

CDM-2018SYN-INFO01

Regular report

Synthesis report of the annual activity reports submitted by the designated operational entities 2017–2018

Version 01.0



United Nations
Framework Convention on
Climate Change

COVER NOTE

1. Procedural background

1. In accordance with paragraph 27(g) of the “Modalities and procedures for a clean development mechanism” (CDM)¹ and section 18 of the “CDM accreditation procedure” version 14.0, designated operational entities (DOEs) shall submit an annual CDM activity report to the CDM Executive Board (hereinafter referred to as the Board). Every year the secretariat produces a synthesis report of the annual activity reports submitted by the DOEs.
2. Paragraphs 20 and 21 of decision 2/CMP.5 require information to be collected regarding the number of project activities under validation or verification per qualified auditor, and the time frames and average fees for the validation and verification of CDM projects by region. The annual activity reporting process provides an opportunity to gather such information from the DOEs. The information has subsequently been aggregated.
3. At its eighty-seventh meeting, the Board agreed to require DOEs to report on other business activities (e.g. those which include undertaking validation or verification of greenhouse gas assertions in other schemes) in their annual synthesis reports. This mandate has been met by including a new section in which the DOEs can report on other business activities.
4. This work relates to the activity “Regulatory framework management” under objective 1(b) “Operate an effective regulatory framework resulting in reduced transaction costs for participants in the mechanism”, with a resource allocation as referred to in table 3 on page 15 of the CDM two-year business and management plan 2018–2019 (EB 97, annex 1).

2. Purpose

5. The purpose of the present synthesis report is to inform the stakeholders of the status of the operations of DOEs.

3. Key issues and proposed solutions

6. The present document is a synthesis report, prepared by the secretariat, of the annual activity reports submitted by DOEs in 2018, in accordance with the requirements of section 18 of the “CDM accreditation procedure” version 14.0, covering the period 1 July 2017 to 30 June 2018.
7. Several observations were drawn from the results presented in the synthesis report:
 - (a) There are 30 DOEs accredited as of 30 June 2018.

¹ Decision 3/CMP.1.

- (b) During the reporting period, no new DOEs were accredited. However, there was one DOE which voluntarily withdrew its accreditation, and there was one DOE whose accreditation was withdrawn by the Board.
 - (c) There are at least 10 DOEs accredited in each sectoral scope (excluding sectoral scope 16 on carbon capture and storage, where there is only one), indicating that there is sufficient coverage of accredited DOEs in each sectoral scope.
 - (d) Geographic coverage is also extensive, with almost half of the DOEs working in underrepresented countries with fewer than 10 registered CDM projects.
 - (e) An increase of verification activities of programmes of activities is observed during this reporting period.
 - (f) Most of the DOEs are active in other business activities that involve validation or verification of greenhouse gases in schemes other than the CDM.
 - (g) Validation and verification services remain predominantly in the hands of approximately one-third of all DOEs (77 per cent of total registered projects (validation) and certified emission reductions issued (verification) are finalized by 10 DOEs).
8. This report is a public document and will enable a range of stakeholders to understand, in a transparent way, the status of the operations of DOEs for the CDM.
- 4. Subsequent work and timelines**
9. This synthesis report is for information and no further work is foreseen.
- 5. Recommendations to the Board**
10. The secretariat recommends that the Board take note of the attached information note.

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1. Executive summary

1. This report provides information and analysis regarding the accreditation status of the 30 designated operational entities (DOEs) as at 30 June 2018, the end of the reporting period. It provides information about the operations of these DOEs and their activities related to the clean development mechanism (CDM), as well as the challenges faced and lessons learned by them, and on other activities the DOEs are conducting. The information is taken from the individual annual activity reports submitted by the DOEs, the CDM Information System and decisions of the Executive Board of the CDM (hereinafter referred to as the Board).
2. Several observations were drawn from the results presented in the synthesis report:
 - (a) There are 30 DOEs accredited as of 30 June 2018.
 - (b) During the reporting period, no new DOEs were accredited. However, there was one DOE which voluntarily withdrew its accreditation, and there was one DOE whose accreditation was withdrawn by the Board.
 - (c) There are at least 10 DOEs accredited in each sectoral scope (excluding sectoral scope 16 on carbon capture and storage, where there is only one), indicating that there is sufficient coverage of accredited DOEs in each sectoral scope.
 - (d) Geographic coverage is also extensive, with almost half of the DOEs working in underrepresented countries with fewer than 10 registered CDM projects.
 - (e) An increase of verification activities of programmes of activities (PoAs) is observed during this reporting period.
 - (f) Most of the DOEs are active in other business activities that involve validation or verification of greenhouse gases in schemes other than the CDM.
 - (g) Validation and verification services remain predominantly in the hands of approximately one-third of all DOEs (77 per cent of total registered projects (validation) and certified emission reductions issued (verification) are finalized by 10 DOEs).

2. Synthesis report

2.1. Introduction

3. In accordance with paragraph 27(g) of the “Modalities and procedures for a clean development mechanism”² and section 18 of the “CDM accreditation procedure” version 14.0 (hereinafter referred to as the CDM accreditation procedure), DOEs shall submit an annual CDM activity report to the Board. Every year the secretariat produces a synthesis report of the annual activity reports submitted by the DOEs.
4. The present document is a synthesis report of the annual activity reports submitted by DOEs in 2018.

² Decision 3/CMP.1.

5. This report is for the period from 1 July 2017 to 30 June 2018. In addition, for comparative purposes, there are data from the previous four reporting periods, covering the period from 1 July 2013 to 30 June 2017.
6. The deadline for submission of the annual activity report by the DOEs for this reporting period was 30 September 2018. Of the 30 DOEs that were accredited as at 30 June 2018, 27 DOEs submitted their annual activity report and supporting documentation (synthesis report of the work of the impartiality committee) within the deadline, two DOEs submitted the annual activity report after the deadline, and one DOE did not submit the annual activity report.
7. It is to be noted that there were full voluntary withdrawal by one DOE, i.e. E-0013 TÜV Rheinland (China) Ltd. (TÜV Rheinland), and withdrawal of accreditation in its entirety by the Board for one DOE, i.e. E-0031 Perry Johnson Registrars Carbon Emissions Services (PJRCES) during the reporting period. Even though there is no submission of annual activity report by these DOEs, for reporting purpose, the activities carried out by these DOEs are included in this synthesis report.
8. The data were submitted by DOEs using the form CDM-AAR-FORM (v.4). In addition, this synthesis report draws on other data sources such as the CDM Information System and decisions by the Board.

2.2. Accreditation status

2.2.1. Scope(s) accredited for and date of accreditation

9. During the reporting period, no new DOEs were accredited. However, there were one full voluntary withdrawal and one withdrawal of accreditation in its entirety by the Board.
10. Accredited sectoral scopes are taken from the accreditation certificates. The data are presented in a summary and in table 1 below:
 - (a) Average number of sectoral scopes a DOE is accredited for: (9, 10, 9, 9)³ **9**;
 - (b) Number of DOEs accredited in 15 sectoral scopes: (7, 8, 7, 8) **6** (this includes one DOE that is accredited for all 16 scopes);
 - (c) Occurrences of suspension during the reporting period: (1, 1, 2, 2) **1**.

³ For comparative purposes, the data from the 2013–2014, 2014–2015, 2015–2016 and 2016–2017 reporting periods are stated, respectively, in italics in parentheses. When parentheses contain less than four figures, the last figure represents data from 2016–2017 reporting period, with the previous figure being the data from the reporting period prior to 2016–2017, and so on.

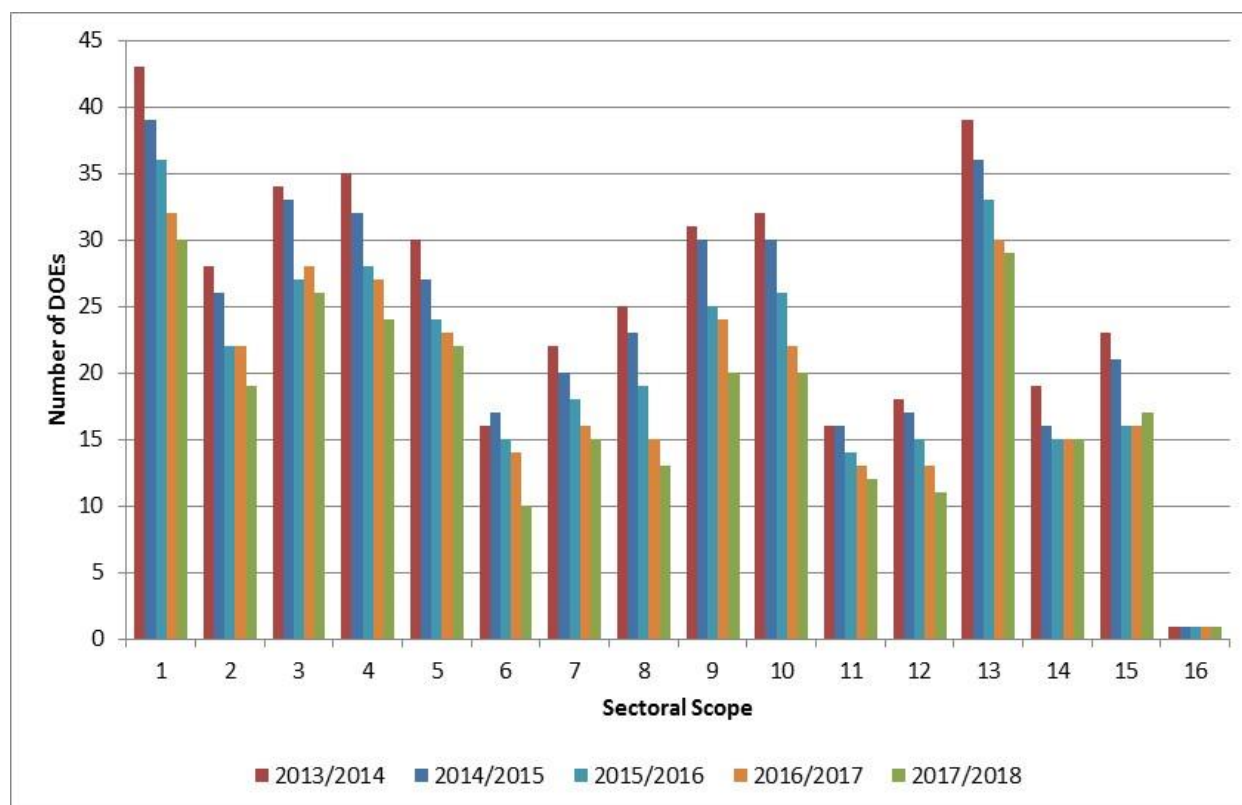
Table 1. Accreditation status of DOEs (as at 30 June 2018)

