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**Review of implementation of commitments and of other provisions of the
Kyoto Protocol
Issues relating to the international transaction log**

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

Note by the secretariat*

Summary

This sixth 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 2009 to October 2010. The report also contains information on transactions of Kyoto Protocol units, as requested by the CMP at its fourth session. The CMP, by its decision 12/CMP.1, requested the Subsidiary Body for Implementation (SBI) to consider, at its future sessions, the annual reports of the ITL administrator. The SBI may wish to take note of the information contained in this report and provide guidance to the secretariat and Parties, as necessary, concerning the implementation of registry systems.

* This document was submitted after the due date in order to include information on the latest progress in this work.

Contents

| | <i>Paragraphs</i> | <i>Page</i> |
|--|-------------------|-------------|
| I. Introduction..... | 1–6 | 3 |
| A. Mandate..... | 1–3 | 3 |
| B. Scope of the note..... | 4–5 | 3 |
| C. Possible action by the Subsidiary Body for Implementation..... | 6 | 3 |
| II. Work undertaken since the publication of the fifth annual report of the administrator of the international transaction log under the Kyoto Protocol..... | 7–63 | 3 |
| A. Summary of work undertaken..... | 7–9 | 3 |
| B. Implementation activities..... | 10–27 | 4 |
| C. Operational activities..... | 28–47 | 7 |
| D. Independent assessment of national registries and go-live activities..... | 48–58 | 15 |
| E. Registry System Administrators Forum and activities of the working groups..... | 59–63 | 17 |
| III. Organizational arrangements and resources..... | 64–79 | 20 |
| A. Resource requirements and expenditure..... | 65–71 | 20 |
| B. Income to support the activities of the administrator of the international transaction log..... | 72–74 | 22 |
| C. Actions to optimize the cost structure of the international transaction log..... | 75–76 | 23 |
| D. Proposals to optimize the cost structure of the international transaction log.. | 77–79 | 24 |

Annexes

| | |
|--|----|
| I. Registry status as at 31 October 2010..... | 25 |
| II. Scale of fees and status of international transaction log fee payments for the biennium 2008–2009 as at 31 October 2010..... | 27 |
| III. Scale of fees and status of international transaction log fee payments for the biennium 2010–2011 as at 31 October 2010..... | 29 |
| IV. Number of transactions proposed to the international transaction log from 1 November 2009 to 31 October 2010..... | 31 |
| V. Number of Kyoto Protocol units subject to transactions proposed to the international transaction log from 1 November 2009 to 31 October 2010..... | 33 |

I. Introduction

A. Mandate

1. The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), by its decision 13/CMP.1, requested the secretariat to establish and maintain an international transaction log (ITL) to verify the validity of transactions proposed by registries established under decisions 3/CMP.1 and 13/CMP.1. The ITL is essential for the implementation of the mechanisms under Articles 6, 12 and 17 of the Kyoto Protocol.

2. The Conference of the Parties (COP), by its decision 16/CP.10, requested the secretariat, as the 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 its decision 12/CMP.1, requested the Subsidiary Body for Implementation (SBI) to consider, at its future sessions, the annual reports of the ITL administrator, with a view to requesting the CMP to provide guidance, as necessary, in relation to the operation of registry systems.

B. Scope of the note

4. This sixth annual report of the ITL administrator provides information on the implementation of the ITL and its operational status, including the facilitation of cooperation with registry system administrators (RSAs) through the activities of the Registry System Administrators Forum (RSA Forum) and the independent assessment of registry systems. This annual report also contains, for the second time, information on transactions in the ITL, as requested by the CMP at its fourth session.¹

5. This report covers the reporting period from 1 November 2009 to 31 October 2010.

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.

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

A. Summary of work undertaken

7. The ITL administrator established the RSA Forum and its working groups to coordinate the management and technical activities of the registry systems. The ITL administrator continued to convene the RSA Forum to guide the work of the working groups.

¹ FCCC/KP/CMP/2008/11, paragraph 67.

8. The activities related to the second annual assessment of national registries and accounting of Kyoto Protocol units were completed successfully. The work included training sessions for the assessors, improvements to the assessment procedure and a post-mortem analysis of experiences in the second year, which was carried out with a view to further improving the assessment procedure.

9. The ITL administrator continued to support the ‘business as usual’ operations of the ITL. Detailed information on the operational activities and ITL operational performance is provided in this report.

B. Implementation activities

1. Standard electronic format

10. The CMP, at its fourth session, welcomed the completion of the work on specifications for the reporting of Kyoto Protocol units in the standard electronic format (SEF) and requested the ITL administrator to continue its work on SEF in collaboration with RSAs, including the provision of two coordinated testing cycles in 2009, if required, to enable the automation of SEF reporting by Parties to the Convention that are also Parties to the Kyoto Protocol with commitments inscribed in Annex B to the Kyoto Protocol.²

11. The secretariat coordinated the planning, organization and support of two coordinated testing cycles in February 2009 and November 2009. The second cycle involved four registry systems developers who could not participate in the first cycle or whose software solution had significantly evolved between the first and the second test cycle.

12. Information reported by Parties in the submissions of the SEF tables for 2010, covering the calendar year 2009, is available in the annual compilation and accounting report for 2010³ and on the UNFCCC website.⁴

2. International transaction log releases

13. During the reporting period, there were two releases of the ITL software, which mainly addressed deficiencies in the message exchange protocol and performance issues caused by the increasing fragmentation of unit blocks.⁵ These releases implemented changes that were decided under the change management procedure, such as the new message flow, account level reconciliation filtering, heartbeat monitoring and additional operational statuses for registries. The releases also contained some correction of software defects, improvements to the ITL user interface regarding handling of reconciliation inconsistencies and more flexible scheduling of the ITL internal processes.

14. These two releases of the ITL software have increased the ability of the ITL to handle larger volumes of transactions proposed by registry systems, improved the reliability of the transaction message flow and resulted in more efficient incident handling by the ITL service desk.

² FCCC/KP/CMP/2008/11, paragraphs 64 and 66.

³ FCCC/KP/CMP/2010/5 and Add.1.

⁴ <http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/5270.php>.

⁵ In accordance with paragraph 7 (d) (ii) of the annex to decision 24/CP.8, serial numbers of Kyoto Protocol units are represented in blocks of consecutive numbers.

3. International transaction log service desk

15. Several new ITL service desk procedures have been developed and implemented. These include procedures for registry software migration, which serves to ensure smooth and reliable transition for registries changing to another registry system or software platform, as well as a new procedure for handling security incidents. A few other procedures have also been added as the outcome of a problem management activity following the investigation of specific operational incidents, in order to ensure consistent and standardized handling in the case of recurring incidents.

16. In addition, a number of existing service desk procedures have been updated in order to align them with the changes and improvements made in the new releases of the ITL application, such as the introduction of the new transactional message flow, new registry operational statuses and changes related to the reconciliation process improvements, etc.

4. Consolidated system of European registries

17. During the ninth meeting of the RSA Forum, which took place in March 2009, the European Union (EU) and its member States expressed their intention to consolidate their national registries. The timeline for this project, as presented during this Forum, starts with an inception phase in 2009 and foresees a transition to production at the end of 2011, in line with the EU legal requirements, which state that all allowances should be held in a single registry system from 1 January 2012 onwards.⁶

18. Article 39 of the draft EU regulation for a standardized and secured system of registries⁷ proposes the decoupling of EU allowances from Kyoto Protocol units. This would allow consolidated national registries of EU member States to transfer EU allowances within and between their respective registries, without requiring these transfers to be reported to the ITL (since these transfers would not involve Kyoto Protocol units, they would fall outside the scope of the relevant decisions of the COP and the CMP). Paragraph 6 of the preamble and Article 56 of this draft EU regulation propose an annual clearing process by which transactions with EU allowances are followed up with corresponding transfers of assigned amount units.

19. The EU and its member States, Iceland, Liechtenstein and Norway communicated to the secretariat in February 2010 the detailed modalities of the proposed consolidated system by which the EU national registries will share a single platform with a common set of infrastructure technologies, while ensuring that they are uniquely identifiable, protected and distinguishable from each other in accordance with decisions 24/CP.8 and 13/CMP.1. Furthermore, the existing roles and responsibilities will be continued unchanged so that, for example, each Party retains its own registry administrator and accounts. In addition, the EU and its member States, Iceland, Liechtenstein and Norway also introduced a change request in May 2010 to support the migration of their respective national registries to a consolidated system.

20. This change request was reviewed by the Change Advisory Board (CAB) at its thirtieth meeting and, as a follow-up, impact assessments were performed by all Parties who did not propose the change request mentioned in paragraph 19 above, who agreed to the proposed change request. The ITL administrator performed the technical, legal and financial assessments of the impact of the proposed change on the ITL, confirming that:

(a) The change is technically feasible and the technical impacts on the ITL software, operations and common operational procedures are limited;

⁶ See paragraph 38 of directive 2009/29/EC of the European Parliament and of the Council. Available at <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0063:0087:en:PDF>>.

⁷ Available at <http://ec.europa.eu/environment/climat/emission/pdf/regreg_iv_ver2_17feb10.pdf>.

(b) The change is consistent with relevant decisions of the CMP, in particular, the requirement under paragraph 18 of the annex to decision 13/CMP.1 for each national registry to remain distinct;

(c) The agreed budget for the ITL is sufficient to cope with the change.

21. The change was approved by the CAB at its fiftieth meeting and a detailed report on the change was made to RSAs during the twelfth RSA Forum. The ITL administrator will supervise testing during the release of the change to ensure that the implementation of the change meets the requirement referred to in paragraph 20 (b) above.

