systems.

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## **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 as 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, 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, 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 ninth 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 information on transactions in the ITL.
5. This report covers the reporting period from 1 November 2012 to 30 September 2013.

### **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.
7. The SBI may also wish to take note of the progress made by the Security Working Group and provide further guidance to the work done by the registries and the ITL administrator towards the implementation of internationally recognized information technology security standards in the registry systems.

### **D. Possible action by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol**

8. The CMP may wish to take note of the information related to the Working Group on the Second Commitment Period, contained in this report, and to provide registry systems administrators and the ITL administrator with guidance on some aspects of the group's work, including on its underlying assumptions on issues that have been raised. In doing so, the CMP may wish to consider the work undertaken by the Subsidiary Body for Scientific

and Technological Advice (SBSTA) on the implications of the implementation of decisions 2/CMP.7 to 4/CMP.7 and 1/CMP.8 on the previous decisions on methodological issues related to the Kyoto Protocol, including those relating to Articles 5, 7 and 8 of the Kyoto Protocol.<sup>1</sup>

9. The CMP may also wish to note that the lack of agreement on how to proceed with the implementation in the data exchange standards (DES), registry systems and the ITL of some key aspects of decision 1/CMP.8 currently forbids the following transaction types related to the second commitment to take place:

- (a) Transfers and acquisitions of assigned amount units (AAUs);
- (b) Issuance of emission reduction units (ERUs);
- (c) Article 3, paragraph 7ter cancellations;
- (d) Ambition increase cancellations;
- (e) Carry-over from the first to the second commitment period.

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

### **A. Summary of work undertaken**

10. The ITL administrator continued to convene the RSA Forum and coordinated the work of its working groups.

11. The activities related to the fifth annual assessment of national registries and accounting of Kyoto Protocol units were completed successfully.

12. The ITL administrator supported the process of European Union registry consolidation and adjusted the operations of ITL to match the new operational setting.

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

### **B. Implementation activities**

#### **1. International transaction log releases**

14. During the reporting period, there was one release of ITL software. The release contained the implementation of provisions of decision 1/CMP.8, the introduction of the support for the clean development mechanism (CDM) programmes of activities, the addition of the CDM administrative cancellation account, as well as some new transactions checks and improvements to the ITL administration web interface.

#### **2. International transaction log operational procedure**

15. At the end of August 2013, the ITL administrator introduced a single procedure for the reversal of ITL transactions. The unified procedure consolidated the common aspects of the four existing procedures into a single part and maintained their specific elements in

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<sup>1</sup> FCCC/TP/2013/9.

separate sections. With the new procedure in place, previous procedures were retired at the end of August 2013.

16. A new procedure for the reversal of conversion transactions was introduced and consolidated into a unified reversal procedure, in response to a request to revert a mistakenly performed conversion transaction by one registry.

### **3. Creation of the consolidated system of European Union registries**

17. Twenty-nine registries of European Union member States consolidated into a registry system provided and maintained by the European Commission in June 2012. Functionalities for providing standard electronic format (SEF) reports on the 2012 reporting year during the 2013 reporting cycle were implemented into the consolidated system of European Union registries (CSEUR) in November 2012.

18. The ITL administrator and ITL service desk worked with the European Commission to facilitate the migration of Croatia's national registry into CSEUR. The migration was completed successfully in February 2013.

### **4. Second commitment period update of standard electronic format reporting tools**

19. Decision 14/CMP.1, annex 1, paragraph 3, requests that Parties included in Annex I to the Convention (Annex I Parties) submit a SEF report including information on ERUs, certified emission reductions (CERs), temporary emission reduction units (tCERs), long-term CERs, AAUs and removal units from its national registry transferred or acquired in the year preceding the reporting year, on a yearly basis. Each Annex I Party has been provided by the ITL administrator with an application that enables the Party to create an SEF report based on reporting requirements contained in decision 14/CMP.1.

20. During the reporting period, the SBSTA drafted an updated set of SEF tables including reporting requirements related to the second commitment period of the Kyoto Protocol, with the intention to provide draft decisions to CMP 9.

21. To prepare the inclusion of updated SEF tables into reporting software, the ITL administrator initiated the development of a new software application geared towards supporting Annex I Parties and the secretariat in the generation and comparison of SEF reports based on current and 2014 reporting requirements. A proof of concept was produced in September 2013 and presented during the RSA Forum.

### **5. International transaction log technology maintenance**

22. The current version of the application server software used in the ITL had reached its end of warranty. The ITL administrator examined the option of purchasing licenses for a newer release of the same software. As the costs of the new licenses were 70 per cent higher than the costs of the current version, it was decided to investigate other software options for the transaction-processing component in the ITL architecture.

23. The option of purchasing new licenses for the current application server software was compared with the option of switching to a different technology solution on the basis of the total cost of ownership over eight years. It was determined that the most beneficial scenario requires migration to another application server software. The planning of the software migration has begun and the entire migration is expected to be completed by July 2014.

24. The ITL administrator, in collaboration with its infrastructure provider, completed the upgrade of the certificate infrastructure used to securely connect registries to the ITL. The upgrade has increased the security of the connections between the registries and the ITL.

25. The ITL administrator routinely oversees the replacement of hardware components in the ITL system infrastructure setup which had run out of warranty. The firewall component used to secure the links between sub-systems and components of the overall ITL infrastructure had expired during the reporting period. Older models of the firewall have been decommissioned and replaced. The new hardware is expected to last until 2018.

## **C. Operational activities**

### **1. Registry testing**

26. The ITL administrator offered the opportunity to perform DES Annex H<sup>2</sup> testing for the second commitment period of the Kyoto Protocol on registries on a voluntary basis. Series of tests were organized, starting from November 2012. Several registries expressed interest in this initiative and six registries participated in the testing. The testing provided the registries with an opportunity to evaluate their preparedness for the start of the second commitment period.

27. In decision 1/CMP.8, 31 December 2020 was designated as the end date of the second commitment period of the Kyoto Protocol. The ITL administrator researched and identified the data affected by this decision across the registry systems network. It was determined that the only data affected were the tCER units issued in the first commitment period of the Kyoto Protocol given that their expiry dates match the end date of second commitment period. In order to give registries the opportunity to test their ability to perform the required changes for these units, the ITL administrator offered to interested registries to participate in the test exercise.

28. Several registries participated in the initial testing in February 2013. Additional rounds of testing were organized in the subsequent three months. In June 2013, an ITL notification was triggered by the ITL administrator and received by all registries holding tCER units, requesting them to update the expiry date of the units. The seven registries that received the notification completed the relevant transactions within 30 days of receiving it.

### **2. Disaster recovery testing**

29. The disaster recovery exercise for the year 2012 was performed in October. During this test, the ITL administrator and its infrastructure provider simulated a disaster affecting the ITL production site. The test verified the readiness of the disaster responses teams and of the ITL equipment to support the switch of ITL operations from the production site to the non-production site. The performance objectives for the exercise were met. A review document of the activities that took place during the test was produced afterwards.

30. For the 2013 disaster recovery exercise, the planning phase started in September.

### **3. Transactions data and analysis**

31. 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 environment<sup>3</sup> each month since November 2008.

32. There are two categories of transactions in the ITL: external transactions and non-external transactions. External transactions are transactions in which the units involved

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<sup>2</sup> Annex H to the DES, version 1.1.9, containing functional test suites covering modalities, rules and guidelines for emissions trading under Article 17 of the Kyoto Protocol.

<sup>3</sup> The live system of the ITL is used to support emissions trading under the Kyoto Protocol.

leave the originating registry and arrive in a different acquiring registry. Non-external transactions are transactions in which the units stay in the same registry although they can change account, move to another account type or change unit type. Figure 2 shows the evolution of the breakdown of external and non-external transactions in the ITL from November 2008.

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

34. 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)<sup>4</sup> if a European Union Emissions Trading System (EU ETS) registry is involved in the transaction. The monthly averages of the transaction completion time since November 2008 are displayed in figure 3.

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<sup>4</sup> The European Union Transaction Log replaced the community independent transaction log, following the consolidation of the European Union Emissions Trading System (EU ETS) registries in June 2012.