Ref.	Entity	Country	Sectoral scope ⁴ for validation/verification
E-0001	Japan Quality Assurance Organisation (JQA)	Japan	1, 3-5, 10, 13, 14
E-0005	TÜV SÜD South Asia Private Limited (TÜV SÜD)	India	1, 3-5, 7, 10, 11, 13-15
E-0006	Deloitte Tohmatsu Sustainability, Co., Ltd. (DTSUS)	Japan	1-3, 5, 10, 12, 13, 15
E-0009	Bureau Veritas India Pvt. Ltd. (BVI)	India	1-5, 7-10, 12-15
E-0011	Korea Energy Agency (KEA)	Republic of Korea	1, 3-5, 7, 9, 11-15
E-0016	ERM Certification and Verification Services Ltd. (ERM CVS)	United Kingdom	1, 3-5, 8-10, 13
E-0020	GHD Limited (GHD)	Canada	1, 4, 5, 8–10, 12, 13
E-0021	AENOR INTERNACIONAL, S.A.U. (AENOR)	Spain	1–15
E-0022	TÜV NORD CERT GmbH (TÜV Nord)	Germany	1–16
E-0023	Lloyd's Register Quality Assurance Ltd. (LRQA)	United Kingdom	1-3, 7, 13
E-0024	Colombian Institute for Technical Standards and Certification (ICONTEC)	Colombia	1-3, 7, 13, 14
E-0025	Korean Foundation for Quality (KFQ)	Republic of Korea	1-5, 9, 11, 13, 15
E-0032	LGAI Technological Center, S.A. (LGAJ)	Spain	1, 13
E-0034	China Environmental United Certification Center Co., Ltd. (CEC)	China	1–15
E-0037	RINA Services S.p.A. (RINA)	Italy	1-7, 9-11, 13-15
E-0039	Korean Standards Association (KSA)	Republic of Korea	1-5, 9, 10, 13
E-0044	China Quality Certification Center (CQC)	China	1–15
E-0046	China Classification Society Certification Company (CCSC)	China	1–10, 13
E-0047	CEPREI certification body (CEPREI)	China	1–5, 8–10, 13, 15
E-0050	Hong Kong Quality Assurance Agency (HKQAA)	China	1
E-0051	KBS Certification Services Pvt. Ltd (KBS)	India	1, 3–5, 7, 9, 10, 12–15

⁴ The sectoral scopes are defined in the CDM accreditation standard (v.7) (CDM-EB46-A02-STAN) as follows: 1: Energy industries (renewable/non-renewable sources); 2: Energy distribution; 3: Energy demand; 4: Manufacturing industries; 5: Chemical industry; 6: Construction; 8: Mining/mineral production; 9: Metal production; 10: Fugitive emissions from fuels (solid, oil and gas); 11: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride; 12: Solvents use; 13: Waste handling and disposal; 14: Afforestation and reforestation; 15: Agriculture; 16: Carbon capture and storage of CO₂ in geological formations.

Ref.	Entity	Country	Sectoral scope ⁴ for validation/verification
E-0052	Carbon Check (India) Private Ltd. (Carbon Check)	India	1–5, 8–10, 13, 14
E-0054	Re Carbon Gözetim Denetim ve Belgelendirme Limited Sirketi (Re Carbon)	Turkey	1–4, 9, 13, 15
E-0056	Korea Testing & Research Institute (KTR)	Republic of Korea	1, 3–5, 11, 13
E-0058	Foundation for Industrial Development - Management System Certification Institute (Thailand) (MASCI)	Thailand	1, 13
E-0061	Shenzhen CTI International Certification Co., Ltd (CTI)	China	1–15
E-0062	EPIC Sustainability Services Pvt. Ltd. (EPIC)	India	1–11, 13–15
E-0065	China Building Material Test and Certification Group Co., Ltd (CTC)	China	1–4, 6, 9, 10, 13
E-0066	Earthood Services Private Limited (Earthood)	India	1, 3–5, 13, 15
E-0067	China Certification Center, Inc. (CCCI)	China	1–15

11. Sectoral scope 1 has the most number of accredited DOEs (30), whereas sectoral scope 16 has the least number of accredited DOEs (1). Figure 1 below provides an overview of how many DOEs were accredited per sectoral scope. In general, the number of DOEs accredited for each sectoral scope has decreased as compared to the previous reporting periods, except for sectoral scope 15. This decrease is also attributed due to the decrease in total number of accredited DOEs as compared to the previous reporting periods.

Figure 1. Number of DOEs accredited for each sectoral scope

2.2.2. Sectoral scopes applied for and status of application

12. Regarding the changes in sectoral scopes during the reporting period:

- (a) Number of DOEs maintaining the sectoral scopes for which they are accredited: (39, 35, 30, 26) **24**;
- (b) Number of DOEs reducing the sectoral scopes for which they are accredited (i.e. partial withdrawals and fewer sectoral scopes applied during reaccreditation): (4, 4, 7, 3) **4**;
- (c) Number of DOEs increasing the sectoral scopes for which they are accredited (i.e. extension of scope): (1, 0, 0, 3) **2**.

2.3. Organization

2.3.1. Major changes reported by the DOEs

13. In accordance with section 17 of the CDM accreditation procedure, a DOE shall inform the secretariat of any planned or unexpected significant changes.

14. The DOEs reported on major changes that had taken place within the reporting period as follows:

- (a) Total number of DOEs reporting major changes: (28, 25, 11, 14) **14**;
- (b) Total number of changes reported in the period: (76, 69, 21, 32) **38**;

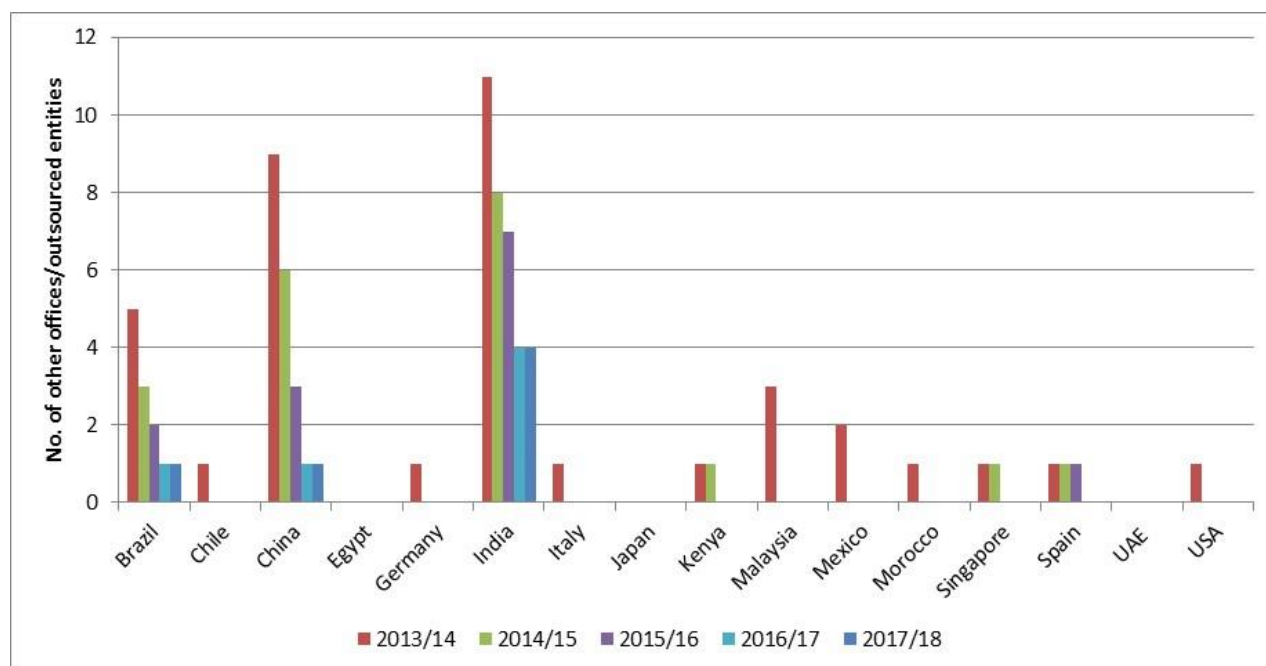
- (c) Average number of reported changes per DOE: (2, 2, 2, 2) **3**;
- (d) Highest number of reported changes for a DOE: (8, 7, 5, 7) **9**.
15. The changes were reported as per the CDM accreditation procedure, as outlined in table 2 below.