5. Registry System Administrators Extranet

22. The RSA Extranet is the central location for sharing all technical and planning information among RSAs. It contains all meetings documentation for the RSA Forum and its working groups, an up-to-date contact list of RSAs, operational procedures documentation, technical and organizational documentation, planning documents and a list of frequently asked questions.

23. As noted in the previous annual report of the ITL administrator,⁸ the platform used by the RSA Extranet has reached its end of life. In August 2010, the secretariat ITL team therefore started a project to migrate to a new platform and the following steps have been taken:

(a) A project plan has been established;

(b) An analysis of the requirements for an RSA Extranet has been conducted;

(c) A prototype has been implemented on the basis of the above-mentioned analysis;

(d) The prototype was demonstrated during the twelfth RSA Forum;

(e) A plan for the migration of the content hosted under the current solution to the new solution has been elaborated.

6. Penetration testing, security audit and disaster recovery testing

24. In March and April 2010, the secretariat ITL team supervised a first annual penetration test and security audit of the ITL. The areas covered by the penetration testing and security audit included the following:

(a) The web services used by the ITL;

(b) The administrator application;

(c) A review of the firewall configuration;

(d) A review of the database configuration;

(e) A security audit of the procedures, patching policy and anti-virus solution.

25. Following the penetration testing and security audit, the ITL system was found to be secure and a limited number of improvements to the ITL infrastructure and software were recommended by the ITL operator. The secretariat ITL team supervises the implementation of these improvements by the ITL operator with a view to completing them by early 2011, at which point the next annual penetration test and security audit should take place.

26. In March 2010, the secretariat ITL team supervised a first annual disaster recovery test of the ITL. In addition to the ITL, this test involved two national registries, the

⁸ FCCC/KP/CMP/2009/19.

Community Independent Transaction Log (CITL), the clean development mechanism (CDM) information system, the joint implementation information system and the Compilation and Accounting Database. Overall, the execution of the disaster recovery test was a success, as the integrity of the ITL data and the nominal functioning of the ITL processes post-disaster were confirmed. The ITL operator issued a few recommendations for improvements to the work instructions contained in the disaster recovery plan and disaster recovery test plan. These recommendations will be taken into account before the next annual disaster recovery test.

7. International transaction log data warehouse

27. During the reporting period, the secretariat data warehouse team completed the implementation, testing and deployment of the replicated ITL database within the secretariat premises. Significant performance improvements were achieved in producing the SEF comparison report and changes were introduced into the SEF comparison report tool to support the aggregation of transactions at regional level.

C. Operational activities

1. Registry testing

28. In June 2010, coordinated registry testing of large transactions was conducted in the registry test environment. This testing was requested by the fragmentation working group, previously appointed by the CAB to investigate the problem of unit block fragmentation in registry systems in a holistic way. The main goal of the testing was to verify the limits of various registries, the ITL and the CITL in processing transaction proposals containing large numbers of unit blocks. Fifteen RSAs, the CITL administrator and the ITL administrator took part in this activity.

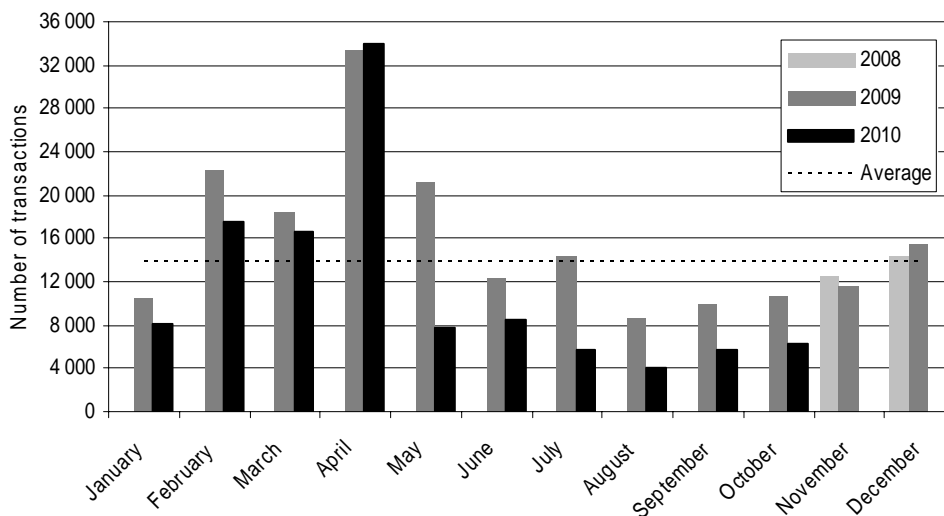
29. The results of this testing were used by the fragmentation working group to better evaluate the current situation with regard to the issue of unit block fragmentation, with particular focus on large transactions; the results also helped the working group to design and fine-tune the appropriate countermeasures.

30. Structured registry testing has continued in the registry and registry developer environments. As at 31 October 2010, 423 issues have been registered following developer tests for registries and 386 issues have been resolved. The rate of new issues in the registry developer environment continues to decrease; during the reporting period an average of six new issues per month were reported.

2. Operational performance

31. The number of transactions proposed to the ITL in the production environment remains significant and is shown for each month since November 2008 in figure 1.

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



32. The transaction termination ratio, which is defined as the number of terminated transactions (i.e. discrepant transactions) divided by the number of transactions proposed in a given time frame, is a good indicator of the level of internal checking performed by a registry to ensure that the transactions it proposes and its data records are accurate. The workload of the ITL service desk increases as the transaction termination ratio increases because RSAs often contact the service desk to ask why a transaction has been terminated. It is therefore important that internal checking procedures be implemented within national registries to keep this ratio as low as possible. The change in this ratio since November 2008 is shown in figure 2.

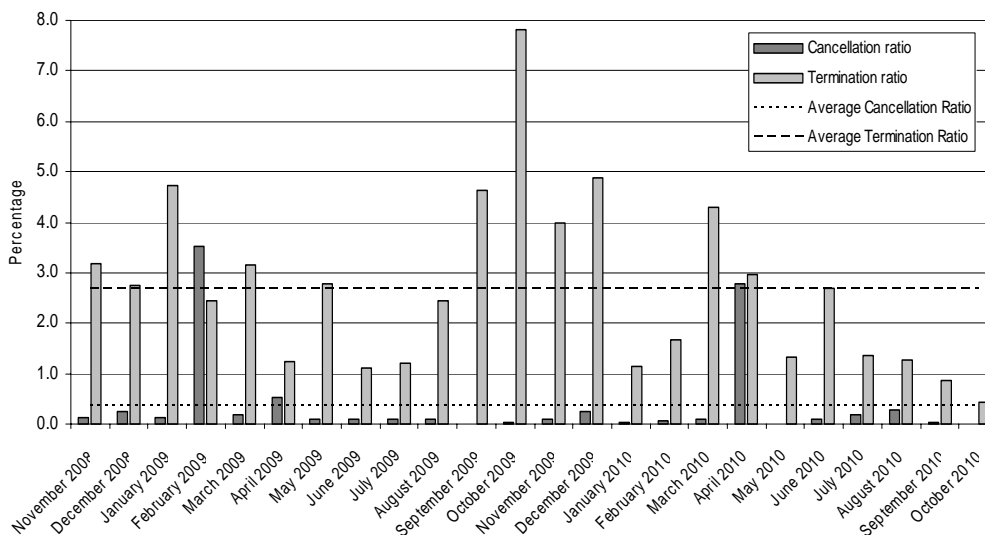
33. The commonest root causes for the termination of a transaction are the following:

- (a) Inherent limitations of the message flows within technical standards for data exchange, amounting to 60 per cent of the termination causes. The ITL administrator has introduced a change request to remedy this situation;
- (b) Limitations in the synchronization between the national registry administrator and the ITL service desk, resulting in transactions being proposed while the registry is not fully operational in the ITL, amounting to 18 per cent of the termination causes;
- (c) Limitations in the coordination, within registry systems, between the transaction process and the reconciliation process, resulting in transactions being proposed involving units that are inconsistent, amounting to 10 per cent of the termination causes;
- (d) Various discrepancies due to incorrect implementation of the national registry systems, amounting to 8 per cent of the termination causes;
- (e) Miscellaneous other causes, including rejection of external transfers of Kyoto Protocol units by the acquiring registry, amounting to 4 per cent of the termination causes.