Figure 1  
Number of transactions proposed to the international transaction log since November 2008

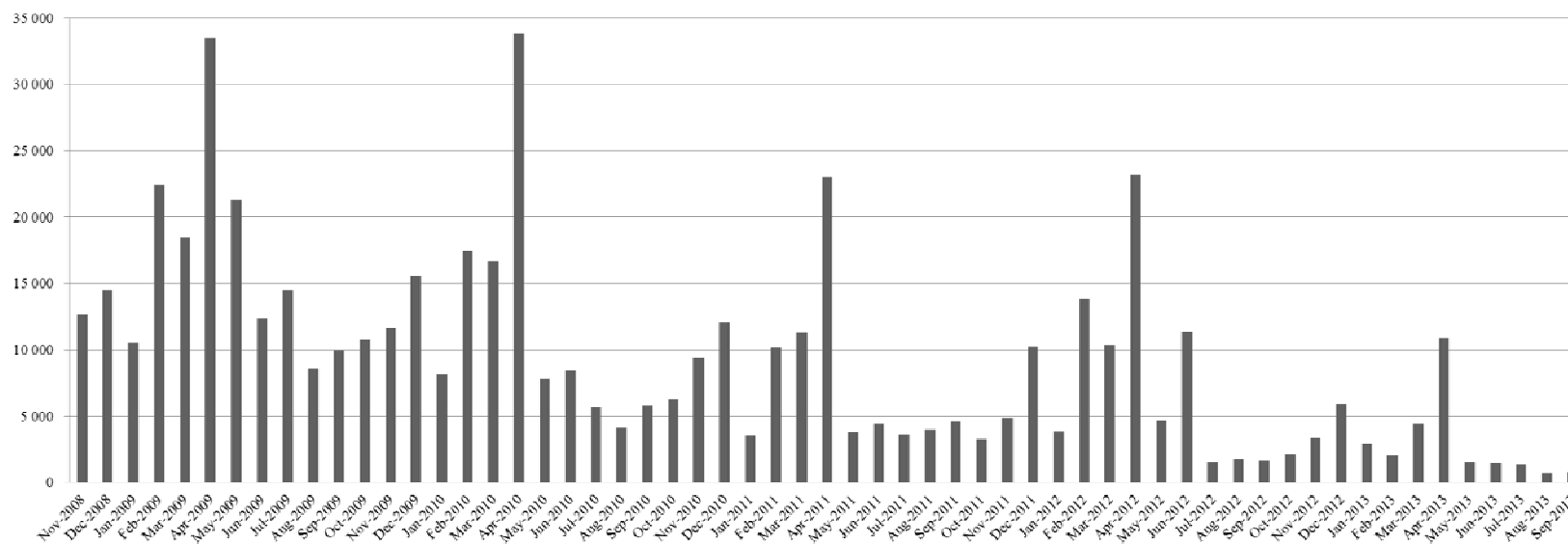


Figure 2  
External versus non-external transactions since November 2008

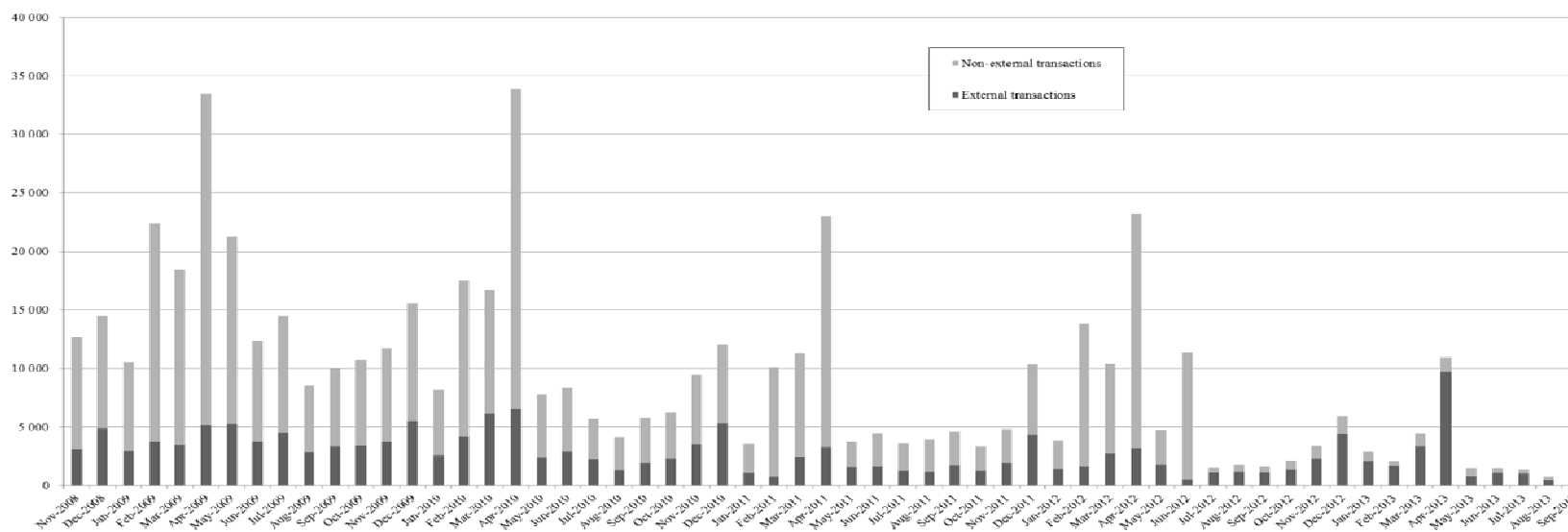
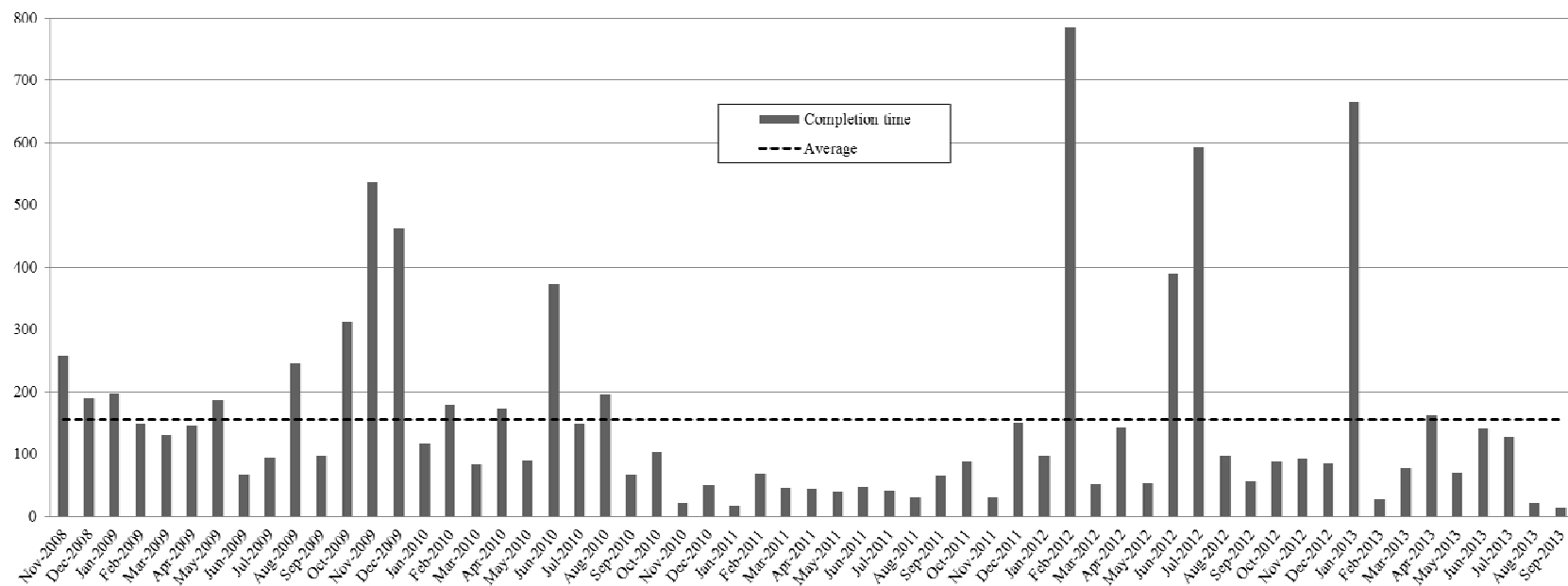




Figure 3  
Monthly averages of transaction completion time



35. The abnormally high transaction completion time observed in January 2013 was principally due to three transaction-processing incidents. During the first incident, the processing of certain transaction proposals forwarded by the ITL to a specific registry was delayed for several minutes, leading to a high completion time for these transactions. The second incident involved transactions which had to be processed through the EUTL.<sup>5</sup> During the incident, there were more than 20 transactions that were idle for more than 17 hours while waiting for the EUTL response to the transaction proposal. For the last transaction-processing incident in January 2013, the processing of some transaction proposals forwarded by the ITL to a registry was delayed for several minutes.