Table 2. Reported changes in 2017–2018

Type of change	Description of change	Number of changes
A	Legal, commercial or organizational status, e.g. ownership, partnership	(19, 11, 2, 5) 8
B	Key professional staff	(44, 24, 14, 16) 18
C	Management system	(6, 5, 2, 7) 7
D	Conformity to the CDM accreditation requirements	(5, 24, 2, 1) 3
E	Allocation of CDM functions to other offices or outsourced bodies	(4, 5, 1, 3) 2

2.3.2. List of outsourced entities/other legal entities to which the DOE outsourced some of the validation and verification/certification functions

16. In accordance with the CDM accreditation standard, a DOE may outsource some of the validation and verification/certification functions.
17. The DOEs reported on the allocation of functions to outsourced entities that had taken place within the reporting period as follows:
- (a) Total number of DOEs having outsourced entities: (12, 8, 6, 3) **3**;
- (b) Average number of declared outsourced entities: (3, 2, 2, 2) **2**;
- (c) Highest number of outsourced entities for a DOE: (7, 4, 4, 3) **3**.
18. Figure 2 below shows the countries in which the outsourced entities/other legal entities are located, the highest represented countries being India with (11, 8, 7, 4) **4**, China with (9, 6, 3, 1) **1** and Brazil with (5, 3, 2, 1) **1**.

Figure 2. Location of outsourced entities/other legal offices

2.3.3. Use of external individuals

19. In accordance with the CDM accreditation standard, DOEs may make use of external validators, verifiers and technical experts.
20. The DOEs reported on the use of external personnel that had taken place within the reporting period as follows:
 - (a) Total number of DOEs utilizing external personnel: (37, 34, 35, 29) **26**;
 - (b) Average number of external personnel utilized per DOE: (21, 18, 14, 14) **16**;
 - (c) Highest number of external personnel utilized by a DOE: (75, 62, 47, 45) **56**.

2.3.4. Management systems

2.3.4.1. Internal audits carried out

21. All DOEs that submitted the annual activity report carried out at least one internal audit.

2.3.4.2. Management reviews carried out

22. All DOEs that submitted the annual activity report carried out at least one management review.

2.3.5. Complaints, disputes and appeals on CDM-related activities

23. Section 14 of the CDM accreditation standard relates to the handling of complaints, disputes and appeals received by the DOE.

24. The DOEs reported on the complaints, disputes and appeals that had been received during the reporting period as follows:
- (a) Number of DOEs reporting receiving complaints, disputes or appeals: (6, 4, 1, 0) **2**;
 - (b) Number of complaints, disputes or appeals received by DOEs from project participants: (12, 3, 1, 0) **2**;
 - (c) Total number of complaints, disputes and appeals received: (2013–2014: 16 complaints, 1 appeal; 2014–2015: 4 complaints; 2015–2016: 1 dispute; 2016–2017: no complaints, disputes or appeals) **2 complaints**;
 - (d) Highest number of complaints, disputes and appeals received by one DOE: (2013–2014: 7 (7 complaints); 2014–2015: 1 (1 complaint); 2015–2016: 1 (1 dispute); 2016–2017: 0) **1 complaint**.

2.3.6. CDM-related training undertaken

25. Twenty-five DOEs reported conducting CDM-related training:⁵
- (a) Average number of training sessions per DOE: (9, 4, 6, 6) **6**;
 - (b) Average duration of training session: (9, 7, 7, 6) **8** hours;
 - (c) Average number of participants per session: (13, 10, 11, 10) **9**;
 - (d) Highest number of training sessions for a DOE: (55, 25, 32, 26) **68**.
26. Of the 157 CDM-related training sessions, 94 were internal and 56 were conducted by external providers. A further seven training sessions were provided in combination with external providers.
- (a) The equivalent figures for the 2016–2017 reporting period were: 148 CDM-related training sessions, for which 113 were internal and 28 were conducted by external providers. A further seven training sessions were provided in combination with external providers.
 - (b) The equivalent figures for the 2015–2016 reporting period were: 177 CDM-related training sessions, for which 140 were internal and 33 were conducted by external providers. A further four training sessions were provided in combination with external providers.
 - (c) The equivalent figures for the 2014–2015 reporting period were: 133 CDM-related training sessions, for which 102 were internal and 17 were conducted by external providers. A further 14 training sessions were provided in combination with external providers.
 - (d) The equivalent figures for the 2013–2014 reporting period were: 374 CDM-related training sessions, for which 297 were internal and 77 were conducted by external providers.

⁵ The level of detail as reported varied across the DOEs for this section.

27. There were (40, 40, 10, 24) **41** training providers, from national and international institutes and associations, standards associations and governmental organizations/departments/ministries, which can be categorized as follows:
- (a) Gold Standard;
 - (b) Individual consultants or consulting companies;
 - (c) Thailand Greenhouse Gas Management Organization (TGO);
 - (d) National Development and Reform Commission and local Development and Reform Commission (China);
 - (e) Other DOEs;
 - (f) UNFCCC secretariat;
 - (g) Universities or institutes;
 - (h) Energy, environment, research or training centers.

2.4. Activities relating to the consideration of project activities

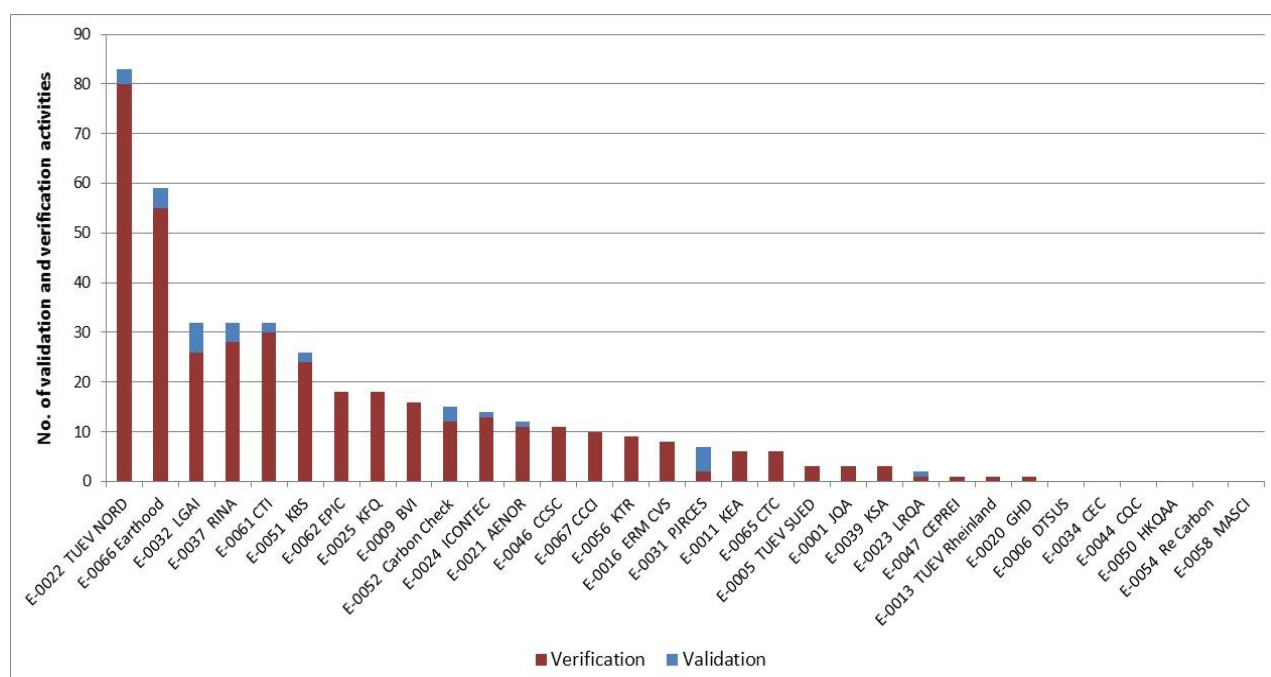
2.4.1. Status of project activities

28. Information regarding project activities was taken from the CDM Information System and from information provided by the DOEs.
29. The DOEs submitted information on all the CDM projects that they had worked on during the reporting period, as presented in the summary and table 3 below:
- (a) Ten DOEs were responsible for 84 per cent of the validation of projects initiated during the period:
 - (i) 2016–2017: 10 DOEs were responsible for 88 per cent;
 - (ii) 2015–2016: 10 DOEs were responsible for 73 per cent;
 - (iii) 2014–2015: 10 DOEs were responsible for 75 per cent;
 - (iv) 2013–2014: 10 DOEs were responsible for 80 per cent;
 - (b) Ten DOEs were responsible for 87 per cent of the verification of projects initiated during the period:
 - (i) 2016–2017: 10 DOEs were responsible for 84 per cent;
 - (ii) 2015–2016: 10 DOEs were responsible for 80 per cent
 - (iii) 2014–2015: 10 DOEs were responsible for 72 per cent
 - (iv) 2013–2014: 10 DOEs were responsible for 76 per cent.

Table 3. Status of project activities

Validation status	No. of validation activities	No. of verification activities
Initiated during this reporting period ⁶	(336, 2013, 193, 335) 190	(568, 403, 487, 590) 355
Contract terminated during this reporting period	(193, 157, 155, 63) 96	(79, 74, 157, 118) 84
Registered (validation)/certified emission reductions issued (verification) during this reporting period	(297, 115, 83, 55) 30	(559, 528, 460, 559) 396
Rejected during this reporting period	(9, 3, 1, 3) 2	(3, 1, 1, 1) 1
Validation/verification ongoing as of final date of the reporting period (not yet submitted for registration/request for issuance)	(726, 518, 507, 346) 186	(418, 318, 376, 312) 196
Validation/verification ongoing as of final date of the reporting period (already submitted for registration/request for issuance)	(256, 56, 17, 21) 17	(296, 106, 50, 86) 101

30. Figure 3 below indicates the distribution of registered validations and verifications among the DOEs. The figure indicates that one-third of the DOEs play a critical role in servicing most the international needs for CDM validation and verification services.

Figure 3. Distribution of validations and verifications among the DOEs

⁶ For the purpose of this report, “initiated during this reporting period” is considered to be validation or verification/certification work that began during this period.

2.4.2. Regional distribution of project activities

31. Figures 4 to 9 below provide an overview of validation and verification of project activities and PoAs during the reporting period (by region) as compared to the previous reporting periods.