34. The transaction cancellation ratio, defined as the number of cancelled transactions (i.e. transactions that are not finalized within 24 hours) divided by the number of proposed transactions in a given time frame, is a good indicator of the extent of communication problems within registry systems, as messages that cannot be delivered often cause a transaction to be delayed and subsequently cancelled. The number of support requests made to the ITL service desk increases as the transaction cancellation ratio increases because staff

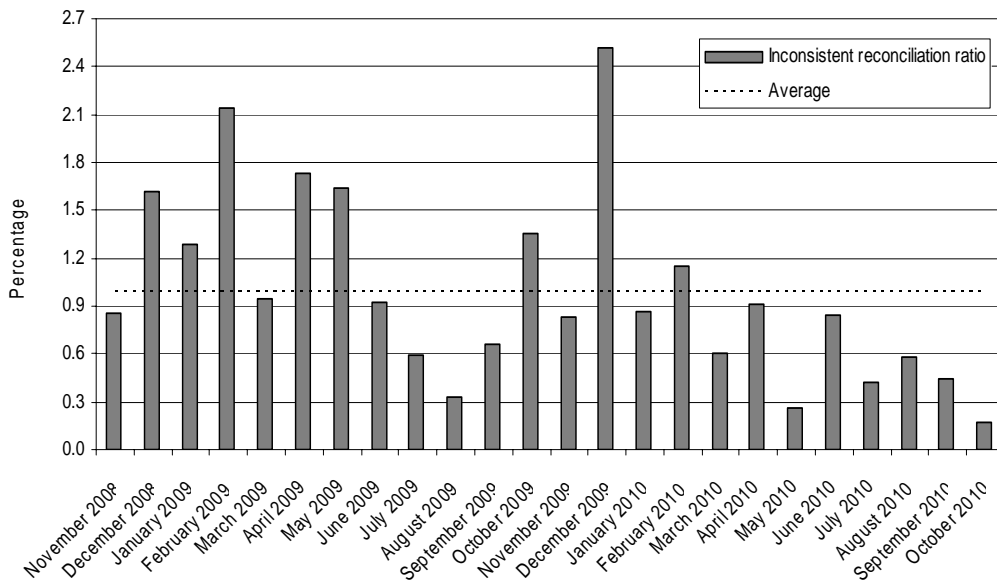
at the service desk contact RSAs regarding each delayed transaction and the staff attempt to finalize the transaction manually. Changes in this ratio since November 2008 are shown in figure 2.

Figure 2
Changes in the production environment of the international transaction log of the transaction cancellation and termination ratios since November 2008



35. The inconsistent reconciliation ratio, which is defined as the number of inconsistent reconciliations divided by the number of reconciliations initiated in a given time frame, is a good indicator of the capacity of registries to maintain accurate records of Kyoto Protocol unit holdings. The number of support requests to the service desk increases as the inconsistent reconciliation ratio increases because a significant amount of time and effort is required to resolve these inconsistencies manually. Changes in this ratio since November 2008 are shown in figure 3.

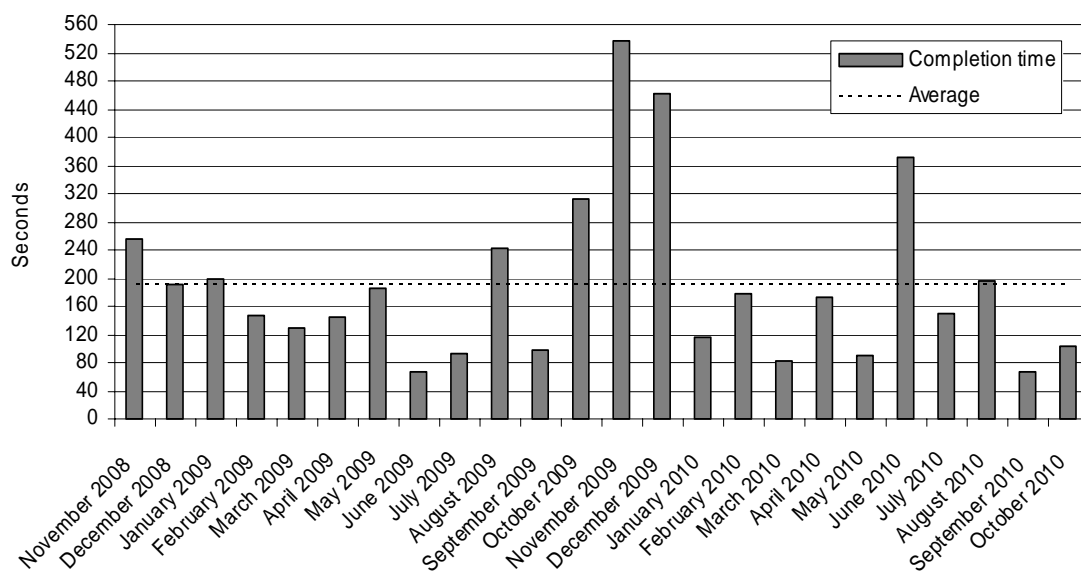
Figure 3
Changes in the production environment of the international transaction log of the inconsistent reconciliation ratio since November 2008



36. Unavailability of the ITL prevents registries from performing their transactions and should be kept to a minimum. Unavailability of the ITL occurs during planned outages, where RSAs are informed ahead of time of any downtime, and during unplanned outages. The ITL availability for the period September 2009 to August 2010 was 99.64 per cent. During this period planned outages lasted 243 hours and unplanned outages lasted 30 hours.

37. Transactions proposed in the production environment of the ITL since November 2008 were completed in the time frames displayed in figure 4. 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 CITL if an EU emissions trading scheme registry is involved in the transaction.

Figure 4
Completion time of transactions proposed to the international transaction log in the production environment since November 2008

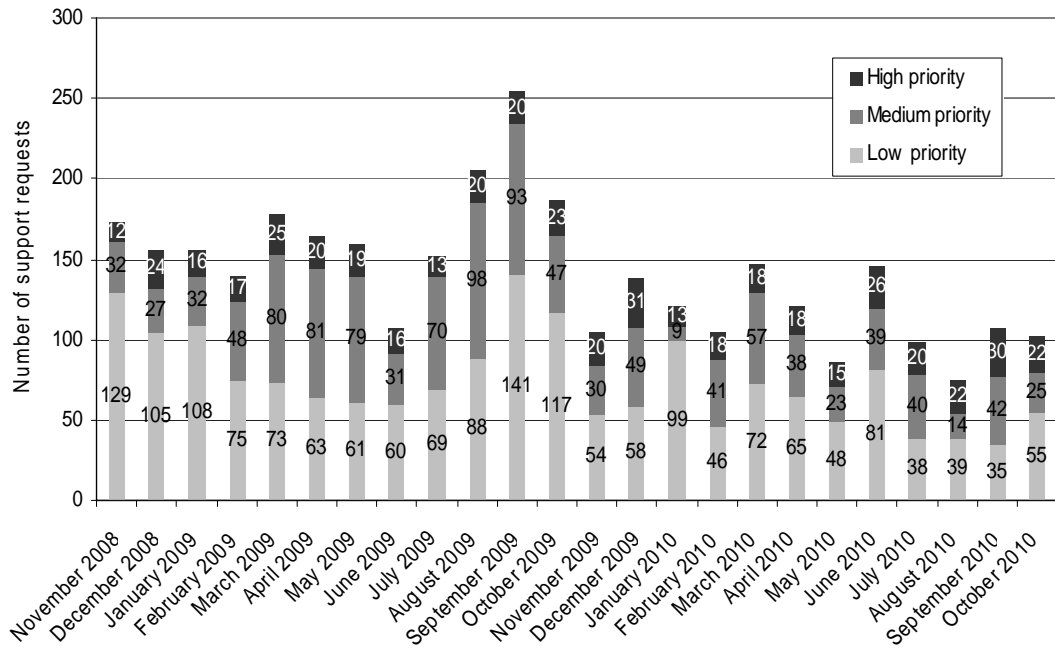


3. International transaction log service desk

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

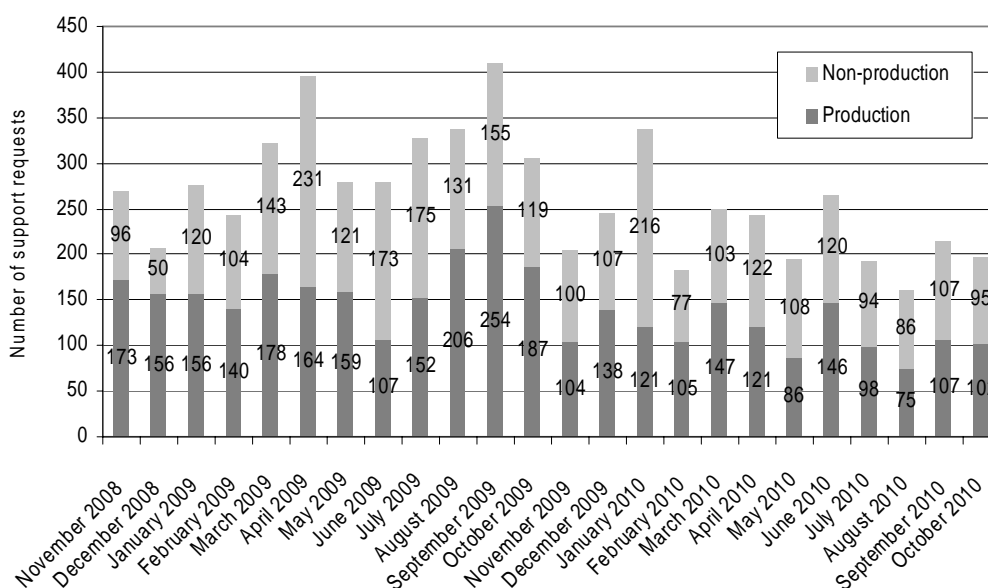
39. Figure 5 shows the changes in the number of support requests handled by the ITL service desk on the ITL production environment during the reporting period, by priority. High-priority support requests are related to the unavailability of the ITL and are raised when the processing of transactions from one or more registries cannot be performed. Medium-priority support requests are related to the performance or the stability of the ITL, which may impact transaction processing. Low-priority support requests relate to information items or performance issues where transaction processing is not directly affected.

Figure 5
Number of support requests handled by the international transaction log service desk on the international transaction log production environment since November 2008



40. Figure 6 shows the changes in the number of support requests handled by the ITL service desk for the production and non-production environments.