36. Transactions which are not compliant with ITL specifications in the DES are terminated when they are proposed to the ITL. A 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 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 this ratio since November 2008 is shown in figure 4.

37. 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. A 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 since November 2008.

38. The high cancellation ratio recorded in March 2013 is due to a transaction-processing incident. During the incident, the ITL was functioning properly and no response was received for more than 100 transactions which the ITL had forwarded to the EUTL for processing. These transactions were ultimately cancelled according to the DES after not being acknowledged for more than 24 hours.

39. The reconciliation process in the ITL ensures that registries keep an accurate record of their Kyoto 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 unit holdings. Figure 5 shows the inconsistent reconciliation ratios since November 2008.

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<sup>5</sup> The EUTL is a supplementary transaction log which is connected to the ITL and is used in the checking of all transactions to and/or from EU ETS registries.

Figure 4  
Transaction cancellation and termination ratios

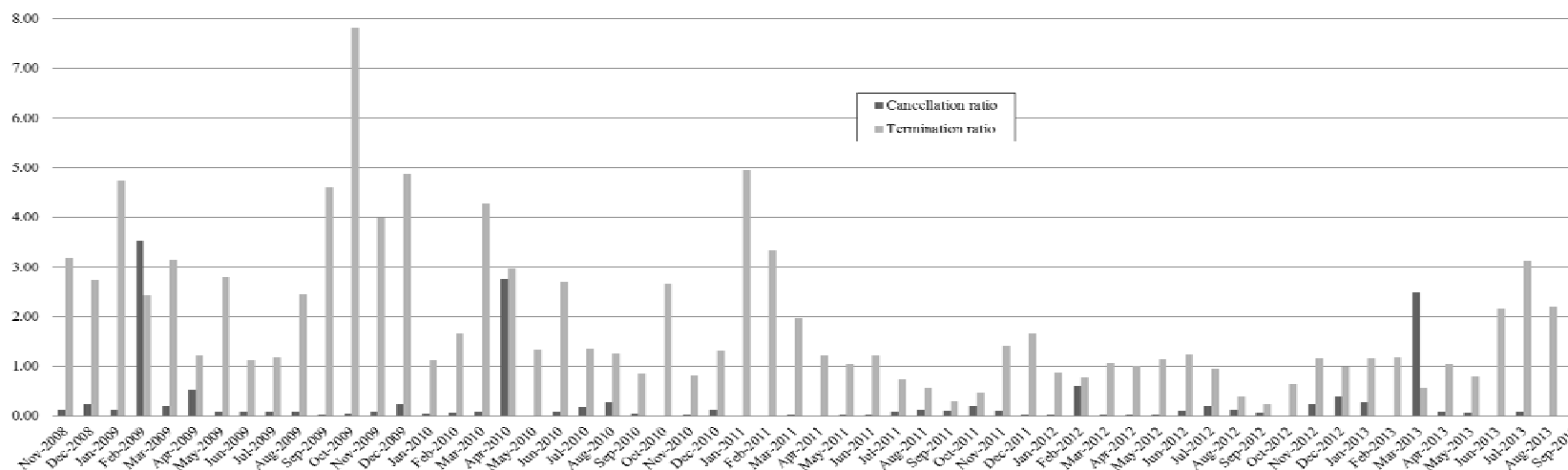
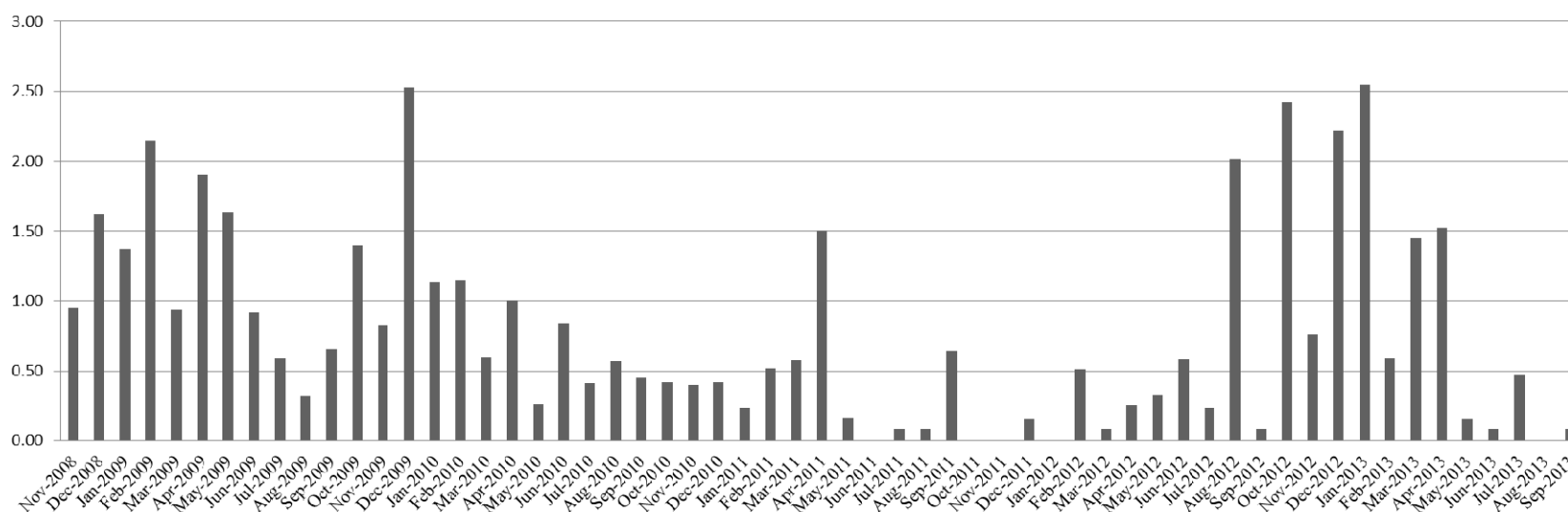


Figure 5  
Inconsistent reconciliation ratio as a percentage



40. The inconsistent reconciliation ratio was high in the following months of the reporting period: December 2012, January 2013, March 2013 and April 2013.

41. In December 2012, there was a reconciliation incident which affected all EU ETS registries.<sup>6</sup> During the incident, some EU ETS registries had reconciliations inconsistencies. In addition, there were 14 isolated reconciliations inconsistencies incidents during this month.

42. In January 2013, seven individual reconciliation inconsistencies incidents occurred at various times of the month. In addition, there was also a reconciliation incident which affected all 30 EU ETS registries on the same day.

43. In March 2013, in addition to a total of six inconsistency events on four different days in four different registries, there was a reconciliation incident with EU ETS registries. The incident lasted for several days, during which many of the EU ETS registries reported account holdings inconsistent with the ITL records.

44. In April 2013, 19 out of the 20 reconciliation inconsistencies affected EU ETS registries on the same day.

45. Unavailability of the ITL prevents registries from performing their transactions. The ITL can be unavailable owing to the planned maintenance windows, of which RSAs are informed in advance, and to unplanned outages caused by operational incidents. The ITL availability for the period of November 2012 to September 2013 was 99.85 per cent.

46. Over the course of their operations in the ITL, some national registries have reported performing transactions by mistake. The ITL administrator was requested to evaluate the possibility of allowing reversal of mistakenly performed transactions. During the reporting period, there were ten requests for reversals of transactions.

47. One formal request for reversal submitted by a national registry was withdrawn. There were four other instances in which registries inquired about reverting a recently processed transaction, but eventually did not initiate the formal reversal process described in the transaction-reversal procedure.

#### **4. Impact of CSEUR creation on ITL operations**

48. The CSEUR became operational in June 2012.

49. To measure the impacts of CSEUR creation on the ITL and the concerned registries, a comparison of some operational metrics for the period from November 2011 to May 2012 and the period from November 2012 to May 2013 was performed.