Figure 4. Number of DOEs conducting validation activities

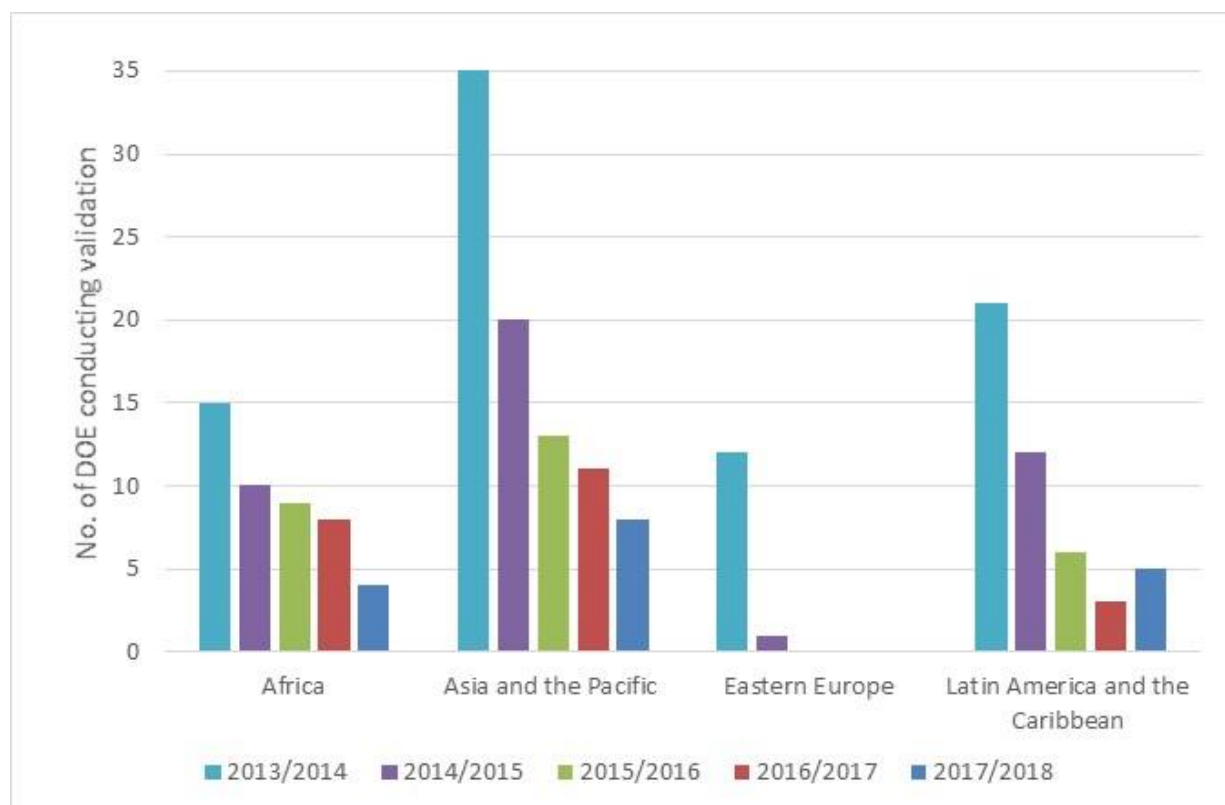


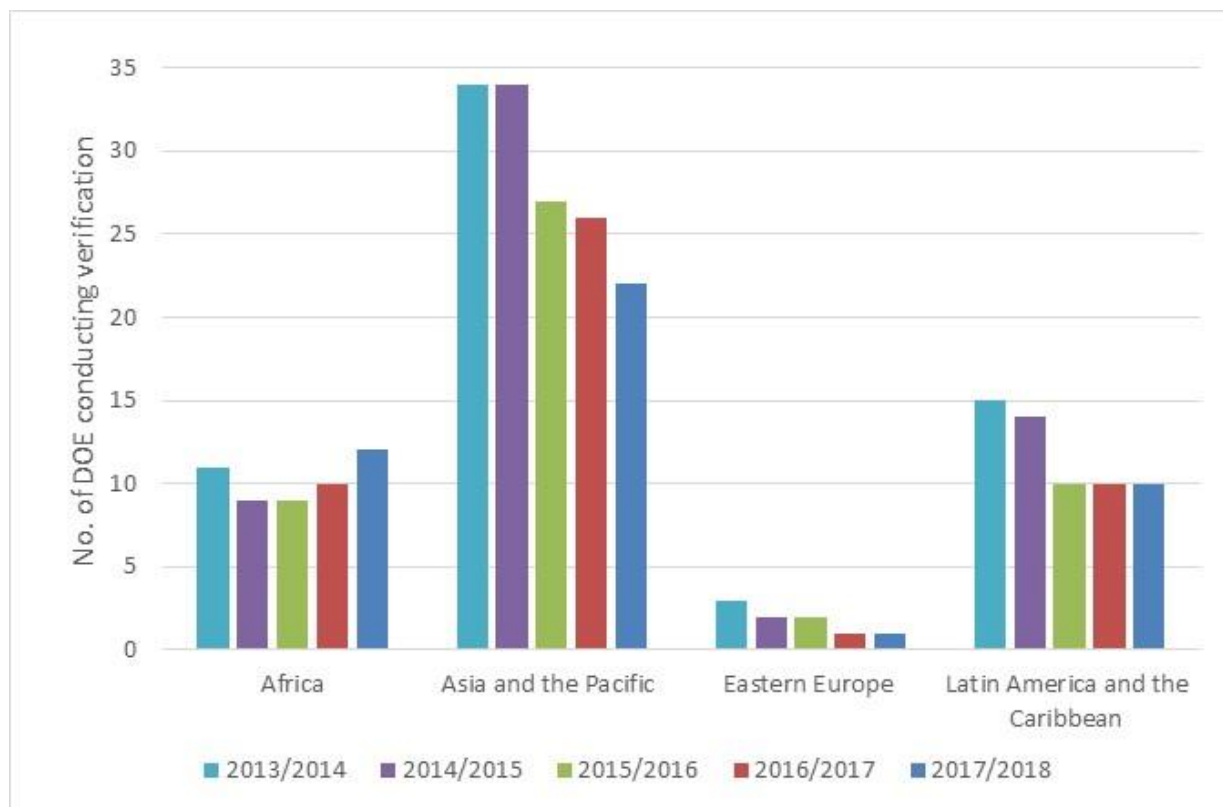
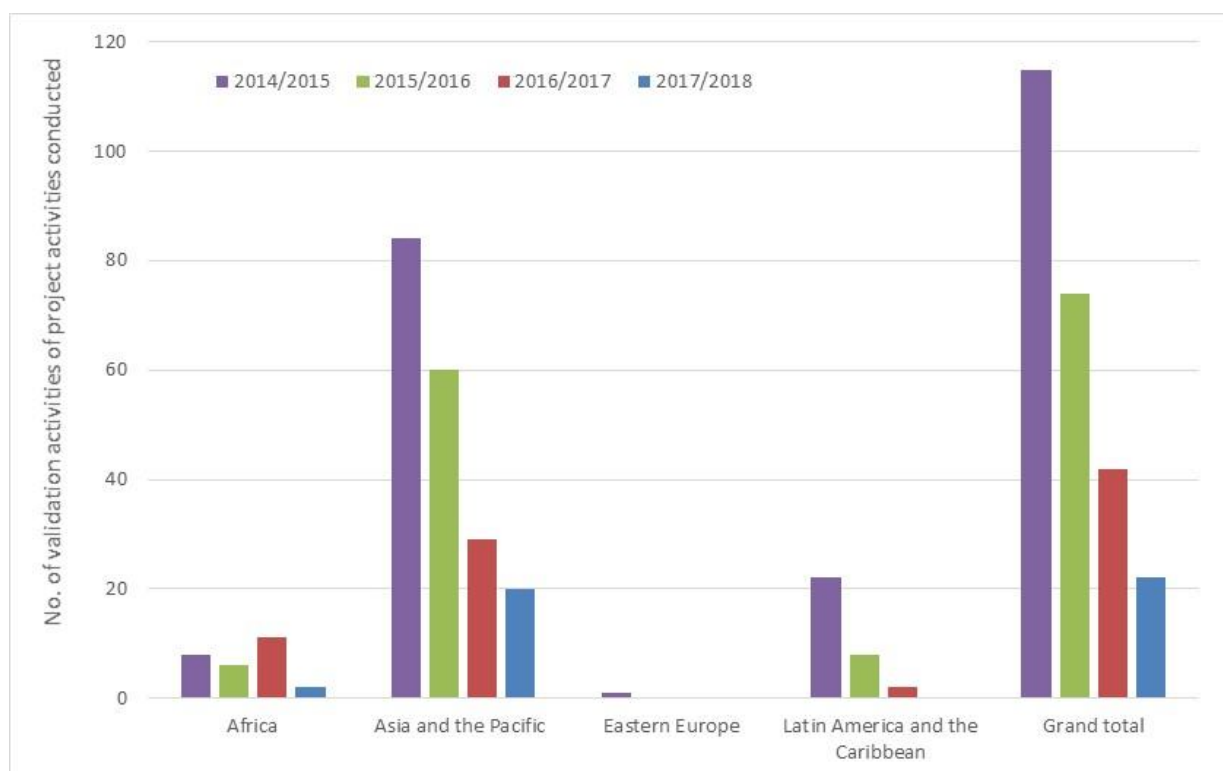
Figure 5. Number of DOEs conducting verification activities**Figure 6. Number of validation activities of project activities**