Figure 6
Number of support requests handled by the international transaction log service desk for the production and non-production environments since November 2008



4. Support of communication tools

41. The ITL administrator continued to contribute to the development and maintenance of the submission portal that ensures that annual submissions made under Article 7 of the Kyoto Protocol are submitted securely. The submission portal has been used by authorized Parties to submit, as part of their national inventory reports (NIRs), the SEF tables and the information on the national registry, as required by decision 15/CMP.1.

42. The secretariat ITL team continued to maintain the web pages on the UNFCCC website relating to the registry systems under the Kyoto Protocol.⁹ These web pages contain information about: the ITL; registry functions; the registry initialization process; initial independent assessment reports; registry status, including the information made publicly available by the ITL administrator pursuant to decision 16/CP.10; and the list of initialized and live registries.

43. In January 2010, the ITL administrator published the information requested by decision 16/CP.10 regarding the operational status of each registry system, discrepancies and inconsistencies, required actions specified in notifications sent by the ITL that have not been completed in the specified time frame and aggregated information on unit holdings in each registry at the end of the calendar year. This information, which can be used by RSAs to verify the content of their respective SEF tables prior to the annual submission, is publicly available on the UNFCCC website.¹⁰

5. Fragmentation of unit blocks in the registry systems

44. The issue of fragmentation of unit blocks in the registry systems, introduced during the tenth RSA Forum and followed up during the eleventh RSA Forum, has received much

⁹ Available at <http://unfccc.int/kyoto_protocol/registry_systems/items/2723.php>.

¹⁰ Available at <http://unfccc.int/kyoto_protocol/registry_systems/registry_status/items/4765.php>.

attention, as it was detected that an increasing number of unit blocks¹¹ were being proposed in each transaction, leading in some cases to the failure to process these transactions. In addition, fragmentation increases the size of each reconciliation, leading, in some cases, to the failure to process these reconciliations successfully. The ITL administrator therefore led a team carrying out the following activities related to the fragmentation issue, with a view to ensuring that the registry systems are able to cope, in the future, with increased fragmentation of unit blocks:

- (a) A change request was proposed in August 2009 recommending measures to RSAs for tackling the issue of fragmentation within their national registries;
- (b) A fragmentation working group was established, with the overall objective of examining the causes of fragmentation and recommending measures to the CAB to mitigate the issue;
- (c) The fragmentation working group recommended a key change to the reconciliation process to mitigate effectively the issue of fragmentation for the most active registries;
- (d) A coordinated testing effort led to the recommendation by the working group of a change request to limit the number of unit blocks that can be proposed in a transaction;
- (e) Several performance improvements took place in the ITL, targeted at improving the capacity of the ITL to deal with large transactions and reconciliations;
- (f) The fragmentation working group will consider the potential impact of the consolidation of EU national registries on the issue and provide relevant recommendations to the CAB as required.

6. Phishing attacks

45. In January to February 2010, a first wave of phishing attacks targeted national registries, resulting in potentially fraudulent transactions of Kyoto Protocol units.

46. Following this first wave of attacks, the ITL administrator suspended the virtual private network connection of the registries concerned and established an emergency procedure. During a second wave of attacks, in March 2010, this emergency procedure was invoked and concluded with the secured and normal operation of all national registries.

47. In the light of these events, a security working group was established, with a view to providing relevant recommendations to RSAs related to the security of registry systems. The activities of the security working group generated the following outcomes:

- (a) A revised, final version of the emergency security procedure;
- (b) Recommended approaches to handle authentication of end-users of registries;
- (c) A proposal to modify the independent assessment procedure of registry systems to cover aspects related to the authentication of end-users of registries, based on the recommended approaches mentioned above.

¹¹ In general, registry systems must ‘split’ unit blocks during the preparation stage of a transaction. Consequently, fragmentation occurs in these systems, the ITL and the CITL, and the size of the transaction, expressed in number of unit blocks, increases.

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

1. Initial assessment activities

48. Initialization is the formal process by which the ITL administrator verifies that a registry has fulfilled the requirements set out in the technical specifications of the technical standards for data exchange between registry systems under the Kyoto Protocol (DES), developed in accordance with decision 24/CP.8. Initialization is a prerequisite for a registry to commence operations with the production environment of the ITL. The ITL administrator did not support initialization activities during the reporting period. As at 31 October 2010, 38 initial independent assessment reports had been issued, as shown in annex I.

2. Annual assessment activities

49. The standardized testing and independent assessment reporting process mentioned in decision 16/CP.10, paragraph 5 (a) (hereinafter referred to as the SIAR process) expands on the initial independent assessment of national registries by defining the following: 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 the activities to be carried out by assessors when reviewing reported changes and accounting information. The outcome of the SIAR process is forwarded to expert review teams (ERTs) for consideration as part of the review of national registries under Article 8 of the Kyoto Protocol.

50. As noted in the previous annual report of the ITL administrator, the secretariat 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 ITL project costs. In January 2010, the ITL administrator reissued its invitation to all RSAs to participate in the SIAR process as assessors. As a result, a significant number of RSAs (28 versus 6 for the 2009 assessment cycle) contributed to the execution of the SIAR process.

51. To prepare RSAs for carrying out the assessments, the ITL administrator organized and conducted in March 2010 a workshop in Bonn, Germany, on the SIAR process (similar to the two workshops that had been conducted in 2009). The objectives of this workshop were to provide an overview of the SIAR process and its timelines, to develop guidance on each section of the SIAR, Parts I and II, and to familiarize RSAs with the tools used to support the execution of the process.

52. In September 2010, a representative of the ITL team gave a presentation to four groups of ERTs on the SIAR process, including an overview of the result of the execution of this process. A similar presentation was made to RSAs during the twelfth meeting of the RSA Forum.

53. In 2010, 34 Parties submitted the SEF tables containing information on Kyoto Protocol units for the year 2009. All the submitted SEF tables were consistent with the ITL records, once Parties had amended their tables to adhere strictly to the SEF specifications.

54. Thirty-eight NIRs, which include the information on changes to the national registry and Kyoto Protocol units assessed under the SIAR process, were submitted during 2010.

55. The SIAR process in 2010 was generally successful, in spite of the limited experience of RSAs with the process and the complexities inherent in the process due to the broad scope of the assessments and the detailed technical and functional knowledge of

registry systems and accounting of Kyoto Protocol units that is required. The following major issues were identified during the 2010 assessment cycle:

(a) Five submissions of SEF tables were formatted incorrectly. The Parties concerned corrected their submissions to meet the SEF specifications and the resubmissions were found to be consistent with the ITL records. Formatting issues had also occurred in the 2009 assessment cycle, but it is hoped that they will not occur in the 2011 assessment cycle, as Parties now have a clear understanding of the specifications and experience with the format;

(b) Three submissions of SEF tables were initially found to be inconsistent with the ITL records. The Parties concerned corrected their submissions and the resubmissions were found to be consistent with the ITL records. The reasons for the initial inconsistencies remain unknown because Parties corrected their SEF submissions but did not provide an explanation regarding the root cause of the initial inconsistencies;

(c) The information related to changes in national registries was, for some Parties, not reported clearly in the submissions, leading to unnecessary time being spent to determine whether a change had occurred in the registry;

(d) The public information to be provided in accordance with decision 13/CMP.1 by Parties through the national registry user interface was generally more complete than in 2009. However, for some Parties, the public information was still incomplete, despite the guidance on reporting of public information provided in the SIAR documentation, and clarification was often requested by the assessors.

56. The deadlines established under the SIAR process are aligned with the deadlines of the annual review process under Article 8 of the Kyoto Protocol, in such a way that ERTs can consider the SIAR Parts I and II reports from the first review week onwards. During the 2010 assessment cycle, delays were experienced which led to the last assessment being finalized during the first review week. These delays were due to the following causes:

(a) Unclear reporting by Parties on changes to their national registries, leading to more time and effort being required than is usually necessary to identify these changes;

(b) Parts of the initial submissions were incomplete, leading to an additional round of clarifications with the Parties concerned in order to complete these submissions;

(c) Schedule conflicts and other obligations of RSAs, which resulted in the reassignment of 10 assessments to an assessor different from the initial assessor.

57. After the completion of all of the assessments in September 2010, a post-mortem analysis of the SIAR process in 2010 was carried out, aimed at identifying areas where adjustments and improvements are needed. This analysis led to the identification of the following potential improvements:

(a) Further updates to the documentation related to the SIAR process, including clarifications with regard to the initialization process, the summary of findings and proposals on the actions to take when Parties do not submit on time, assessors do not provide their assessment on time and Parties do not submit their documentation in English;

(b) Taking into account the need for assessors to support periodic reviews of national registries;

(c) Further updates and upgrades of the supporting tools for the SIAR process.

3. Go-live activities

58. During the reporting period, the ITL administrator supported the go-live process of the registries of Canada (12 February 2010), Croatia (11 December 2009) and Iceland (6 May 2010). As at 31 October 2010, 38 registries are connected to the ITL.

E. Registry System Administrators Forum and activities of the working groups

1. Registry System Administrators Forum

59. The ITL administrator uses 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 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.

60. Participation in the RSA Forum is open to all administrators of national registries, the CDM registry, supplementary transaction log administrators (such as the CITL administrator) and ITL vendors. The ITL administrator invites a number of participants from Parties to the Kyoto Protocol that are not included in Annex I to the Convention to participate.¹² Although these Parties are not required under the Kyoto Protocol to implement registry systems, the participation of such experts increases the transparency of the RSA Forum and allows the sharing of experiences with registry systems under the Kyoto Protocol with experts implementing similar systems for environmental policy purposes in such Parties. Table 1 provides an overview of the two meetings of the RSA Forum organized by the secretariat during the reporting period.