50. Table 1 shows the comparisons of different transactions metrics for these two periods.

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<sup>6</sup> EU ETS registries are registries of Parties to the Convention that are also Parties to the Kyoto Protocol with commitments inscribed in Annex B to the Kyoto Protocol, and which also have commitments under the EU ETS.

Table 1

**Comparison of some transaction metrics for European Union Emissions Trading System registries before the consolidation and after the consolidation<sup>a</sup>**

	<i>Transactions proposed to the ITL by EU ETS registries</i>		<i>Internal transactions proposed to the ITL by EU ETS registries</i>		<i>Transactions proposed to the European Union registry by the EU ETS registries</i>	
	<i>2011–2012</i>	<i>2012–2013</i>	<i>2011–2012</i>	<i>2012–2013</i>	<i>2011–2012</i>	<i>2012–2013</i>
November	4 123	1 395	2 618	68	5	567
December	9 413	2 958	5 464	162	1	1 213
January	3 027	1 331	2 056	100	0	627
February	13 214	944	11 793	52	2	394
March	9 563	2 558	7 321	76	0	920
April	22 321	8 792	19 553	62	2	1 981
May	4 006	449	2 539	3	29	163
<b>Total</b>	<b>65 667</b>	<b>18 427</b>	<b>51 344</b>	<b>523</b>	<b>39</b>	<b>5 865</b>

*Abbreviations:* EU ETS = European Union Emissions Trading System, ITL = international transaction log.

<sup>a</sup> To ensure comparability, both periods are from November to May. November is the start of the (current) ITL reporting period (November 2012). May 2012 was the last month when individual registries from the EU ETS were operating independently.

51. There is an overall decrease in the numbers of transactions proposed to the ITL by EU-ETS registries. Internal transactions proposed to the ITL by EU-ETS registries have substantially decreased. But the number of transactions to the EU registry has increased significantly

52. For reconciliation, three metrics are compared for the two periods: the number of reconciliations closed manually by the ITL service desk, the number of reconciliation requests sent by the ITL and denied by EU ETS registries, and the number of reconciliations which returned inconsistencies. The numbers for each metric are provided in table 2.

Table 2

**Comparison of reconciliations metrics for European Union Emissions Trading System registries before and after consolidation**

	<i>Reconciliations completed by manual intervention by the ITL service desk for EU ETS registries</i>		<i>Reconciliations attempts from the ITL denied by EU ETS registries</i>		<i>Reconciliation inconsistencies from EU ETS registries</i>	
	<i>2011–2012</i>	<i>2012–2013</i>	<i>2011–2012</i>	<i>2012–2013</i>	<i>2011–2012</i>	<i>2012–2013</i>
November	16	0	48	23	0	0
December	31	90	57	100	2	24
January	53	53	128	296	0	36
February	32	26	26	119	6	7
March	5	49	2	231	1	15
April	15	112	16	294	3	19
May	25	75	14	173	2	0

*Abbreviations:* EU ETS = European Union Emissions Trading System, ITL = international transaction log.

53. After the consolidation of the EU-ETS registries, there was an increase in the number of reconciliations which required a manual intervention to complete. In all seven months considered in the comparison, the numbers of reconciliation inconsistencies were higher after the consolidation than before the consolidation.

54. Reconciliations are initiated on a nightly basis for each registry. Each registry receives a reconciliation initiation message at a specific time during the night from the ITL. When a registry is not in a state of providing confirmation for a reconciliation initiation request when it arrives, the reconciliation attempt triggered in the ITL is denied.

55. For each reconciliation incident, the ITL service desk collaborates with the EU-ETS service desk for the resolution of the incident.

56. Further efforts will be required to achieve the expected benefits of the reduction of the number of incidents from EU registry consolidation and the associated costs. In this regard, the ITL administrator has initiated consultations with the CSEUR representatives with a view to establishing and implementing a plan to address the operational issues arising from the consolidation.

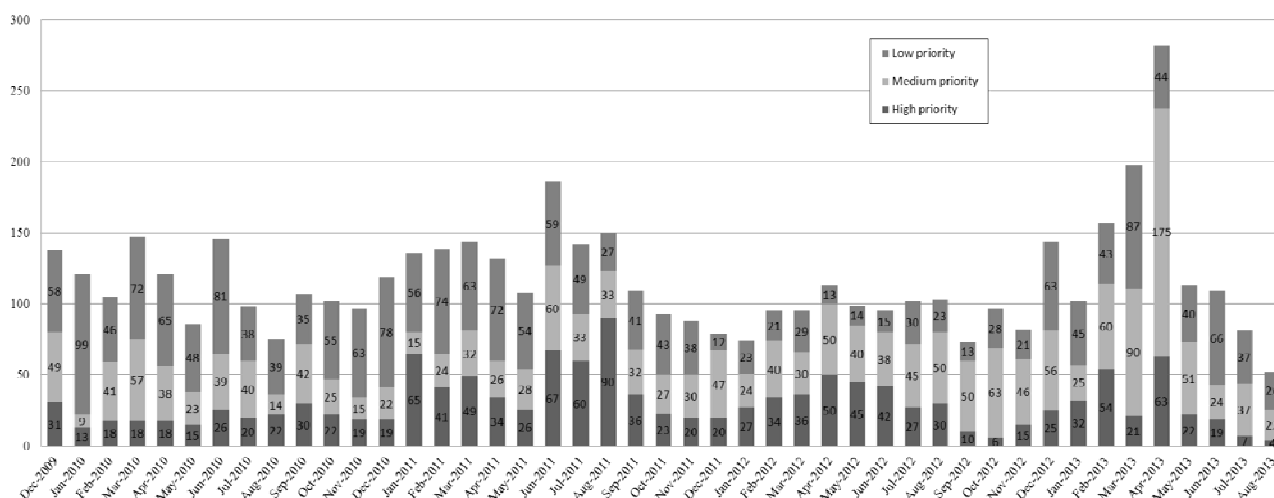
## 5. International transaction log service desk

57. 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 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 based on Coordinated Universal Time.

58. 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 which do not directly affect transaction processing.

Figure 6

**Number of support requests handled by the international transaction log service desk**



## 6. National registry connectivity and eligibility

59. In the light of Canada's withdrawal from the Kyoto Protocol, which took effect on 15 December 2012, the Canadian national registry was disconnected from the ITL.

## 7. Change management activities

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

61. In the reporting period there were 11 ITL change requests directly approved by the ITL change manager. Table 3 provides a list of the 11 change requests.

Table 3

### Changes submitted to the international transaction log change manager from November 2012 to September 2013

<i>Change title<sup>a</sup></i>	<i>Date proposed</i>	<i>Status as at 30 September 2013</i>
RSNCM 49 – ITL transactions reversal procedure	21 August 2013	Approved
RSNCM 48 – Check 5166 – Enforce the use of units with an applicable commitment period corresponding to the notification commitment period for net source cancellations	25 June 2013	Approved
RSNCM 47 – New LULUCF activity – wetland drainage and rewetting	16 April 2013	Approved
RSNCM 46 – Amendments to SIAR documentation related to the 2013 registry assessment process	11 January 2013	Approved
RSNCM 45 – Check 5257 – Block retirements of xCER for party with no second commitment period QELRC and amendment to the Kyoto Protocol not into force	11 January 2013	Approved
RSNCM 44 – Check 5112 – Block external transfers of second commitment period xCER for a Party with no second commitment period QELRC	11 January 2013	Approved
RSNCM 43 – Introduction of a procedure to perform reversals of net source cancellations	11 January 2013	Approved
RSNCM 42 – Introduction of a procedure to perform reversals of conversions	12 January 2013	Approved
RSNCM 41 – Provide account for CDM registry to allow for the cancellation of units for administrative purposes	29 November 2012	Approved
RSNCM 40 – New single check to prevent over-fulfilment of notifications	3 December 2012	Approved
RSNCM 39 – Support multiple host Parties for registered CDM program of activities	29 November 2012	Approved

*Abbreviations:* ITL = international transaction log, LULUCF = land use, land-use change and forestry, QELRC = quantified emission limitation or reduction commitment, SIAR = standard independent assessment report, xCER = CER, tCER, 1CER.

<sup>a</sup> The documents contain a prefix RSNCM, which refers to registry systems network change management.