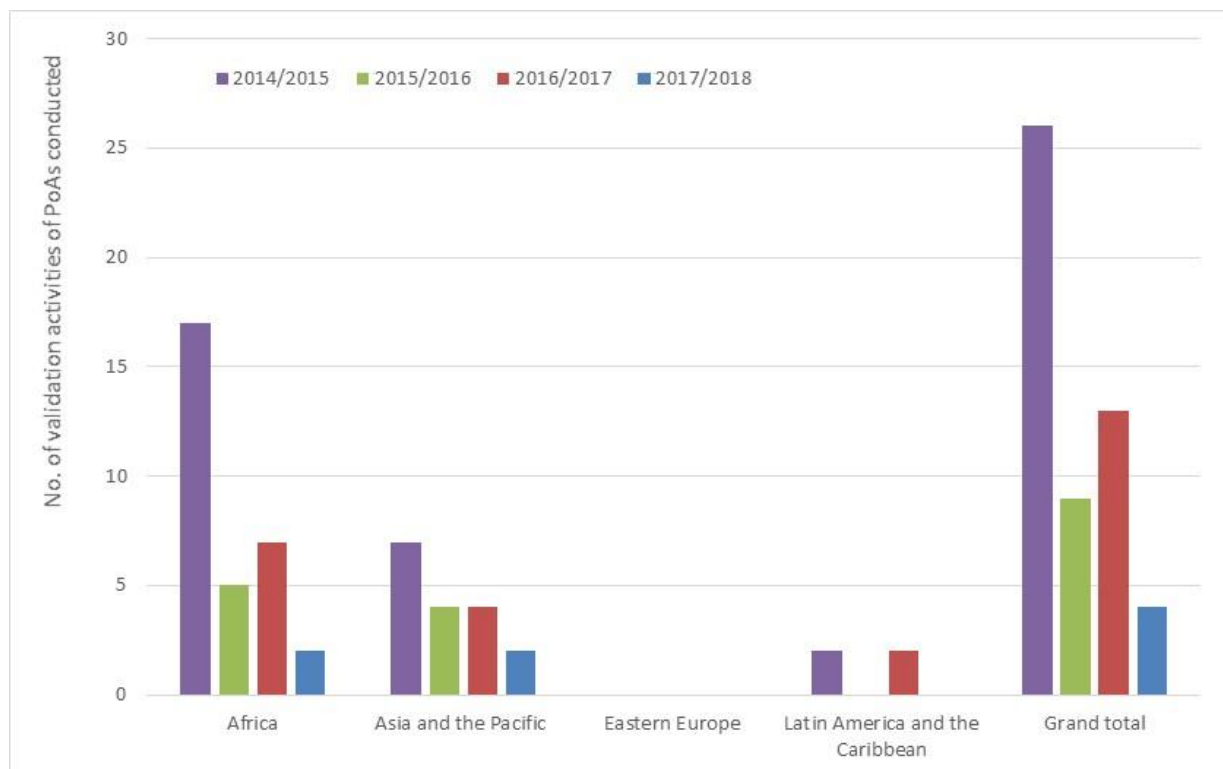
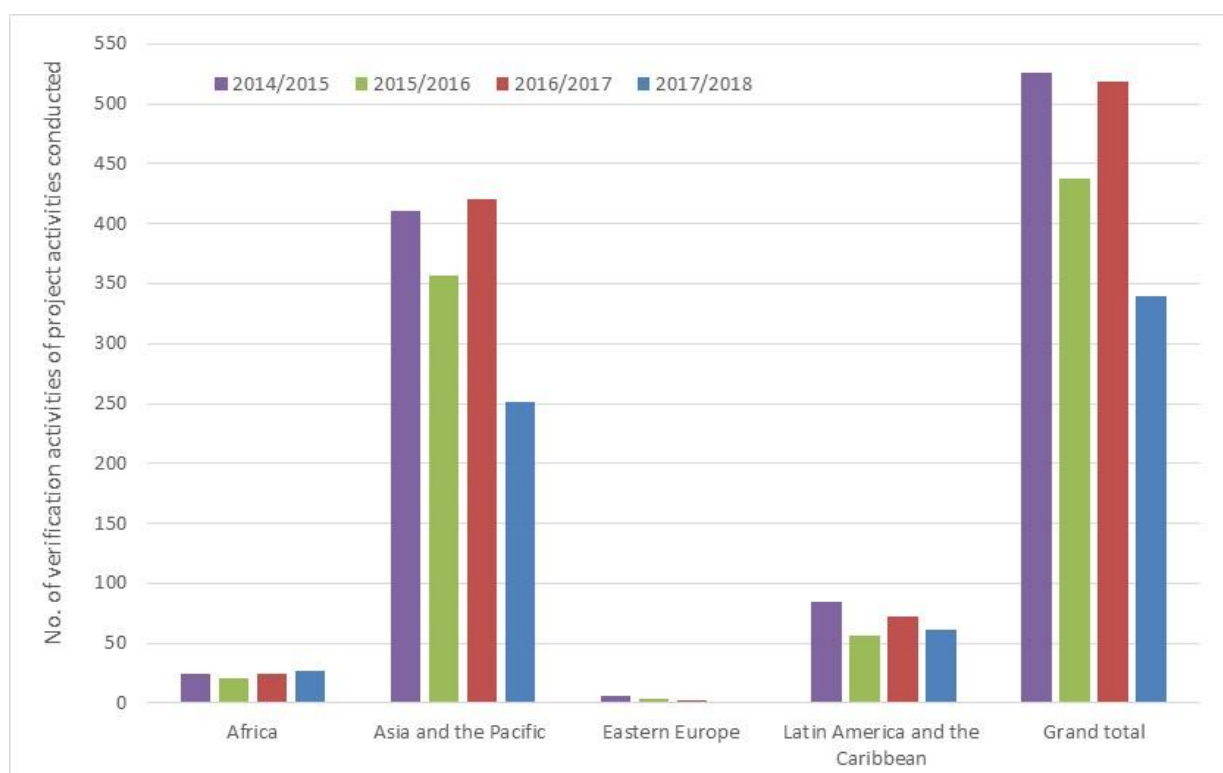
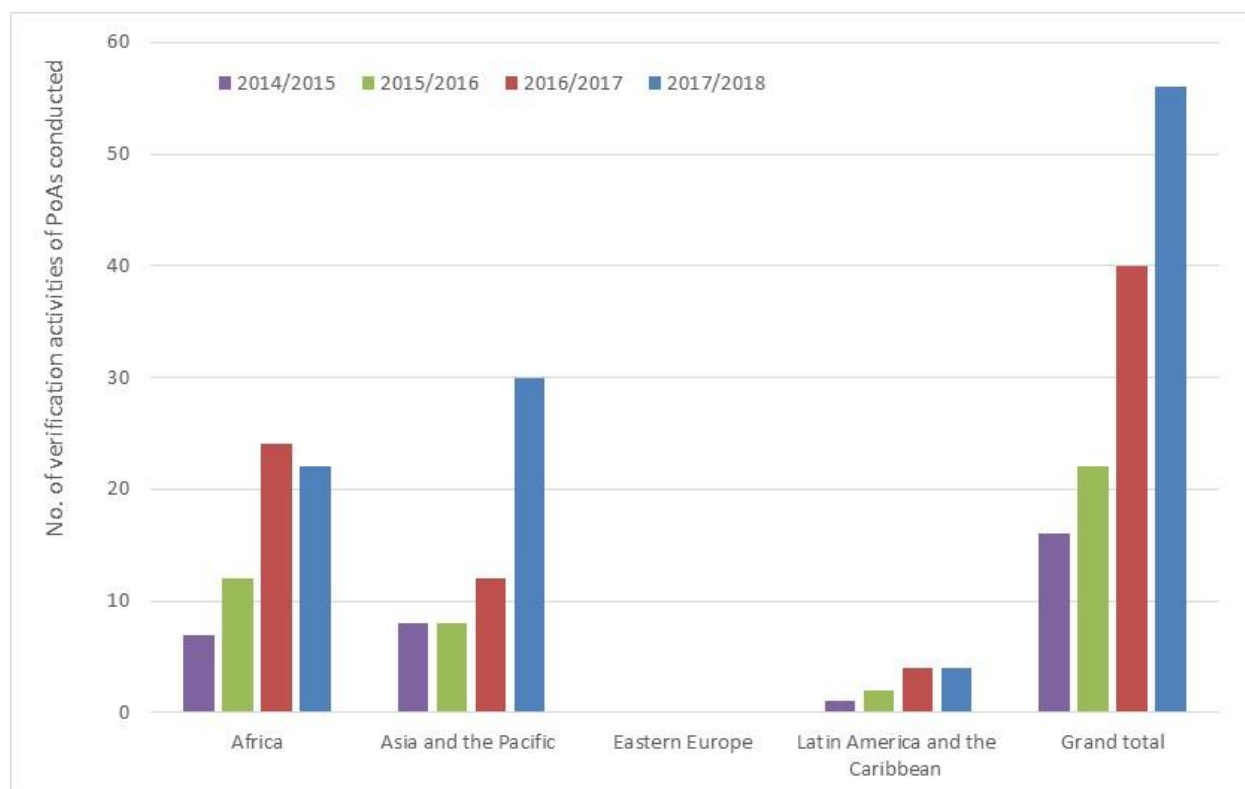
Figure 7. Number of validation activities of PoAs**Figure 8. Number of verification activities of project activities**