Table 1

Meetings of the Registry System Administrators Forum from November 2009 to October 2010

| <i>Meeting</i> | <i>Date</i> | <i>Location</i> | <i>Key objectives</i> |
|----------------|-----------------|-----------------|---|
| Eleventh | 9–10 March 2010 | Bonn, Germany | <ul style="list-style-type: none"> • To provide RSAs with an update on operational status and issues • To present RSAs with software and hardware improvements in the latest ITL release • To present RSAs with current disaster recovery plans and results • To share plans for the consolidation of the individual European national registries into a consolidated platform • To provide RSAs with an update of current fragmentation issues • To update the status of working groups and managed changes • To provide information relating to phishing attacks • To explain additional security |

¹² In accordance with decision 16/CP.10, paragraph 6 (c).

| <i>Meeting</i> | <i>Date</i> | <i>Location</i> | <i>Key objectives</i> |
|----------------|----------------------|-----------------|--|
| | | | <p>measures adopted by the RSAs and the establishment of the security working group</p> <ul style="list-style-type: none"> • To provide feedback on the standard independent assessment report execution for 2009 |
| Twelfth | 29–30 September 2010 | Bonn, Germany | <ul style="list-style-type: none"> • To provide RSAs with an update of operational status and issues • To present RSAs with the new RSA Extranet project • To update the status of working groups and managed changes • To provide RSAs with an update on the fragmentation and security issues • To provide feedback on the standard independent assessment report execution for 2010 • To inform RSAs on the outcome of the discussions held by Parties during the thirty-second session of the SBI on the methodology to collect ITL fees |

Abbreviations: ITL = international transaction log, RSA = registry system administrator, SBI = Subsidiary Body for Implementation.

2. Activities of the working groups under the Registry System Administrators Forum

61. During the reporting period, the secretariat and RSAs continued to work with the working groups in the areas of incident and problem management, security, fragmentation, change management and the SIAR process. The work performed by the working groups and the CAB is outlined below:

(a) The incident and problem management working group met twice in this period. Its initial scope was outlined and a preliminary set of tools and techniques identified to prevent and reduce the effects of incidents on the production environment. The work on incident management was completed and a new incident management procedure agreed by RSAs;

(b) The registry security working group was established during the tenth CAB meeting. The secretariat carried out the preparatory work, and the working group contributed to improving the common operational procedures by proposing a revised procedure for handling security incidents and by proposing a change to the SIAR process to improve the assessment of end-user authentication. The security working group met three times during the reporting period;

(c) The fragmentation working group held six sessions during the period to identify and provide solutions to fragmentation caused by the effects of increased sizes and quantities of unit blocks in the transaction and reconciliation processes;

(d) The SIAR working group met once during the reporting period to improve the SIAR process based on the 2010 assessment cycle;

(e) The CAB, established in accordance with the change management procedure, met eight times during the reporting period and considered the changes described in table 2.

Table 2

Changes considered by the Change Advisory Board from November 2009 to October 2010

| <i>Change title</i> | <i>Date proposed</i> | <i>Status as at 31 October 2010</i> |
|---|----------------------|---|
| SIAR process update for 2010 | 22 September 2009 | Completed |
| Limit on the number of transaction unit blocks | 9 June 2009 | Completed |
| Revised transaction message flow | 29 June 2009 | Completed |
| Proposal for defragmentation | 22 August 2009 | Rejected |
| Heartbeat monitoring | 19 November 2009 | Completed |
| Revised registry operational statuses | 9 December 2009 | Completed |
| Account-level reconciliation filtering | 10 December 2009 | Completed |
| Procedure for registry systems security breach | 20 February 2010 | Completed |
| Two-factor authentication | 26 February 2010 | Rejected |
| Changing response code 1515 to a sequence check | 20 April 2010 | Completed |
| Clarification for "result identifier equal zero" | 20 April 2010 | Completed |
| European Union registry consolidation | 10 June 2010 | Accepted |
| Undoing of retirement transaction | 5 August 2010 | Completed |
| Clarification of the definition of project identifier | 5 August 2010 | Completed |
| Updates to the reconciliation procedure | 5 August 2010 | Completed |

62. The CAB considered and agreed, in September 2010, on a change request to introduce a procedure to support the undoing of retirement transactions proposed erroneously. The procedure, similar to the previously agreed procedure to undo voluntary cancellations, maintains the integrity of accounting of Kyoto Protocol units in the ITL and registry system concerned. This procedure has been executed once as at 31 October 2010. Additionally, the ITL administrator has received a request to undo conversion transactions, which is being considered at the time of writing this report.

63. Table 3 below summarizes the work performed by the working groups active during the reporting period.

Table 3
Working groups established under the Registry System Administrators Forum

| <i>Working group</i> | <i>Objective</i> | <i>Number of members</i> | <i>Number of meetings held during reporting period</i> |
|--|--|--------------------------|--|
| Incident and problem management | To define a process to handle incidents and problems in the registry systems | 7 | 2 |
| Change management | To elaborate on how change is managed in registry systems | 8 | 9 |
| Standard independent assessment report | To implement the procedure that registries must follow during their annual assessment | 8 | 1 |
| Registry security | To address security issues in the registry systems and establish a common security procedure | 9 | 3 |

III. Organizational arrangements and resources

64. Following the centralization of the information technology (IT) resources of the secretariat into the newly created Information Technology Services (ITS) programme of the secretariat, the functions of the ITL administrator have been moved from the Reporting, Data and Analysis programme to the ITS programme. The ITS programme, which became fully operational in July 2010, is also responsible for the software delivery and IT infrastructure support of the secretariat.

A. Resource requirements and expenditure

65. 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 2008–2009¹⁴ and 2010–2011¹⁵ were identified in the proposed programme budget for each of these bienniums.

66. The budget for the ITL for the biennium 2010–2011,¹⁶ not including the deduction of fees paid by Parties which were not listed in annex II to decision 11/CMP.3, is EUR 6,150,617. This budget includes a working capital reserve equal to EUR 245,080.

67. The CMP, by its decision 11/CMP.3, requested the Executive Secretary to provide a breakdown of the expenditures on the development and operation of the ITL with a view to optimizing the cost structure. Table 4 shows the expenditure of the ITL in the biennium 2010–2011, by object of expenditure.

¹³ FCCC/SBI/2005/8/Add.2.

¹⁴ FCCC/SBI/2007/8/Add.2.

¹⁵ FCCC/SBI/2009/2/Add.3.

¹⁶ Decision 10/CMP.5.

Table 4
Expenditure of the international transaction log for the biennium 2010–2011
 (Euros)

| <i>Object of expenditure</i> | <i>As at 30 June 2010</i> | <i>1 July 2010- 31 December 2011</i> | <i>Total</i> |
|-----------------------------------|-------------------------------|--|------------------|
| Staff costs | 321 199 | 1 011 077 | 1 332 976 |
| Temporary assistance and overtime | 0 | 69 930 | 69 930 |
| Contractors and consultants | 819 989 | 2 504 158 | 3 324 147 |
| Expert groups | 12 533 | 37 599 | 50 132 |
| Travel of staff | 7 609 | 22 827 | 30 436 |
| General operating expenses | 22 404 | 75 498 | 97 902 |
| Contributions to common services | 10 349 | 119 842 | 130 191 |
| Programme support costs | 155 231 | 499 412 | 654 643 |
| Total expenditure | 1 349 314 | 4 341 042 | 5 690 356 |

68. Table 5 shows the breakdown of expenditure expected for contractors and consultants for the ITL in 2011. Implementation services are services performed by the developer and operator of the ITL to support the implementation activities outlined in this report. Operation services are activities performed by the developer and operator of the ITL to sustain all operations of the ITL, such as maintaining the infrastructure and operating the ITL service desk. Operation procedure services cover the expenditure required to deliver the services related to common operational procedures pursuant to decision 16/CP.10. Consultancy expenditures are incurred when the secretariat needs to consult experts in specific fields.

Table 5
Breakdown of planned expenditure for contractors and consultants for the international transaction log in 2011
 (per cent)

| <i>Object of expenditure</i> | <i>Percentage of expenditures for contractors and consultants</i> |
|---------------------------------|---|
| Implementation services | 12 |
| Operation services | 76 |
| Legal services | 1 |
| Operational procedures services | 8 |
| Consultancies | 3 |

69. Operation services expenditures are mostly related to infrastructure services (54 per cent of operation services expenditures), operation of the ITL service desk (23 per cent), registry developer support (8 per cent), software maintenance (12 per cent) and support to registry initialization, connectivity changes and recertification (3 per cent).

70. The CMP, at its fourth session, requested the ITL administrator to report on planned activities and the related resource requirements with a view to ensuring that adequate means are available to perform these activities.¹⁷

71. In the biennium 2010–2011, the focus of activities has shifted from implementing registry systems to ensuring that these systems continue to operate reliably. For 2010 and

¹⁷ FCCC/KP/CMP/2008/11, paragraph 72.