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

### **1. Initial assessment activities**

62. In the reporting period, no registry has initiated a go-live process. As a result, no support for this particular process was provided by the ITL administrator. As of 31 September 2013, there were 36 national registries connected to the ITL.

### **2. Annual assessment activities**

63. The standardized testing and independent assessment reporting (SIAR) process, 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 registry 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 SIAR reports are forwarded to expert review teams for consideration as part of the review of national registries, as described in decision 22/CMP.1, in accordance with decision 16/CP.10, paragraph 6(k).

64. 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 reporting and review, thus improving the quality of national registry information in annual submissions and optimizing the ITL costs. In January 2013, the ITL administrator reissued its invitation to all RSAs to participate in the SIAR process as assessors. In this invitation, the ITL administrator introduced a central assessment week as a new element in the yearly registry assessment process. Twenty-two RSAs contributed to the 2013 SIAR process.

65. Before the registry assessment by the SIAR assessors, the Party submits a national inventory report and a SEF report to the secretariat. In 2013, 37 Parties submitted the annual SEF report with information on Kyoto Protocol units for 2012. Six submissions of SEF tables were initially found to be inconsistent with ITL records. Corrections were provided by the Parties concerned and resubmissions were in line with ITL records. Thirty-seven national inventory reports containing information on changes to the national registry and Kyoto Protocol units assessed under the SIAR process were submitted during 2013.

66. The SIAR process was executed successfully during the reporting period. The following issues regarding the assessed registries were identified:

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

(b) Parties consolidated in the CSEUR did not comply with the requirement found in decision 15/CMP.1, annex, paragraphs 32(c) and (j) to provide complete information on changes in the database and test results.

67. The issues were addressed in the recommendations provided by the assessors in the final SIAR reports.

68. Deficiencies in the software used to accept SEF submissions and issue SEF comparison reports were identified in the process of working on the 2013 SEF cycle. These deficiencies resulted in an increased effort requirement and delays in processing of submissions. As a response measure, the ITL administrator initiated a process of upgrading the SEF software.



### 3. Go-live activities

69. In the reporting period, no registry has initiated a go-live process. As a result, there was no support for this particular process provided by the ITL administrator. As of 31 October 2013, there were 36 national registries connected to the ITL.

## E. Registry System Administrators Forum

70. 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.

71. Participation in the RSA Forum is open to all administrators of national and consolidated registries, administrators of the CDM registry, the administrator of the supplementary transaction log and ITL vendors. The ITL administrator invited a number of participants from Parties not included in Annex I to the Convention that are Parties to the Kyoto Protocol to participate.

72. The 15<sup>th</sup> meeting of RSAs was hosted by the Government of Norway in Oslo on 10 and 11 October 2013. The key objectives of the meeting were the following:

- (a) To provide RSAs with an update of operational status and issues;
- (b) To provide feedback on the 2013 survey related to service desk operations;
- (c) To provide feedback on the independent assessment report process as executed during the reporting period;
- (d) To provide feedback on the activities and outcomes of the Security Working Group;
- (e) To provide feedback on change requests prepared by the working group on the second commitment period;
- (f) To inform RSAs about upgrades being applied to SEF reporting software.

## F. Working group on the second commitment period

73. The purpose of the working group on the second commitment period is to assess the impact of decisions made at CMP 7 and CMP 8 on registry systems and the ITL, and recommend changes to the DES and to common operational procedures.

74. In 2013, the working group continued its work and met seven times to discuss the matters outlined in paragraphs 75-88 below.

### 1. Urgent changes following the Doha Amendment to the Kyoto Protocol

75. The working group discussed the implementation of an urgent change to the DES to ensure that only a Party with a quantified emission limitation or reduction commitment inscribed in the third column of the amended Annex B to the Kyoto Protocol<sup>7</sup> is eligible to transfer and acquire CERs.<sup>8</sup>

<sup>7</sup> Decision 1/CMP.8, annex I.

<sup>8</sup> Decision 1/CMP.8, paragraph 13.

76. The working group discussed the implementation of another change to the DES in order to ensure that a Party of the type referred to in decision 1/CMP.8, paragraphs 15 and 16, is eligible to use CERs to contribute to compliance with part of its commitment under Article 3 of the Kyoto Protocol for the second commitment period upon the entry into force for that Party of the Doha Amendment to the Kyoto Protocol.

## **2. Share of proceeds**

77. The working group identified several options and recommended an approach to implementing the requirements contained in decision 1/CMP.8, paragraphs 20–22. This recommended approach assumes the following:

- (a) The share of proceeds is always rounded up to the nearest unit;
- (b) For a first-time transfer of AAUs, the share of proceeds is additional to the amounts transferred, whereas for issuance of ERUs, the share of proceeds is included in the project issuance limit;
- (c) Units carried over and subsequently transferred are considered to be transferred for the first time in their “target” commitment period, regardless of the number of times these units were transferred in their initial commitment period;
- (d) The levy on the share of proceeds apply to transfers between previous period surplus reserve accounts(PPSR);
- (e) Transfers of the share of proceeds to the Adaptation Fund account are not subject to the share of proceeds;
- (f) The share of proceeds must be contributed before the actual first-time transfer of AAUs or conversion of ERUs occurs;
- (g) One Adaptation Fund account will be the recipient of the share of proceeds applied to the first transfers of AAUs and the issuance of ERUs.

78. Despite its efforts, the working group was not in a position to complete its work and recommend a change request to the DES, as concerns related to how the levy on transfers between PPSRs could be itself transferred to the Adaptation Fund account were raised, given that decision 1/CMP.8 only recognizes transfers between PPSRs and retirements as valid transaction types for PPSRs.

## **3. Carbon capture and storage**

79. The working group identified options and recommended an approach to handling non-permanent events related to carbon dioxide capture and storage CDM project activity, as contained in decision 10/CMP.7. As a result of the work on carbon dioxide capture and storage, the working group proposed a change request to the DES, which will allow registry systems and the ITL to support these project activities in the future.

## **4. Wetland drainage and rewetting**

80. The new land use, land-use change and forestry activity “wetland drainage and rewetting” under Article 3, paragraph 4, of the Kyoto Protocol, introduced in decision 2/CMP.7, annex, paragraphs 1(b), 6, 10 and 11 has impacts on registry systems. The working group considered these impacts and recommended a change request to the DES to support this new activity. This change request has been implemented in the DES and in the ITL.

## 5. Previous period surplus reserve

81. The working group discussed the revised modalities for carry-over contained in decision 1/CMP.8, paragraphs 23–26. The working group could not conclude its work on this topic. Divergent views were expressed relating to whether the destination of AAUs being carried-over should be the national holding account or the PPSR. Furthermore, concerns regarding the share of proceeds applied to transfers between PPSRs were raised (see paragraph 78 above). The working group achieved progress in its work on some other aspects of the revised carried-over modalities, on the basis of the following assumptions:

- (a) A PPSR can only contain AAUs valid for the commitment period to which it relates. In particular, CERs and ERUs converted from AAUs are carried over from and to the national holding account;
- (b) The quantity of AAUs contained in the PPSR contributes to the commitment period reserve of the Party concerned;
- (c) AAUs contained in a PPSR can only be transferred to another PPSR, retired or cancelled.<sup>9</sup>

## 6. Article 3, paragraph 7ter cancellations

82. The working group also considered the implications of Article 3, paragraph 7 ter, and based its work on the following assumptions:

- (a) Cancellations pursuant to Article 3, paragraph 7 ter, decrease the commitment period reserve of the Party concerned;
- (b) Units cancelled in accordance with Article 3, paragraph 7 ter, must:
  - (i) Be AAUs;
  - (ii) Be issued by the Party initiating the cancellation transaction;
  - (iii) Be issued for the second commitment period;
  - (iv) Be valid for the second commitment period;
  - (v) Be held on the Party national holding account;
  - (vi) Not be subject to prior external transfers.

83. Despite its efforts, the working group could not complete its work and recommend a change request to the DES. Concerns related to how Article 3, paragraph 7 ter, would apply to Parties who agreed to fulfil their commitments under Article 3 jointly were raised, as well as what information is to be used to determine the average annual emissions for the first three years of the preceding commitment period.