Figure 9. Number of verification activities of PoAs

2.4.3. Sectoral scope distribution of project activities

32. The distribution of work per sectoral scope was taken from the CDM Information System, as shown in Table 4 below.

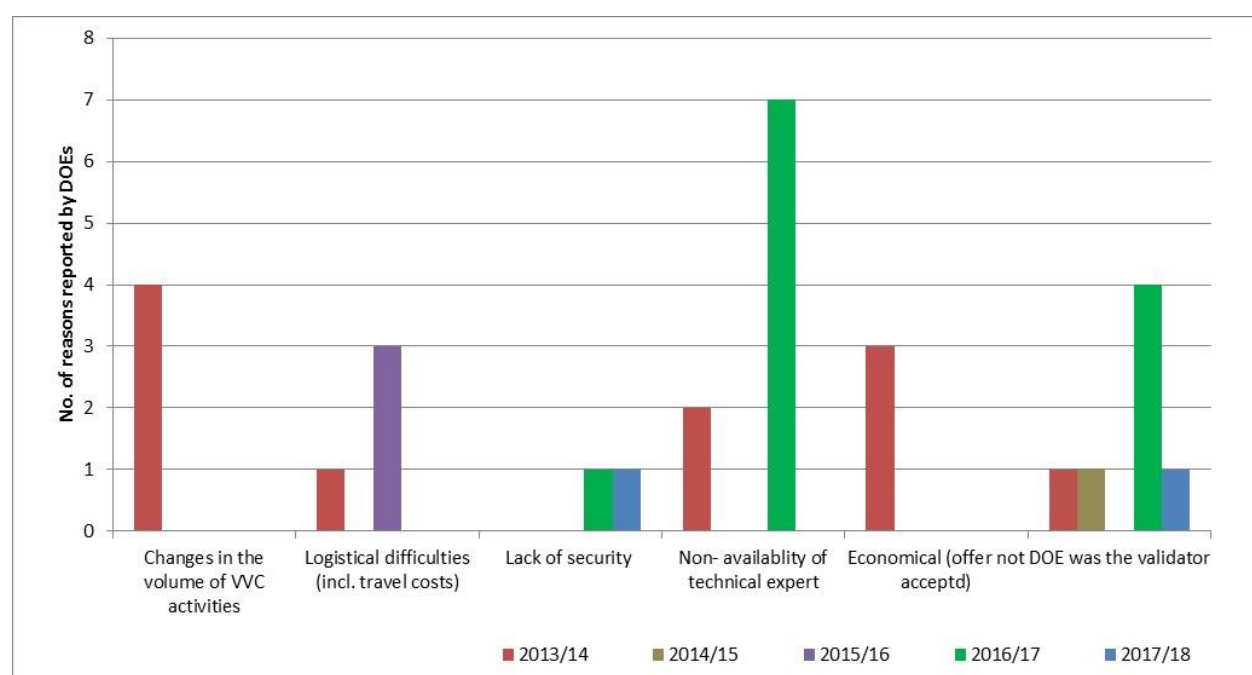
Table 4. Number of validation and verification project activities per sectoral scope

Sectoral scope	No. of validation activities	No. of active DOEs (validation)	No. of verification activities	No. of active DOEs (verification)
1	(955, 105, 58, 49) 30	(36, 24, 16, 14) 11	(918, 405, 347, 463) 280	(37, 25, 28, 28) 25
2	(6, 1, 1, 0) 1	(5, 1, 1, 0) 1	(2, 0, 0, 0) 0	(2, 0, 0, 0) 0
3	(71, 20, 9, 6) 1	(15, 7, 4, 6) 1	(37, 22, 27, 41) 45	(10, 9, 7, 8) 7
4	(118, 12, 2, 6) 1	(16, 8, 1, 5) 1	(58, 18, 13, 28) 9	(17, 11, 8, 8) 5
5	(12, 1, 1, 1) 0	(4, 1, 1, 1) 0	(35, 16, 0, 22) 25	(16, 5, 0, 6) 6
6	(1, 0, 0, 0) 0	(1, 0, 0, 0) 0	(0, 0, 0, 0) 0	(0, 0, 0, 0) 0
7	(8, 2, 0, 0) 0	(6, 2, 0, 0) 0	(3, 4, 3, 2) 2	(3, 4, 3, 1) 2
8	(14, 0, 0, 0) 0	(5, 0, 0, 0) 0	(28, 15, 10, 13) 5	(8, 3, 4, 3) 2
9	(1, 0, 0, 0) 0	(1, 0, 0, 0) 0	(0, 2, 0, 2) 3	(0, 2, 0, 2) 2
10	(17, 1, 3, 1) 0	(7, 1, 2, 1) 0	(43, 28, 16, 15) 5	(8, 6, 8, 5) 2
11	(1, 0, 0, 0) 0	(1, 0, 0, 0) 0	(28, 5, 1, 4) 4	(4, 2, 1, 2) 2
12	(0, 0, 0, 0) 0	(0, 0, 0, 0) 0	(1, 0, 0, 0) 0	(1, 0, 0, 0) 0

Sectoral scope	No. of validation activities	No. of active DOEs (validation)	No. of verification activities	No. of active DOEs (verification)
13	(128, 9, 6, 3) 1	(23, 6, 5, 2) 1	(178, 88, 66, 82) 54	(25, 21, 18, 17) 16
14	(5, 0, 10, 0) 0	(3, 3, 1, 0) 0	(6, 1, 2, 0) 3	(2, 1, 1, 0) 2
15	(24, 0, 0, 0) 0	(7, 0, 0, 0) 0	(21, 18, 16, 17) 15	(7, 7, 5, 6) 5
16	(0, 0, 0, 0) 0	(0, 0, 0, 0) 0	(0, 0, 0, 0) 0	(0, 0, 0, 0) 0

2.4.4. List of project activities declined, if any, including the reasons for doing so

33. A DOE may decline validation and verification work for a number of reasons. The DOEs submitted information on the number of assignments for which they declined to perform validation or verification/certification in the reporting period:
- (a) Number of DOEs reporting that they had declined projects: (10, 4, 3, 6) **1**;
 - (b) Total number of assignments reported as declined for all DOEs: (>19, >4, >5, >13) **2**;
 - (c) Number of different countries in which assignments were declined: (21, 13, >4, >4, >9) **3**;
 - (d) Top country in terms of the number of assignments declined by entities: Costa Rica (1), Mali (1) and Democratic Republic. of Congo (1).
 - (i) 2016–2017, India (3), Guatemala (>3), Chile (1), Colombia (1), Malawi (1), Malaysia (1), Myanmar (1), Niger (1), Nigeria (1) and Peru (1);
 - (ii) 2015–2016, Nepal (2), Colombia (1), Peru (1), Republic of South Africa (1);
 - (iii) 2014–2015, India (>1), Brazil (2);
 - (iv) 2013–2014, China (6), Cambodia (2);
 - (v) 2012–2013, India (5), Brazil (5), Iran (4), China (3).
34. The reasons for declining the projects or PoAs were categorized into two main reasons, i.e. lack of security (1) and the DOE being the validator for the same project (1). Figure 10 shows the comparison of the reasons for declining projects or PoAs in the last five reporting periods.

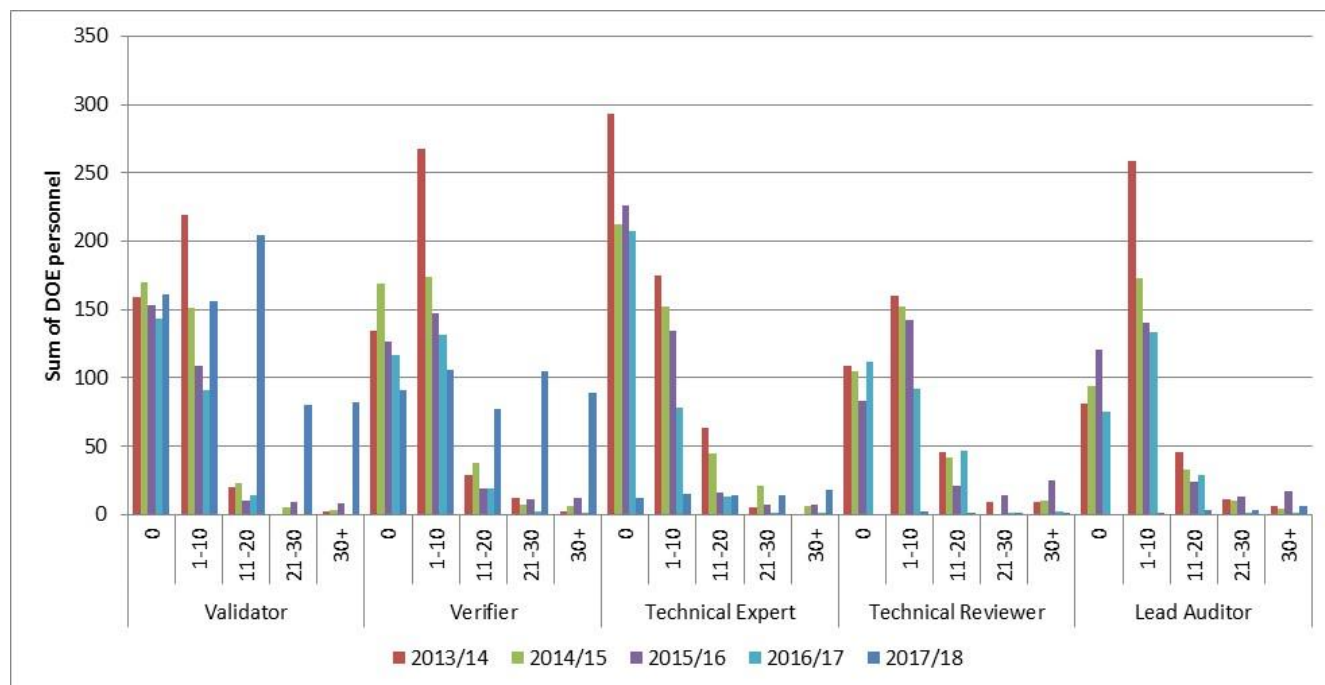
Figure 10. Comparison of reasons for declining projects

2.4.5. Project activities and PoAs registered or issued in countries with fewer than 10 registered project activities and PoAs

35. Thirteen DOEs registered or successfully verified project activities or PoAs in underrepresented countries with fewer than 10 registered projects/PoAs (as of 30 June 2018) (20, 14, 9, 9).