2011 the planned staffing level is composed of three P-4 positions, two P-3 positions and two full-time positions at the General Service level. These members of staff perform the following activities:

- (a) Development activities:
 - (i) Initializing and performing go-live events for the national registries not yet connected to the ITL or potentially new national registries;
 - (ii) Continuing to support future changes to the DES and releases of the ITL as a result of the operational experience and changes adopted under the common operational procedures of the change management and release management;
 - (iii) Improving the common operational procedure of the SIAR process based on the lessons learned and feedback received following the second assessment cycle;
 - (iv) Upgrading the hardware and software in the ITL infrastructure, as necessary;
 - (v) Completing the migration of the RSA extranet to a new platform;
 - (vi) Supporting the work arising from the change request related to the consolidation of EU national registries.
- (b) Operational activities:
 - (i) Continuing to support the live operations and test activities of the ITL system and the registry systems in all supported environments;
 - (ii) Performing annual disaster recovery testing and security audits on the ITL system;
 - (iii) Maintaining the ITL data warehouse;
 - (iv) Performing all activities to support the operational procedures, including change management, and the implementation of the common operational procedure for the initial independent assessment reports and problem management for registries;
 - (v) Continuing to facilitate cooperation among RSAs through the RSA Forum, its working groups and registry developers;
 - (vi) 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

72. As at 31 October 2010, USD 1,915,095 in ITL fees had been received from Parties for 2007, USD 4,518,060 for 2008, USD 4,745,041 for 2009 and EUR 3,014,382 for 2010, leaving EUR 41 outstanding for 2010. Some Parties have already paid their 2011 ITL fees amounting to EUR 58,308. The secretariat would like to express its gratitude to Parties that have paid their fees. The status of fees as at 31 October 2010 is shown in tables 6 and 7.

Table 6
Fees for international transaction log activities in the period 2007–2009 and cumulative shortfall as at 31 October 2010

(United States dollars)

| | 2007 | 2008 | 2009 |
|----------------------|---------------------|-----------|-----------|
| Fees budgeted | 2 500 000 | 4 518 060 | 4 745 741 |
| Fees received | 1 915 095 | 4 518 060 | 4 745 041 |
| Shortfall | 584 905 (23.4 %) | 0 | 0 |
| Cumulative shortfall | 584 905 | 584 905 | 584 905 |

Table 7
Fees for international transaction log activities in the period 2010–2011 and cumulative shortfall as at 31 October 2010

(Euros)

| | 2010 | 2011 |
|----------------------|-----------|----------------|
| Fees budgeted | 3 014 423 | 3 014 423 |
| Fees received | 3 014 382 | 58 308 |
| Shortfall | 41 | Not applicable |
| Cumulative shortfall | 41 | Not applicable |

73. Delays in receiving ITL fees from Parties have already been noted in previous annual reports of the ITL administrator.¹⁸ The situation has not improved in 2010, as more than EUR 1,000,000 (35 per cent of the fees budgeted for 2010) was still due as at 1 April 2010.

74. As noted in the previous annual report of the ITL administrator, the establishment of the working capital reserve, in addition to budget optimizations and tight cost control on the project, has helped minimize the impact of delays in payments of ITL user fees. These measures, combined with the decision to manage the ITL budget in euros, continue to ensure that the ITL is self-sustaining, given the current funding level, expenditure and methodology to collect ITL user fees.

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

75. The CMP, at its fourth session, recognized the importance of the various ITL testing environments and requested the ITL administrator to work in collaboration with the RSAs to optimize the costs of maintaining these environments.¹⁹

76. In order to reduce further the ITL costs, the secretariat has taken the following actions, which have not affected the level of service to registries:

(a) Key improvements in the DES, such as the introduction of a new message flow and new operational statuses for registries, have helped to limit costs relating to the ITL service desk by reducing the number of incidents and facilitating their resolution;

¹⁸ FCCC/KP/CMP/2006/7, FCCC/KP/CMP/2007/5, FCCC/KP/CMP/2008/7 and FCCC/KP/CMP/2009/19.

¹⁹ FCCC/KP/CMP/2008/11, paragraph 65.

(b) The participation of RSAs as assessors during the execution of the SIAR process has been maximized;

(c) Hardware upgrades of the ITL infrastructure have been postponed.

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

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

(a) Further enhancing the registry systems, the DES and the common operational procedures in order to reduce support and service costs. The use of the new RSA Extranet as a communication channel instead of the ITL service desk could reduce the costs related to information requests;

(b) Continuing to engage RSAs during the execution of the SIAR process. Ideally, RSAs should be fully in charge of the implementation of this process;

(c) Reducing the frequency of RSA Forum meetings;

(d) Revising the way digital certificates for registry systems are replaced and batching these replacements.

78. As noted in the previous annual report of the ITL administrator, a large share of the expenditures related to the ITL service desk are for manual interventions performed when transactions are delayed or discrepant and reconciliations are delayed or inconsistent. A few registries are responsible for the majority of discrepant transactions and inconsistent reconciliations. The top six registries are responsible for 90 per cent of the discrepancies and for 82 per cent of the inconsistencies. The ITL Service Desk related expenditures would be greatly reduced should these registries review their implementation.

79. The CMP, at its fourth session, requested the ITL administrator to compile sufficient information on transactions in the ITL and provide it in the annual reports of the ITL administrator to the CMP for 2009 and 2010.²⁰ The information on the number of transactions and number of units involved in transactions proposed to the ITL from November 2009 to October 2010 is available in annex IV and annex V.

²⁰ FCCC/KP/CMP/2008/11, paragraph 67.

Annex I

Registry status as at 31 October 2010

Table 8
Registry status as at 31 October 2010

| <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 |
| Canada | 12 June 2008 | 12 February 2010 |
| 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 |

| <i>Registry</i> | <i>Date independent assessment report was issued</i> | <i>Date of live connection to the international transaction log</i> |
|---------------------------------|--|---|
| Norway | 27 September 2007 | 21 October 2008 |
| Poland | 5 December 2007 | 16 October 2008 |
| Portugal | 24 October 2007 | 16 October 2008 |
| Romania | 30 April 2008 | 16 October 2008 |
| Russian Federation ^a | 12 November 2007 | 4 March 2008 |
| Slovakia | 13 September 2007 | 16 October 2008 |
| Slovenia | 25 October 2007 | 16 October 2008 |
| Spain | 8 October 2007 | 16 October 2008 |
| Sweden | 9 November 2007 | 16 October 2008 |
| Switzerland | 8 August 2007 | 4 December 2007 |
| Ukraine | 10 December 2007 | 28 October 2008 |
| United Kingdom | 16 August 2007 | 16 October 2008 |

^a Live operation of this registry was re-established 21 October 2010 following payment of the outstanding international transaction log fees.

Annex II

Scale of fees and status of international transaction log fee payments for the biennium 2008–2009 as at 31 October 2010

Table 9

Scale of fees and status of international transaction log fee payments for the biennium 2008–2009 as at 31 October 2010

(United States dollars)

| <i>Party</i> | <i>Scale of fees</i> | <i>2008</i> | | | <i>2009</i> | | |
|------------------------|----------------------|-----------------|-----------------|--------------------|-----------------|-----------------|--------------------|
| | | <i>Budgeted</i> | <i>Received</i> | <i>Outstanding</i> | <i>Budgeted</i> | <i>Received</i> | <i>Outstanding</i> |
| Australia ^a | | 18 060 | 18 060 | 0 | 110 201 | 110 201 | 0 |
| Austria | 1.562 | 70 290 | 70 290 | 0 | 71 680 | 71 680 | 0 |
| Belgium | 1.941 | 87 345 | 87 345 | 0 | 89 072 | 89 072 | 0 |
| Bulgaria | 0.035 | 1 575 | 1 575 | 0 | 1 606 | 1 606 | 0 |
| Canada | 4.476 | 201 420 | 201 420 | 0 | 205 402 | 205 402 | 0 |
| Croatia ^a | | 0 | 0 | 0 | 45 870 | 45 870 | 0 |
| Czech Republic | 0.495 | 22 275 | 22 275 | 0 | 22 715 | 22 715 | 0 |
| Denmark | 1.301 | 58 545 | 58 545 | 0 | 59 702 | 59 702 | 0 |
| Estonia | 0.028 | 1 260 | 1 260 | 0 | 1 285 | 1 285 | 0 |
| European Community | 2.642 | 118 890 | 118 890 | 0 | 121 241 | 121 241 | 0 |
| Finland | 0.993 | 44 685 | 44 685 | 0 | 45 568 | 45 568 | 0 |
| France | 10.497 | 472 365 | 472 365 | 0 | 481 704 | 481 704 | 0 |
| Germany | 15.103 | 679 635 | 679 635 | 0 | 693 073 | 693 073 | 0 |
| Greece | 1.049 | 47 205 | 47 205 | 0 | 48 138 | 48 138 | 0 |
| Hungary | 0.430 | 19 350 | 19 350 | 0 | 19 733 | 19 733 | 0 |
| Iceland | 0.726 | 32 670 | 32 670 | 0 | 33 316 | 33 316 | 0 |
| Ireland | 0.784 | 35 280 | 35 280 | 0 | 35 978 | 35 978 | 0 |
| Italy | 8.944 | 402 480 | 402 480 | 0 | 410 437 | 410 437 | 0 |
| Japan | 14.700 | 661 500 | 661 500 | 0 | 674 579 | 674 579 | 0 |
| Latvia | 0.032 | 1 440 | 1 440 | 0 | 1 468 | 1 468 | 0 |
| Liechtenstein | 0.185 | 8 325 | 8 325 | 0 | 8 490 | 8 490 | 0 |
| Lithuania | 0.055 | 2 475 | 2 475 | 0 | 2 524 | 2 524 | 0 |
| Luxembourg | 0.150 | 6 750 | 6 750 | 0 | 6 883 | 6 883 | 0 |
| Monaco | 0.178 | 8 010 | 8 010 | 0 | 8 168 | 8 168 | 0 |
| Netherlands | 3.298 | 148 410 | 148 410 | 0 | 151 344 | 151 344 | 0 |
| New Zealand | 0.945 | 42 525 | 42 525 | 0 | 43 366 | 43 366 | 0 |
| Norway | 2.282 | 102 690 | 102 690 | 0 | 104 720 | 104 720 | 0 |
| Poland | 0.882 | 39 690 | 39 690 | 0 | 40 475 | 40 475 | 0 |
| Portugal | 0.928 | 41 760 | 41 760 | 0 | 42 586 | 42 586 | 0 |
| Romania | 0.123 | 5 535 | 5 535 | 0 | 5 644 | 5 644 | 0 |
| Russian Federation | 2.699 | 121 455 | 121 455 | 0 | 123 856 | 123 856 | 0 |