84. As regards the joint fulfilment of commitments under Article 3, concerns were expressed regarding the identification of the issuing Party of the AAUs to be cancelled, as well as regarding whether AAUs can be transferred prior to their cancellations. Similar concerns were raised regarding cancellations that follow ambition increases, as well as regarding the potential impact of such joint fulfilment on the commitment reserve calculation and, possibly, on the share of proceeds.

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<sup>9</sup> All types of cancellations would be allowed, with the exception of cancellations pursuant to Article 3, paragraph 7ter, of the Kyoto Protocol and ambition increases (see paragraphs 82 and 85 of this document).

**7. Ambition increase cancellation**

85. The working group further considered the implications of paragraph 8 of decision 1/CMP.8, but it could not recommend a change request to the DES to support this new requirement. Similar concerns as those expressed regarding Article 3, paragraph 7, were raised.

**8. Requirements regarding data exchange standards for Parties without a quantified emission or reduction limitation commitment**

86. The working group considered the impact on the DES and on all common operational procedures of the fact that Parties which have not taken on a quantified emission limitation and reduction commitment must still be able to perform some, but not all, transactions, during the second commitment period. The working group identified the transactions and automated validations that are still relevant for those Parties, the necessary changes to DES Annex H test suite as well as the required adaptations to the SIAR process, as a few elements pertaining to accounting of Kyoto Protocol units currently reported by all Parties are not relevant for Parties without a quantified emission or reduction limitation commitment. Such elements include the following:

- (a) Reporting on the calculation of the commitment period reserve;
- (b) Reporting on units that are not valid for use towards compliance with commitments under Article 3, paragraph 1, of the Kyoto Protocol, pursuant to decision 13/CMP.1, annex, paragraph 43(b).

**9. Standard electronic format tables**

87. The working group considered the implications of items 2 to 7 above on the standard electronic format tables referred to in decision 14/CMP.1, and produced a draft set of tables as input to SBSTA 38. The working group subsequently considered the work done on these tables at SBSTA 38.

**10. Workplan**

88. Finally, in order to guide its work, the working group established and maintained a workplan of its ongoing and planned activities. This workplan will need to be revised to take into account any clarification that will be provided at CMP 9 regarding the issues outlined above.

**G. Security Working Group**

89. During the reporting period, the ITL administrator reinitiated the Security Working Group, which established objectives and made plans to adopt the ISO/IEC 27001 standard for managing the security of information assets within systems supporting emissions trading under the Kyoto Protocol, as introduced in the previous report of the ITL administrator.<sup>10</sup>

90. The working group met nine times during the reporting period. The objectives of the working group are to raise the awareness of all stakeholders involved in emissions trading under the Kyoto Protocol of the need for information security and to ensure a comprehensive approach to information security management.

91. The working group initiated its work by defining and valuing the assets in scope. The defined scope contains primary assets and supporting assets. Primary assets relate to

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<sup>10</sup> FCCC/KP/CMP/2012/8.

business processes and information related to emissions trading under the Kyoto Protocol. Supporting assets refer to information technology systems, stakeholders and sites hosting systems and staff. Based on the agreed scope, the working group analysed known threats and vulnerabilities, and agreed on a baseline of controls.

### III. Organizational arrangements and resources

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

#### A. Resources requirements and expenditure

93. The resource requirements for activities relating to the ITL and the ITL administrator, to be funded from supplementary sources for the bienniums 2006–2007,<sup>11</sup> 2008–2009,<sup>12</sup> 2010–2011,<sup>13</sup> 2012–2013<sup>14</sup> and 2014–2015 were identified in the proposed programme budget for each of these bienniums.

94. The budget for the ITL for the biennium 2012–2013,<sup>15</sup> not including the deduction of fees paid by Parties which were not listed in decision 11/CMP.3, annex II, is EUR 5,770,020. This budget includes a working capital reserve equal to EUR 239,680.

95. The CMP, by 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 to optimizing the cost structure. Table 4 shows the expenditure of the ITL in the biennium 2012–2013, broken down by object of expenditure.

Table 4

#### **Expenditure of the international transaction log for the biennium 2012–2013** (Euros)

<i>Object of expenditure</i>	<i>As at 30 June 2012</i>	<i>As at June 2013</i>
Staff costs	291 855	755 702
Contractual services <sup>a</sup>	1 261 008	2 154 941
Expert groups	–	5 493
Travel of staff	1 422	11 469
General operating expenses	4 200	3 397
Contributions to common services	11 780	83 184
Programme support costs	166 107	382 617
<b>Total expenditure</b>	<b>1 736 372</b>	<b>3 396 803</b>

<sup>a</sup> The amount for contractual services includes EUR 592,248 earmarked for contractual services until the end of 2013 but not spent in the first six months of 2013.

<sup>11</sup> FCCC/SBI/2005/8/Add.2.

<sup>12</sup> FCCC/SBI/2007/8/Add.2.

<sup>13</sup> FCCC/SBI/2009/2/Add.3.

<sup>14</sup> FCCC/SBI/2011/2/Add.3.

<sup>15</sup> Decision 17/CMP.7.

96. Table 5 shows the breakdown of expenditure, as expected, for contractors and consultants for the ITL in 2012–2013. 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/CP.10. Consultancy expenditures are incurred when the secretariat needs to consult experts in specific fields.

Table 5

**Breakdown of expenditure for contractors and consultants for the international transaction log in 2012–2013**

<i>Object of expenditure</i>	<i>Percentage of expenditures for contractors and consultants</i>
Operation services	76
Production and disaster recovery environments	45
Service desk	18
Registry developer support	11
Security and disaster recovery testing	2
Software maintenance services	18
Operational procedure services	5
Consultancies	1

97. 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 these activities.<sup>16</sup>

98. In the period 2012–2013, the focus of activities continued to be to ensure that registry systems operate reliably. In addition, a new large area of work for the ITL administrator was to make arrangements for support of the true-up period<sup>17</sup> and for the second commitment period of the Kyoto Protocol by the ITL and the registry systems.

99. The staffing level was lower than projected in the ITL budget and was variable due to natural staff attrition and recruitment activities. In 2013, the recruitment of the team lead (P4 position) was completed. The projected level of staffing will stay unchanged in 2014 and the secretariat is making efforts to complete all other outstanding recruitment activities in the beginning of the year. The level of effort required is expected to increase due to the increasing amount of work related to the implementation of the second commitment period of the Kyoto Protocol and the accrued need to renew certain technology components of the ITL infrastructure.

100. The staff members mentioned in paragraph 99 above 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;

<sup>16</sup> FCCC/KP/CMP/2008/11, paragraph 72.

<sup>17</sup> 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 commitment under Article 3, paragraph 1, of the Kyoto Protocol.

- (b) Supporting future changes to the DES and releases of ITL 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 first commitment period under the Kyoto Protocol, the true-up period and 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 the registry systems based on internationally recognized information system security standards;
- (e) Upgrading the hardware and software in the ITL infrastructure, as necessary;
- (f) Administering and maintaining the RSA extranet;
- (g) Continuing to support the live operations and test activities of the ITL system and the registry systems in all supported environments;
- (h) Performing an annual disaster recovery test and security audit on the ITL and taking into account the results of this test and audit to enhance the reliability and security of the ITL;
- (i) Maintaining the ITL data warehouse;
- (j) Performing all required activities to support the common operational procedures, including change management, and the implementation of the common operational procedure for security and problem management for registries;
- (k) Continuing to facilitate cooperation among RSAs through the RSA Forum, its working groups and registry developers;
- (l) 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**

101. As at 30 September 2013, USD 1,963,788 in ITL fees had been received from Parties for 2007,<sup>18</sup> 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, and EUR 2,759,483 for 2013 with EUR 125,527 outstanding. Thirty-seven Parties have already paid their 2013 ITL fees, which amount to EUR 2,759,483. The secretariat would like to express its gratitude to Parties that have paid their fees. The status of fees as at 30 September 2013 is shown in tables 6 and 7.