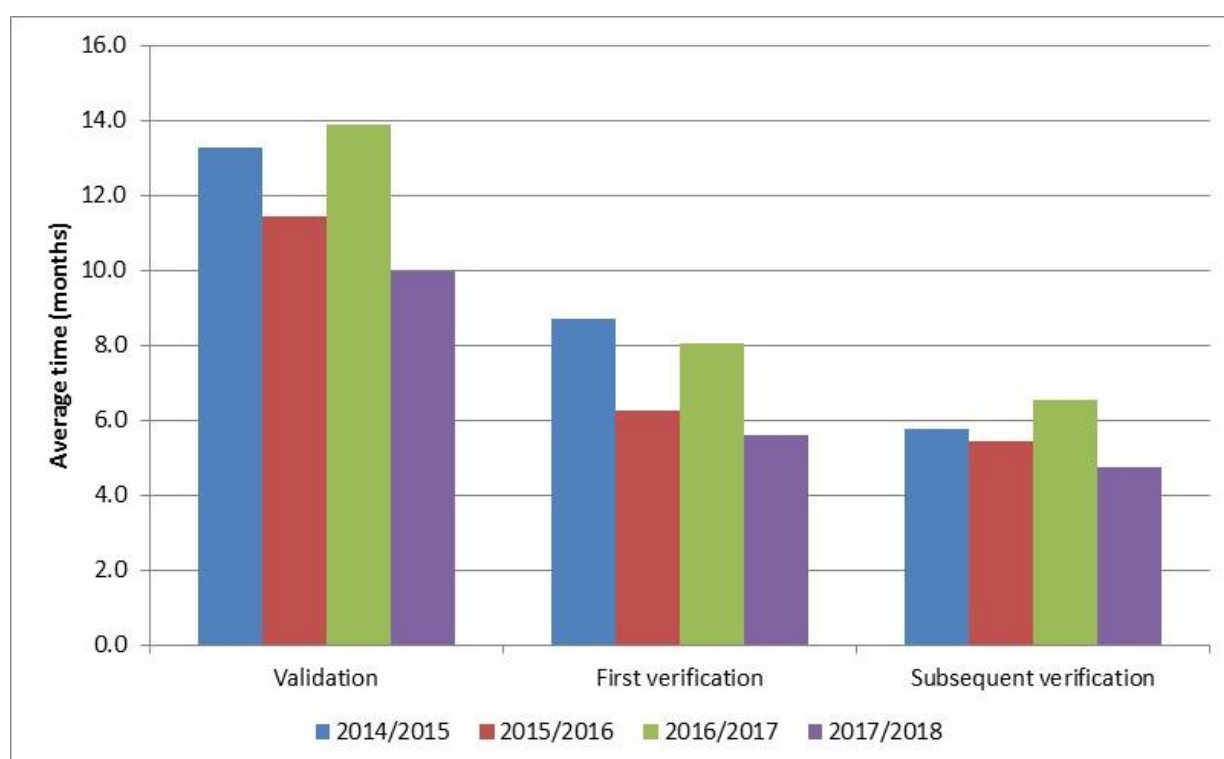
2.4.6. Number of project activities under validation or verification/certification per qualified auditor

36. Figure 11 below shows how many cases individuals worked on during the reporting period. The data were reported by DOEs per validator, verifier, lead auditor, technical expert and technical reviewer.

Figure 11. Comparison of workload per auditor type

2.4.7. Time frames for conducting validation and verification/certification

37. All DOEs submitted information regarding their average time frames for conducting validations, verifications and subsequent verifications. Figure 12 below shows the average time frames reported by the DOEs. The time frame is considered as the time from signing the contract until the validation or verification is submitted to the Board. In addition, the DOEs provided time adjustment factors indicating the impact on time frames from working in different regions. Time adjustment factor of more than 1 indicates that working in that region took longer than the average, while time adjustment factor of less than 1 indicates that it took less time than the average. The time frames in each region described in table 5 and table 6 below are determined based on the reported time adjustment factor.

Figure 12. Average time frames for validation, verification and subsequent verification**Table 5. Minimum and maximum (average) time frames for a validation per region (months)**

Region	Shortest reported time frame (months)	Longest reported time frame (months)
Africa	(7.5, 3.9, 2.3, 2.8) 10.0	(19.5, 16.9, 34.3, 20.8) 31.9
Asia and the Pacific	(6.2, 3.9, 4.6, 5.5) 7.0	(18.5, 18.2, 30.9, 23.6) 15.0
Eastern Europe	(11.7, 5.2, 11.4, 13.9) 9.0	(25.5, 15.6, 22.9, 20.8) 19.9
Latin America and the Caribbean	(7.9, 9.1, 8.0, 4.2) 7.0	(19, 27.3, 53.8, 20.8) 24.9

Table 6. Minimum and maximum (average) time frames for a (first) verification per region (months)

Region	Shortest reported time frame (months)	Longest reported time frame (months)
Africa	(4.2, 2.7, 1.3, 1.6) 5.6	(10.1, 11.7, 18.8, 12.1) 17.9
Asia and the Pacific	(2.7, 2.7, 2.5, 3.2) 3.9	(15.1, 12.6, 16.9, 13.7) 8.4
Eastern Europe	(6.1, 3.6, 6.3, 8.0) 5.0	(35.6, 10.8, 12.5, 12.1) 11.2
Latin America and the Caribbean	(4.5, 6.3, 4.4, 2.4) 3.9	(17.8, 18.9, 29.4, 12.1) 14.0

2.4.8. Average fees for the validation and verification/certification of CDM project activities by region

38. The DOEs submitted information regarding the average fees (in United States dollars) for conducting validations, verifications and subsequent verifications. Figure 13 below shows the average fees reported by the DOEs. In addition, the DOEs provided price adjustment

factors indicating the impact on fees from working in different regions and with different project types. Price adjustment factor of more than 1 indicates that working in that region or with that project type was costlier than average, while price adjustment factor of less than 1 indicates that it was less costly than the average. The average fees for each region and for each project type are presented in tabular format in tables 7, 8, 9 and 10 below.

Figure 13. Average fees for validation, verification and subsequent verification

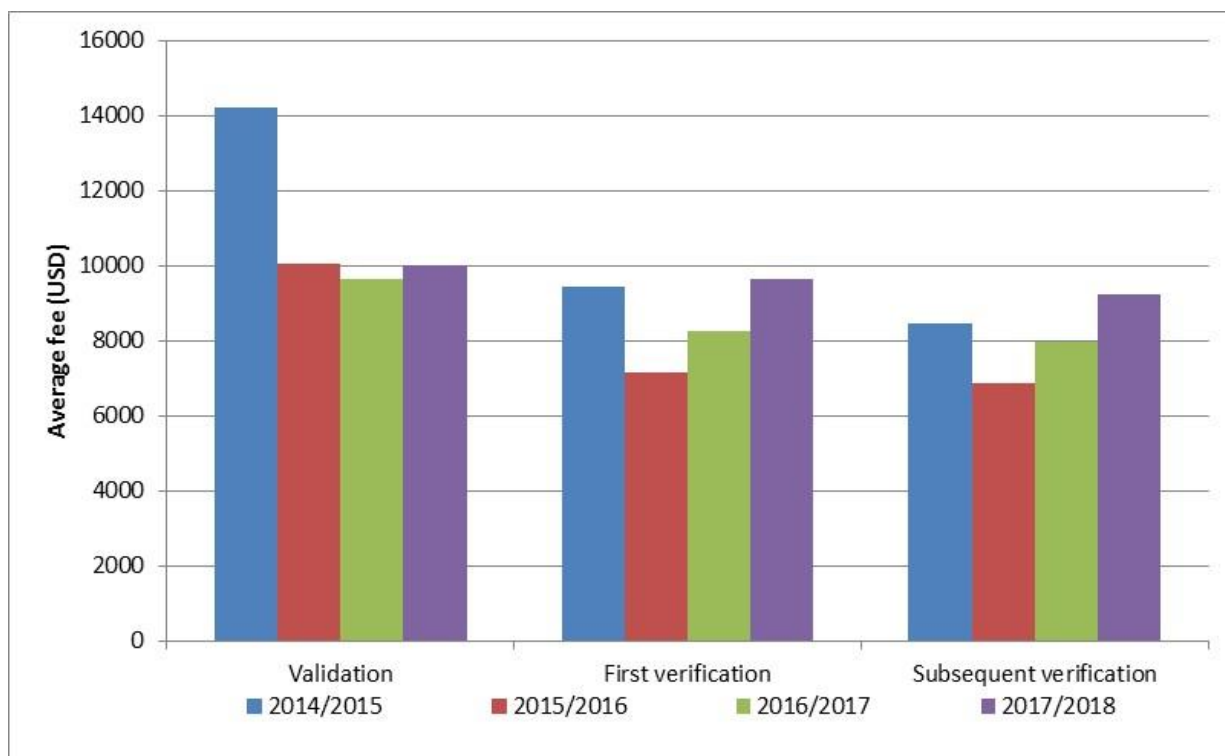


Table 7. Minimum and maximum fees for a validation in each region (in United States dollars)

Region	Minimum reported fee	Maximum reported fee
Africa	(4500, 2000, 8327, 8654) 8994	(115248, 42000, 31226, 19231) 24983
Asia and the Pacific	(1700, 990, 4163, 3846) 6995	(116375, 39200, 14572, 11539) 14990
Eastern Europe	(12967, 4875, 10409, 9616) 9993	(102683, 39200, 20817, 19231) 19986
Latin America and the Caribbean	(1667, 1 320, 9368, 7692) 5996	(100974, 52500, 31226, 23077) 29979

Table 8. Minimum and maximum fees for a verification in each region (in United States dollars)

Region	Minimum reported fee	Maximum reported fee
Africa	(4500, 1824, 5912, 7296) 8469	(70000, 26 000, 22172, 16213) 23525
Asia and the Pacific	(1300, 810, 2956, 3243) 6587	(279166, 24 000, 10347, 9728) 14115
Eastern Europe	(10400, 5000, 7391, 8107) 9410	(36160, 18000, 14781, 16213) 18820
Latin America and the Caribbean	(4000, 1080, 6652, 6485) 5646	(47645, 24000, 22172, 19456) 28230

Table 9. Minimum and maximum fees for a validation for each activity type (in United States dollars)

Activity type	Minimum reported fee	Maximum reported fee
Large scale project activity	(11349, 8327, 6731) 8994	(11349, 21858, 19231) 12991
Small scale project activity	(5675, 3123, 6731) 6995	(17024, 13531, 12500) 12991
Programme of activities	(8512, 5204, 5769) 5996	(45397, 27062, 21154) 24983

Table 10. Minimum and maximum fees for a verification for each activity type (in United States dollars)

Activity type	Minimum reported fee	Maximum reported fee
Large scale project activity	(7095, 5906, 5675) 8469	(7095, 15503, 16213) 12233
Small scale project activity	(3547, 2215, 5675) 6587	(10642, 9597, 10539) 12233
Programme of activities	(5321, 3691, 4864) 5646	(28379, 19194, 17834) 23525

2.5. Impartiality

2.5.1. Report of the impartiality committee

39. The DOEs submitted their annual reports of activities of the impartiality committee as per paragraph 37(g) of the CDM accreditation standard.