| <i>Party</i> | <i>Scale of fees</i> | <i>2008</i> | | | <i>2009</i> | | |
|----------------|----------------------|------------------|------------------|--------------------|------------------|------------------|--------------------|
| | | <i>Budgeted</i> | <i>Received</i> | <i>Outstanding</i> | <i>Budgeted</i> | <i>Received</i> | <i>Outstanding</i> |
| Slovakia | 0.111 | 4 995 | 4 995 | 0 | 5 094 | 5 094 | 0 |
| Slovenia | 0.169 | 7 605 | 7 605 | 0 | 7 755 | 7 755 | 0 |
| Spain | 5.226 | 235 170 | 235 170 | 0 | 239 820 | 239 820 | 0 |
| Sweden | 1.886 | 84 870 | 84 870 | 0 | 86 548 | 86 548 | 0 |
| Switzerland | 2.715 | 122 175 | 122 175 | 0 | 124 591 | 124 591 | 0 |
| Ukraine | 0.734 | 33 030 | 33 030 | 0 | 33 683 | 33 683 | 0 |
| United Kingdom | 11.696 | 526 320 | 526 320 | 0 | 536 726 | 536 726 | 0 |
| Total | 100.000 | 4 518 060 | 4 518 060 | 0 | 4 745 041 | 4 745 041 | 0 |

^a The scale of fees for Australia and Croatia is not available as these Parties joined the international transaction log during the biennium 2008–2009.

Annex III

Scale of fees and status of international transaction log fee payments for the biennium 2010–2011 as at 31 October 2010

Table 10

Scale of fees and status of international transaction log fee payments for the biennium 2010–2011 as at 31 October 2010

(Euros)

| <i>Party</i> | <i>Scale of fees</i> | <i>2010</i> | | | <i>2011</i> | | |
|--------------------|----------------------|-----------------|-----------------|--------------------|-----------------|-----------------|--------------------|
| | | <i>Budgeted</i> | <i>Received</i> | <i>Outstanding</i> | <i>Budgeted</i> | <i>Received</i> | <i>Outstanding</i> |
| Australia | 2.342 | 70 609 | 70 609 | 0 | 70 609 | 0 | 70 609 |
| Austria | 1.509 | 45 482 | 45 482 | 0 | 45 482 | 0 | 45 482 |
| Belgium | 1.875 | 56 517 | 56 517 | 0 | 56 517 | 2 986 | 53 531 |
| Bulgaria | 0.034 | 1 019 | 1 019 | 0 | 1 019 | 0 | 1 019 |
| Canada | 4.324 | 130 330 | 130 330 | 0 | 130 330 | 0 | 130 330 |
| Croatia | 1.064 | 32 062 | 32 062 | 0 | 32 062 | 0 | 32 062 |
| Czech Republic | 0.478 | 14 413 | 14 413 | 0 | 14 413 | 0 | 14 413 |
| Denmark | 1.257 | 37 882 | 37 868 | 14 | 37 882 | 0 | 37 882 |
| Estonia | 0.027 | 815 | 815 | 0 | 815 | 815 | 0 |
| European Community | 2.552 | 76 928 | 76 928 | 0 | 76 928 | 0 | 76 928 |
| Finland | 0.959 | 28 914 | 28 914 | 0 | 28 914 | 0 | 28 914 |
| France | 10.139 | 305 647 | 305 647 | 0 | 305 647 | 0 | 305 647 |
| Germany | 14.589 | 439 762 | 439 762 | 0 | 439 762 | 0 | 439 762 |
| Greece | 1.013 | 30 544 | 30 544 | 0 | 30 544 | 3 198 | 27 346 |
| Hungary | 0.415 | 12 521 | 12 521 | 0 | 12 521 | 0 | 12 521 |
| Iceland | 0.701 | 21 139 | 21 139 | 0 | 21 139 | 0 | 21 139 |
| Ireland | 0.757 | 22 828 | 22 828 | 0 | 22 828 | 22 828 | 0 |
| Italy | 8.639 | 260 427 | 260 427 | 0 | 260 427 | 0 | 260 427 |
| Japan | 14.199 | 428 028 | 428 028 | 0 | 428 028 | 0 | 428 028 |
| Latvia | 0.031 | 932 | 932 | 0 | 932 | 932 | 0 |
| Liechtenstein | 0.179 | 5 387 | 5 387 | 0 | 5 387 | 0 | 5 387 |
| Lithuania | 0.053 | 1 601 | 1 601 | 0 | 1 601 | 0 | 1 601 |
| Luxembourg | 0.145 | 4 368 | 4 368 | 0 | 4 368 | 0 | 4 368 |
| Monaco | 0.172 | 5 183 | 5 183 | 0 | 5 183 | 0 | 5 183 |
| Netherlands | 3.186 | 96 029 | 96 023 | 6 | 96 029 | 0 | 96 029 |
| New Zealand | 0.913 | 27 516 | 27 516 | 0 | 27 516 | 27 516 | 0 |
| Norway | 2.204 | 66 446 | 66 446 | 0 | 66 446 | 0 | 66 446 |
| Poland | 0.852 | 25 682 | 25 682 | 0 | 25 682 | 18 | 25 664 |
| Portugal | 0.896 | 27 021 | 27 021 | 0 | 27 021 | 0 | 27 021 |
| Romania | 0.119 | 3 581 | 3 581 | 0 | 3 581 | 0 | 3 581 |
| Russian Federation | 2.607 | 78 588 | 78 588 | 0 | 78 588 | 0 | 78 588 |

| <i>Party</i> | <i>Scale of fees</i> | <i>2010</i> | | | <i>2011</i> | | |
|----------------|----------------------|------------------|------------------|--------------------|------------------|-----------------|--------------------|
| | | <i>Budgeted</i> | <i>Received</i> | <i>Outstanding</i> | <i>Budgeted</i> | <i>Received</i> | <i>Outstanding</i> |
| Slovakia | 0.107 | 3 232 | 3 232 | 0 | 3 232 | 0 | 3 232 |
| Slovenia | 0.163 | 4 921 | 4 921 | 0 | 4 921 | 0 | 4 921 |
| Spain | 5.048 | 151 168 | 151 168 | 0 | 151 168 | 0 | 151 168 |
| Sweden | 1.822 | 54 916 | 54 895 | 21 | 54 916 | 0 | 54 916 |
| Switzerland | 2.623 | 79 054 | 79 054 | 0 | 79 054 | 0 | 79 054 |
| Ukraine | 0.709 | 21 372 | 21 372 | 0 | 21 372 | 0 | 21 372 |
| United Kingdom | 11.298 | 340 559 | 340 559 | 0 | 340 559 | 15 | 340 544 |
| Total | 100.000 | 3 014 423 | 3 014 382 | 41 | 3 014 423 | 58 308 | 2 956 115 |

Annex IV

Number of transactions proposed to the international transaction log^a from 1 November 2009 to 31 October 2010

Table 11

Number of transactions proposed to the international transaction log^a from 1 November 2009 to 31 October 2010

| <i>Registry</i> | <i>Acquisition^b</i> | <i>Transfer^c</i> | <i>Forwarding^d</i> | <i>Internal transfer^e</i> | <i>Issuance^f</i> | <i>Retirement^g</i> | <i>Cancellation^h</i> | <i>Total</i> |
|-----------------------------|--------------------------------|-----------------------------|-------------------------------|--------------------------------------|-----------------------------|-------------------------------|---------------------------------|--------------|
| Australia | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Austria | 1 415 | 2 955 | 0 | 2 062 | 0 | 2 | 0 | 6 434 |
| Belgium | 531 | 640 | 0 | 1 566 | 0 | 2 | 1 | 2 740 |
| Bulgaria | 129 | 211 | 0 | 695 | 14 | 1 | 0 | 1 050 |
| Clean development mechanism | 0 | 83 | 2 903 | 0 | 1 072 | 0 | 0 | 4 058 |
| Canada | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Croatia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Czech Republic | 1 655 | 1 841 | 0 | 3 331 | 77 | 0 | 0 | 6 904 |
| Denmark | 14 321 | 17 636 | 0 | 23 134 | 0 | 4 | 28 | 55 123 |
| Estonia | 313 | 359 | 0 | 217 | 6 | 2 | 1 | 898 |
| European Community | 6 | 20 | 0 | 107 | 4 | 0 | 22 | 159 |
| Finland | 622 | 565 | 0 | 3 135 | 0 | 2 | 6 | 4 330 |
| France | 15 981 | 14 526 | 0 | 113 115 | 10 | 2 | 54 | 143 688 |
| Germany | 9 304 | 6 770 | 0 | 20 895 | 7 | 52 | 91 | 37 119 |
| Greece | 75 | 463 | 0 | 1 037 | 0 | 2 | 0 | 1 577 |
| Hungary | 448 | 545 | 0 | 1 614 | 14 | 1 | 3 | 2 625 |
| Iceland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | 399 | 311 | 0 | 547 | 0 | 2 | 3 | 1 262 |
| Italy | 3 456 | 2 564 | 0 | 10 259 | 0 | 0 | 0 | 16 279 |
| Japan | 804 | 98 | 0 | 0 | 0 | 22 | 10 | 934 |
| Latvia | 89 | 164 | 0 | 428 | 0 | 2 | 0 | 683 |