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<sup>18</sup> This figure differs from the one 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 6

**Fees for international transaction log activities in the period 2007–2009 and cumulative shortfall as at 30 September 2013**

(United States dollars)

	2007	2008	2009
Fees budgeted	2 500 000	4 518 060	4 745 741
Fees received	1 963 788	4 518 060	4 745 041
Shortfall	536 212	0	0
Cumulative shortfall	536 212	536 212	536 212

Table 7

**Fees for international transaction log activities in the period 2010–2012 and cumulative shortfall as at 30 September 2013**

(Euros)

	2010 <sup>a</sup>	2011	2012	2013
Fees budgeted	3 014 423	3 014 423	2 885 010	2 885 010
Fees received	3 014 423	3 014 423	2 885 010	2 759 483
Shortfall	0	0	0	125 527
Cumulative shortfall	374 812	374 812	374 812	500 339

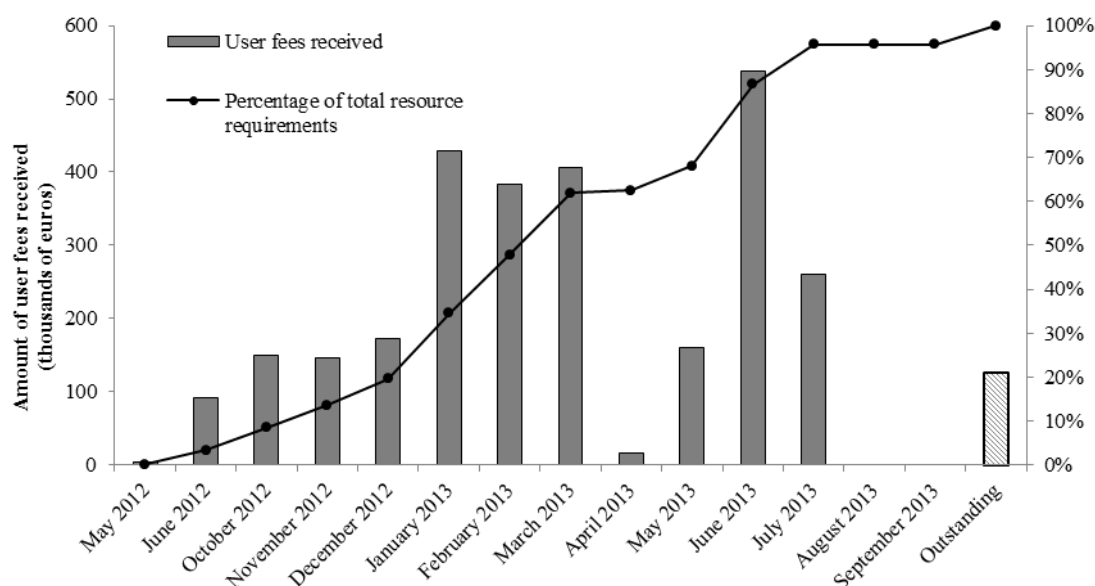
<sup>a</sup> The shortfall of 2009 in United States dollars was carried over to 2010 by converting at the average exchange rate of 0.699 euros applicable on the day of conversion.

102. Delays in receiving ITL fees from Parties had been noted in previous annual reports of the ITL administrator. The situation has improved in 2013 and all fees have been paid by 25 July 2013, excluding the contribution from Canada which is no longer due. Figure 7 shows the ITL fees received for 2013 in 2012 and 2013 as at 30 September 2013 and the cumulative percentage of resource requirements, by month.

103. The ITL connection fee contribution has not been received from Canada for 2013 owing to Canada's withdrawal from the Kyoto Protocol and the resulting disconnection of its registry from the ITL. As a result, there is a shortfall of EUR 125,527 in the 2013 contributions (4.35 per cent of the fees budgeted for 2013).



Figure 7

**International transaction log user fees for 2013 received in 2012 and 2013**

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

104. The secretariat is seeking ways to further optimize the ITL cost structure and is currently considering the following measures:

- (a) Technology refresh and licence cost optimization synchronized with the natural end of the life cycle of the software and hardware used to run the ITL;
- (b) Continuous vendor contract reviews;
- (c) Harmonization of the ITL technology stack with other information technology activities managed by the secretariat;
- (d) Systematization, documentation and addressing of typical incident, user error and user problem scenarios in order to minimize their reoccurrence and associated remedy costs.

## Annex I

### Registry status as at 30 September 2013

Table 8

#### Registry status as at 30 September 2013

<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 Community	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	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	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 2012–2013 as at 30 September

Table 9

Scale of fees and status of international transaction log fee payments in euros for the biennium 2012–2013 as at 30 September

Party	Scale of fees	2012			2013		
		Budgeted	Received	Outstanding	Budgeted <sup>a</sup>	Received	Outstanding
Australia	2.717	78 386	78 386	0	78 386	78 386	0
Austria	1.519	43 823	43 823	0	43 823	43 823	0
Belgium	1.887	54 440	54 440	0	54 440	54 440	0
Bulgaria	0.034	981	981	0	981	981	0
Canada	4.351	125 527	125 527	0	125 527	0	125 527
Croatia	0.076	2 193	2 193	0	2 193	2 193	0
Czech Republic	0.481	13 877	13 877	0	13 877	13 877	0
Denmark	1.256	36 495	36 495	0	36 495	36 495	0
Estonia	0.027	779	779	0	779	779	0
European Community	2.568	74 087	74 087	0	74 087	74 087	0
Finland	0.965	27 840	27 840	0	27 840	27 840	0
France	10.203	294 358	294 358	0	294 358	294 358	0
Germany	14.682	423 577	423 577	0	423 577	423 577	0
Greece	1.019	29 398	29 398	0	29 398	29 398	0
Hungary	0.418	12 059	12 059	0	12 059	12 059	0
Iceland	0.705	20 339	20 339	0	20 339	20 339	0
Ireland	0.762	21 984	21 984	0	21 984	21 984	0
Italy	8.694	250 823	250 823	0	250 823	250 823	0
Japan	14.289	412 239	412 239	0	412 239	412 239	0
Latvia	0.031	894	894	0	894	894	0
Liechtenstein	0.180	5 193	5 193	0	5 193	5 193	0
Lithuania	0.053	1 529	1 529	0	1 529	1 529	0
Luxembourg	0.146	4 212	4 212	0	4 212	4 212	0
Monaco	0.173	4 991	4 991	0	4 991	4 991	0
Netherlands	3.206	92 493	92 493	0	92 493	92 493	0
New Zealand	0.919	26 513	26 513	0	26 513	26 513	0
Norway	2.218	63 990	63 990	0	63 990	63 990	0
Poland	0.857	24 725	24 725	0	24 725	24 725	0
Portugal	0.902	26 023	26 023	0	26 023	26 023	0
Romania	0.120	3 462	3 462	0	3 462	3 462	0
Russian Federation	2.624	75 703	75 703	0	75 703	75 703	0
Slovakia	0.108	3 116	3 116	0	3 116	3 116	0
Slovenia	0.164	4 731	4 731	0	4 731	4 731	0
Spain	5.080	146 559	146 559	0	146 559	146 559	0
Sweden	1.834	52 911	52 911	0	52 911	52 911	0
Switzerland	2.640	76 164	76 164	0	76 164	76 164	0
Ukraine	0.713	20 570	20 570	0	20 570	20 570	0
United Kingdom	11.370	328 026	328 026	0	328 026	328 026	0
<b>Total</b>	<b>100.000</b>	<b>2 885 010</b>	<b>2 885 010</b>	<b>0</b>	<b>2 885 010</b>	<b>2 759 483</b>	<b>125 527</b>

<sup>a</sup> See paragraph 103 of this document on the Canadian contribution.