| <i>Registry</i> | <i>Acquisition^b</i> | <i>Transfer^c</i> | <i>Forwarding^d</i> | <i>Internal transfer^e</i> | <i>Issuance^f</i> | <i>Retirement^g</i> | <i>Cancellation^h</i> | <i>Total</i> |
|--------------------|--------------------------------|-----------------------------|-------------------------------|--------------------------------------|-----------------------------|-------------------------------|---------------------------------|----------------|
| Liechtenstein | 1 047 | 1 136 | 0 | 742 | 0 | 0 | 0 | 2 925 |
| Lithuania | 118 | 338 | 0 | 696 | 8 | 2 | 0 | 1 162 |
| Luxembourg | 114 | 57 | 0 | 75 | 0 | 2 | 0 | 248 |
| Netherlands | 6 820 | 5 467 | 0 | 3 748 | 0 | 3 | 4 | 16 042 |
| New Zealand | 11 | 39 | 0 | 0 | 12 | 0 | 10 | 72 |
| Norway | 676 | 220 | 0 | 583 | 0 | 3 | 25 | 1 507 |
| Poland | 1 630 | 1 813 | 0 | 6 558 | 19 | 2 | 0 | 10 022 |
| Portugal | 688 | 834 | 0 | 1 150 | 0 | 3 | 0 | 2 675 |
| Romania | 675 | 1 161 | 0 | 1 631 | 3 | 2 | 0 | 3 472 |
| Russian Federation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Slovakia | 380 | 699 | 0 | 1 042 | 0 | 1 | 0 | 2 122 |
| Slovenia | 157 | 156 | 0 | 540 | 0 | 2 | 0 | 855 |
| Spain | 2 815 | 4 639 | 0 | 10 492 | 0 | 4 | 7 | 17 957 |
| Sweden | 1 116 | 811 | 0 | 3 207 | 0 | 2 | 357 | 5 493 |
| Switzerland | 1 740 | 4 872 | 0 | 0 | 0 | 0 | 314 | 6 926 |
| Ukraine | 2 | 78 | 0 | 0 | 44 | 0 | 0 | 124 |
| United Kingdom | 14 284 | 9 833 | 0 | 18 660 | 0 | 1 | 92 | 42 870 |
| Total | 81 821 | 81 904 | 2 903 | 231 266 | 1 292 | 123 | 1 028 | 400 337 |

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

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

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

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

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

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

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

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

Annex V

Number of Kyoto Protocol units subject to transactions proposed to the international transaction log from 1 November 2009 to 31 October 2010

Table 12

Number of Kyoto Protocol units subject to transactions proposed to the international transaction log from 1 November 2009 to 31 October 2010

| <i>Registry</i> | <i>Acquisition</i> | <i>Transfer</i> | <i>Net transfer^a</i> | <i>Forwarding</i> | <i>Internal transfer</i> | <i>Issuance</i> | <i>Retirement</i> | <i>Cancellation</i> |
|-----------------------------|--------------------|-----------------|---------------------------------|-------------------|--------------------------|-----------------|-------------------|---------------------|
| Australia | 0 | 0 | 0 | 0 | 0 | 2 957 579 143 | 0 | 0 |
| Austria | 84 477 503 | 64 460 870 | -20 016 633 | 0 | 208 487 237 | 0 | 59 282 561 | 0 |
| Belgium | 49 892 344 | 56 654 037 | 6 761 693 | 0 | 354 741 232 | 0 | 101 717 718 | 578 |
| Bulgaria | 1 919 359 | 92 638 854 | 90 719 495 | 0 | 441 187 943 | 3 331 743 | 69 925 286 | 0 |
| Clean development mechanism | 0 | 7 734 981 | 7 734 981 | 269 773 747 | 0 | 245 496 675 | 0 | 0 |
| Canada | 0 | 0 | 0 | 0 | 0 | 2 791 792 771 | 0 | 0 |
| Croatia | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Czech Republic | 108 498 302 | 200 712 337 | 92 214 035 | 0 | 643 203 034 | 1 685 935 | 0 | 0 |
| Denmark | 1 330 222 724 | 1 306 530 909 | -23 691 815 | 0 | 1 488 297 741 | 0 | 52 031 351 | 19 594 |
| Estonia | 21 235 253 | 37 826 448 | 16 591 195 | 0 | 130 980 112 | 209 527 | 23 667 710 | 210 000 |
| European Community | 936 594 | 508 009 | -428 585 | 0 | 38 715 589 | 37 598 471 | 0 | 15 059 418 |
| Finland | 27 488 216 | 28 420 742 | 932 526 | 0 | 246 014 197 | 0 | 70 362 856 | 5 205 |
| France | 1 441 327 555 | 1 410 406 028 | -30 921 527 | 0 | 4 777 921 256 | 1 298 349 | 235 196 885 | 194 562 |
| Germany | 791 154 518 | 679 307 285 | -111 847 233 | 0 | 9 261 082 026 | 1 006 334 | 904 961 597 | 422 831 |
| Greece | 2 300 529 | 12 696 252 | 10 395 723 | 0 | 794 938 601 | 0 | 133 515 465 | 0 |
| Hungary | 16 458 329 | 35 858 897 | 19 400 568 | 0 | 514 707 774 | 2 423 772 | 49 638 997 | 318 |
| Iceland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | 27 833 595 | 21 836 991 | -5 996 604 | 0 | 423 587 799 | 0 | 37 597 064 | 2 549 |
| Italy | 199 661 186 | 196 477 359 | -3 183 827 | 0 | 2 439 784 154 | 0 | 0 | 0 |
| Japan | 196 815 123 | 14 055 027 | -182 760 096 | 0 | 0 | 0 | 58 792 339 | 18 418 |

| <i>Registry</i> | <i>Acquisition</i> | <i>Transfer</i> | <i>Net transfer^a</i> | <i>Forwarding</i> | <i>Internal transfer</i> | <i>Issuance</i> | <i>Retirement</i> | <i>Cancellation</i> |
|--------------------|----------------------|----------------------|---------------------------------|--------------------|--------------------------|----------------------|----------------------|---------------------|
| Latvia | 22 514 953 | 54 223 229 | 31 708 276 | 0 | 18 477 813 | 0 | 5 232 715 | 0 |
| Liechtenstein | 86 696 646 | 46 613 782 | -40 082 864 | 0 | 25 260 690 | 0 | 0 | 0 |
| Lithuania | 6 339 580 | 14 537 805 | 8 198 225 | 0 | 91 711 376 | 1 697 573 | 11 892 935 | 0 |
| Luxembourg | 5 412 793 | 2 139 514 | -3 273 279 | 0 | 33 601 997 | 0 | 4 280 589 | 0 |
| Netherlands | 519 514 182 | 517 686 778 | -1 827 404 | 0 | 3 256 708 174 | 0 | 287 982 275 | 1 020 |
| New Zealand | 422 003 | 2 722 070 | 2 300 067 | 0 | 0 | 896 447 | 0 | 2 689 |
| Norway | 34 294 033 | 22 605 293 | -11 688 740 | 0 | 208 619 630 | 0 | 38 559 339 | 28 971 |
| Poland | 54 423 513 | 83 991 902 | 29 568 389 | 0 | 2 453 760 008 | 3 541 257 | 394 880 479 | 0 |
| Portugal | 41 174 820 | 41 334 335 | 159 515 | 0 | 194 294 242 | 0 | 58 215 618 | 0 |
| Romania | 34 784 206 | 86 267 498 | 51 483 292 | 0 | 827 027 458 | 207 505 | 112 734 996 | 0 |
| Russian Federation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Slovakia | 14 569 441 | 47 018 928 | 32 449 487 | 0 | 173 986 647 | 0 | 46 931 916 | 0 |
| Slovenia | 2 412 697 | 2 163 148 | -249 549 | 0 | 51 386 083 | 0 | 16 930 244 | 0 |
| Spain | 188 264 363 | 178 375 279 | -9 889 084 | 0 | 2 034 025 995 | 0 | 300 364 261 | 550 |
| Sweden | 30 111 955 | 41 879 295 | 11 767 340 | 0 | 146 793 616 | 0 | 37 614 376 | 245 653 |
| Switzerland | 312 941 979 | 340 415 534 | 27 473 555 | 0 | 0 | 0 | 0 | 389 939 |
| Ukraine | 237 107 | 87 330 777 | 87 093 670 | 0 | 0 | 12 852 661 | 0 | 0 |
| United Kingdom | 1 395 072 226 | 1 321 712 415 | -73 359 811 | 0 | 3 917 041 981 | 0 | 265 508 431 | 991 670 |
| Total | 7 049 407 627 | 7 057 142 608 | 7 734 981 | 269 773 747 | 35 196 344 405 | 6 061 618 163 | 3 377 818 003 | 17 593 965 |

^a Net transfer is equal to transfer minus acquisition.