## Annex III

**Number of transactions proposed to the international transaction log  
from 1 November 2012 to 30 September 2013**

Table 10

**Number of transactions proposed to the international transaction log from  
1 November 2012 to 30 September 2013<sup>a</sup>**

<i>Registry</i>	<i>Acquisition<sup>b</sup></i>	<i>Transfer<sup>c</sup></i>	<i>Forwarding<sup>d</sup></i>	<i>Internal transfer<sup>e</sup></i>	<i>Issuance<sup>f</sup></i>	<i>Retirement<sup>g</sup></i>	<i>Cancellation<sup>h</sup></i>	<i>Total</i>
Australia	13	8	0	0	1	0	5	27
Austria	184	73	0	2	0	4	1	264
Belgium	346	57	0	2	2	1	1	409
Bulgaria	123	76	0	4	20	1	0	224
Canada	0	0	0	0	0	0	10	10
Clean development mechanism	0	19	3 126	0	2 388	0	44	5 577
Croatia	0	0	0	0	0	0	0	0
Czech Republic	210	181	0	0	105	3	1	500
Denmark	241	140	0	7	6	0	5	399
Estonia	48	43	0	0	20	14	1	126
European Community	9 511	9 842	0	0	0	0	158	19 511
Finland	420	241	0	41	6	0	4	712
France	886	737	0	92	31	1	22	1 769
Germany	1 526	1 047	0	93	19	1	21	2 707
Greece	121	25	0	0	0	0	0	146
Hungary	148	87	0	8	20	0	2	265
Iceland	0	0	0	0	1	0	0	1
Ireland	72	52	0	0	0	0	0	124
Italy	982	483	0	31	0	1	4	1 501
Japan	549	311	0	0	0	0	0	860
Latvia	39	24	0	5	1	0	0	69
Liechtenstein	1	4	0	10	1	0	2	18
Lithuania	55	26	0	5	15	4	1	106
Luxembourg	130	3	0	0	0	0	0	133
Netherlands	626	635	0	9	0	0	74	1 344
New Zealand	356	38	0	0	6	0	69	469
Norway	233	65	0	3	0	1	15	317
Poland	842	321	0	1	46	1	0	1 211
Portugal	248	55	0	6	0	2	1	312
Romania	145	54	0	1	13	0	0	213
Russian Federation	4	113	0	206	84	0	1	408
Slovakia	63	30	0	2	0	2	1	98
Slovenia	46	21	0	0	0	0	0	67
Spain	1 212	924	0	167	3	0	2	2 308
Sweden	310	419	0	40	8	0	96	873
Switzerland	1 905	4 490	0	1 387	2	0	153	7 937
Ukraine	1	196	0	0	180	0	0	377

<i>Registry</i>	<i>Acquisition<sup>b</sup></i>	<i>Transfer<sup>c</sup></i>	<i>Forwarding<sup>d</sup></i>	<i>Internal transfer<sup>e</sup></i>	<i>Issuance<sup>f</sup></i>	<i>Retirement<sup>g</sup></i>	<i>Cancellation<sup>h</sup></i>	<i>Total</i>
United Kingdom	1 824	2 599	0	20	0	0	14	4 457
<b>Total</b>	<b>23 420</b>	<b>23 439</b>	<b>3 126</b>	<b>2 142</b>	<b>2 978</b>	<b>36</b>	<b>708</b>	<b>55 849</b>

<sup>a</sup> 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.

<sup>b</sup> Acquisition from another national registry. See decision 13/CMP.1, annex, paragraph 30.

<sup>c</sup> Transfer to another national registry. See decision 13/CMP.1, annex, paragraph 30.

<sup>d</sup> 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.

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

<sup>f</sup> 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.

<sup>g</sup> See decision 13/CMP.1, annex, paragraph 34.

<sup>h</sup> See decision 13/CMP.1, annex, paragraph 33.

**Number of Kyoto Protocol units subject to transactions proposed to the international transaction log<sup>a</sup>  
from 1 November 2012 to 30 September 2013**

Table 11

**Number of Kyoto Protocol units subject to transactions proposed to the international transaction log from 1 November 2012  
to 30 September 2013**

<i>Registry</i>	<i>Acquisition<sup>b</sup></i>	<i>Transfer<sup>c</sup></i>	<i>Net Transfer<sup>d</sup></i>	<i>Forwarding<sup>e</sup></i>	<i>Internal transfer<sup>f</sup></i>	<i>Issuance<sup>g</sup></i>	<i>Retirement<sup>h</sup></i>	<i>Cancellation<sup>i</sup></i>
Australia	428 470	105 102	-323 368	0	0	23 262 032	0	58 200 160
Austria	20 734 845	25 379 654	4 644 809	0	25 350 293	0	106 362 535	1
Belgium	21 441 820	39 908 962	18 467 142	0	360 031	400 034	43 001 347	2 220
Bulgaria	16 086 740	25 682 633	9 595 893	0	206 403	1 449 025	20 371 625	0
Canada	0	0	0	0	0	0	0	2 792 234 073
Clean development mechanism	0	2 161 686	2 161 686	260 557 314	0	352 501 262	0	1 056 524
Croatia	0	0	0	0	0	0	0	0
Czech Republic	22 403 075	67 863 580	45 460 505	0	0	984 676	69 294 762	27
Denmark	11 404 263	20 399 619	8 995 356	0	210 762	6 318 614	0	220 888
Estonia	13 089 340	21 838 133	8 748 793	0	0	301 795	15 229 972	4 200
European Community	2 848 983 604	873 836 165	-1 975 147 439	0	0	0	0	3 332 508
Finland	16 857 926	35 882 040	19 024 114	0	1 586 052	490 029	0	9 356
France	67 133 966	332 049 788	264 915 822	0	4 429 701	20 171 982	8 157	18 183 086
Germany	180 986 113	414 862 236	233 876 123	0	924 584	3 242 214	1	34 158
Greece	13 825 950	8 200 185	-5 625 765	0	0	0	0	0
Hungary	3 085 739	15 011 922	11 926 183	0	1 523 551	6 882 730	0	133 161
Iceland	0	0	0	0	0	18 523 847	0	0
Ireland	3 263 957	6 387 062	3 123 105	0	0	0	0	0
Italy	60 080 210	144 134 507	84 054 297	0	1 423 785	0	190 106 903	4 250
Japan	55 649 021	48 976 052	-6 672 969	0	0	0	0	0
Latvia	13 334 708	19 962 667	6 627 959	0	1 512 079	44 248	0	0

<i>Registry</i>	<i>Acquisition<sup>b</sup></i>	<i>Transfer<sup>c</sup></i>	<i>Net Transfer<sup>d</sup></i>	<i>Forwarding<sup>e</sup></i>	<i>Internal transfer<sup>f</sup></i>	<i>Issuance<sup>g</sup></i>	<i>Retirement<sup>h</sup></i>	<i>Cancellation<sup>i</sup></i>
Liechtenstein	1	279 631	279 630	0	291 808	2 866	0	5 944
Lithuania	6 512 989	11 467 894	4 954 905	0	2 594 682	2 773 719	7 384 318	11 559
Luxembourg	5 590 005	1 094 312	-4 495 693	0	0	0	0	0
Netherlands	126 352 642	262 911 682	136 559 040	0	815 409	0	0	275 512
New Zealand	74 313 788	17 508 099	-56 805 689	0	0	264 146	0	30 706
Norway	11 809 587	8 236 820	-3 572 767	0	115 154	0	4 907 166	283 670
Poland	54 465 537	96 178 851	41 713 314	0	1 000	8 121 363	1 000	0
Portugal	13 506 705	26 194 764	12 688 059	0	354 745	0	25 229 951	2 085
Romania	18 305 205	36 627 560	18 322 355	0	552	2 226 623	0	0
Russian Federation	1 913 351	139 742 089	137 828 738	0	181 838 323	64 012 364	0	15 246 228
Slovakia	1 990 544	21 257 538	19 266 994	0	168 883	0	20 282 903	2 379
Slovenia	3 699 716	581 525	-3 118 191	0	0	0	0	0
Spain	92 295 479	136 929 912	44 634 433	0	2 673 307	515 356	0	155
Sweden	18 986 211	30 937 065	11 950 854	0	1 411 456	856 549	0	125 633
Switzerland	546 637 879	641 426 771	94 788 892	0	241 662 290	835 082	0	327 842
Ukraine	18 789 985	334 922 970	316 132 985	0	0	325 694 030	0	0
United Kingdom	338 909 323	836 090 904	497 181 581	0	1 602 694	0	0	16 546
<b>Total</b>	<b>4 702 868 694</b>	<b>4 705 030 380</b>	<b>2 161 686</b>	<b>260 557 314</b>	<b>471 057 544</b>	<b>839 874 586</b>	<b>502 180 640</b>	<b>2 889 742 871</b>

<sup>a</sup> 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.

<sup>b</sup> Acquisition from another national registry. See decision 13/CMP.1, annex, paragraph 30.

<sup>c</sup> Transfer to another national registry. See decision 13/CMP.1, annex, paragraph 30.

<sup>d</sup> Net transfer is equal to transfer minus acquisition.

<sup>e</sup> 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.

<sup>f</sup> Transfer within the registry. See decision 13/CMP.1, annex, paragraph 30.

<sup>g</sup> 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.

<sup>h</sup> See decision 13/CMP.1, annex, paragraph 34.

<sup>i</sup> See decision 13/CMP.1, annex, paragraph 33.