2.5.2. Other impartiality issues

40. The DOEs were requested to submit any further relevant comments with regard to impartiality issues experienced during the reporting period. One DOE provided a comment on impartiality issues.

2.6. Interactions with interested parties⁷

2.6.1. Interactions with the Board

41. The DOEs submitted information regarding significant interactions that had taken place with the Board during the reporting period.
42. Fourteen (24, 17, 21, 18) DOEs reported interactions with the Board, and these were conducted through the following channels:
 - (a) Accreditation assessments;
 - (b) Board meetings (through the DOE forum);
 - (c) DOE teleconferences (after Board meetings).

2.6.2. Interactions with other designated operational entities and/or applicant entities

43. The DOEs submitted information regarding interactions that had taken place with other interested parties during the reporting period.
44. Fourteen (23, 15, 16, 12) DOEs reported significant interactions with other DOEs and/or applicant entities, and these were conducted through the following channels:
 - (a) DOE and/or Designated and Independent Operational Entities (DIA) forum meetings;
 - (b) Ad hoc meetings and interactions with other DOEs;
 - (c) Greenhouse Gas Assurance Association of Japan;
 - (d) Korea DOE (K-DOE) Forum;
 - (e) Calibration workshop for DOEs;
 - (f) DOE teleconferences (after Board meetings).

2.6.3. Interactions with other interested parties

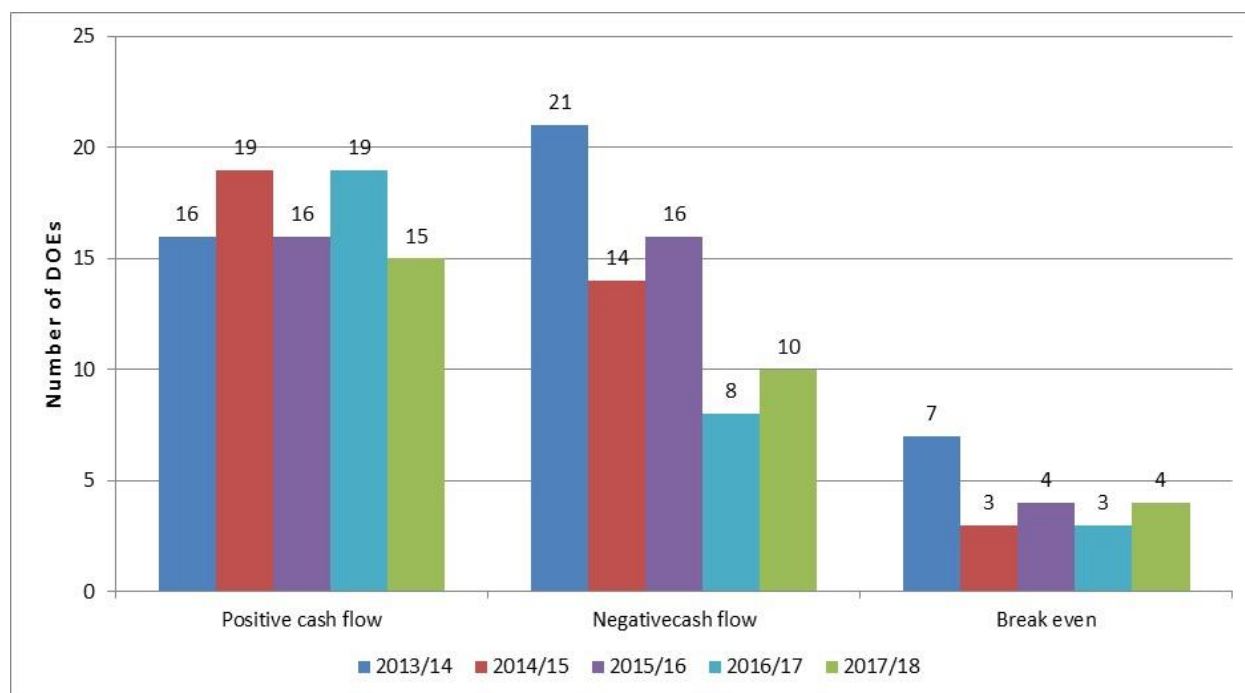
45. All the DOEs submitted information regarding significant interactions that had taken place with other interested parties during the reporting period.
46. Nine (19, 11, 1, 11) DOEs reported interactions with other interested parties during the reporting period, and these were conducted through the following channels:
 - (a) Interaction with governmental and/or non-governmental organizations;
 - (b) Thailand Greenhouse Gas Management Organization;
 - (c) National ministry offices;
 - (d) Impartiality committees (composed of external experts);
 - (e) Commercial discussions with potential clients and project participants.

⁷ The level of detail as reported for this section varied across the DOEs.

2.7. Financial statement

47. The DOEs submitted information on annual income and expenditure relating to CDM activities (validation and verification) in United States dollars.
48. Figure 14 below shows the balance of income and expenditure for the last four reporting periods.

Figure 14. Income and expenditure trend



49. During the reporting period:
- (a) Fifteen DOEs reported a higher income than expenditure;
 - (b) Ten DOEs reported a lower income than expenditure;
 - (c) Four DOEs reported equal income and expenditure.

2.8. Challenges and lessons learned

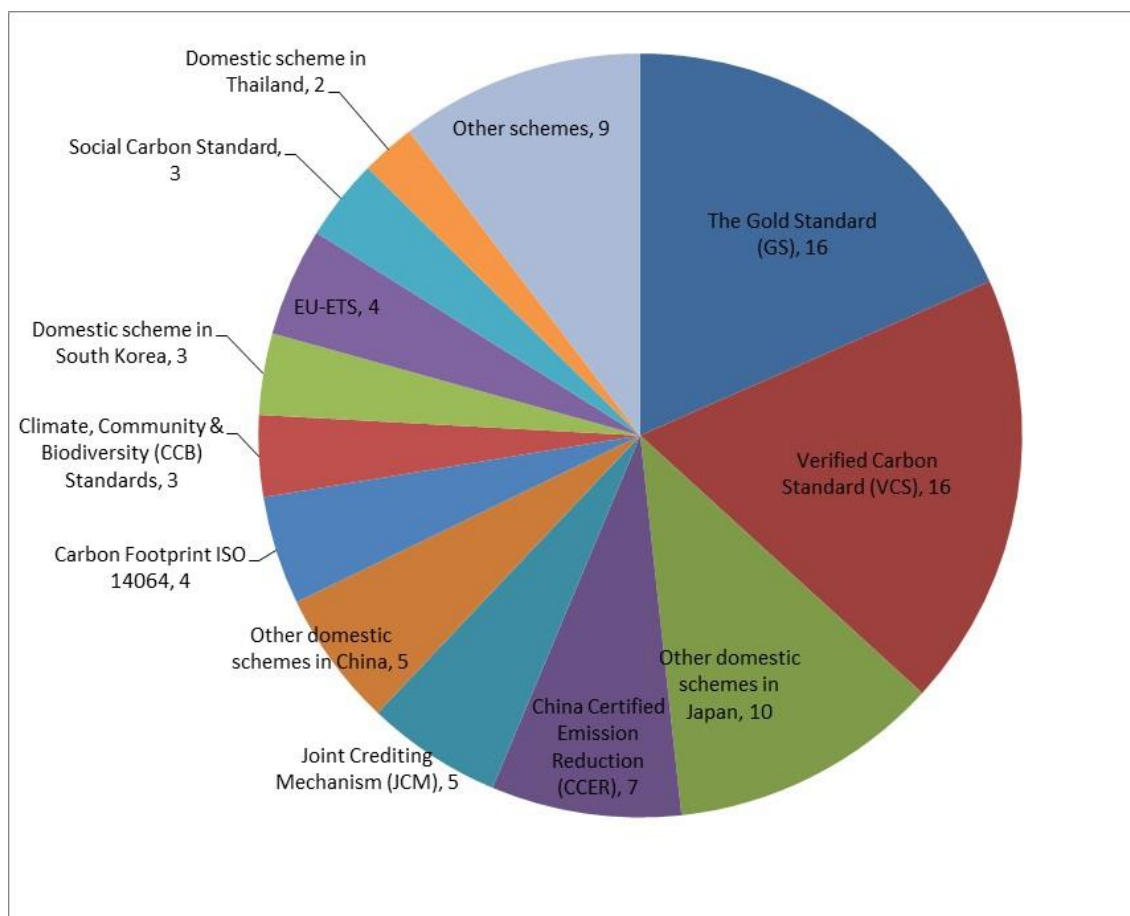
50. Twenty-five DOEs submitted further comments with regard to challenges and lessons learned during the reporting period. The wide range of responses have been grouped into three areas, as presented below:
- (a) Low price of certified emission reductions and the decrease in the volume of validation and verification work. For some DOEs this has led to difficulties in maintaining the accreditation in terms of the cost;
 - (b) Lack of opportunities to practice and implement the updated CDM requirements due to the low volume of projects;

- (c) Experience with the CDM and current market conditions having provided opportunities to seek and support other business in the greenhouse gas (GHG) sector;
- (d) DOEs having expectations of the market-based mechanism from Paris Agreement.

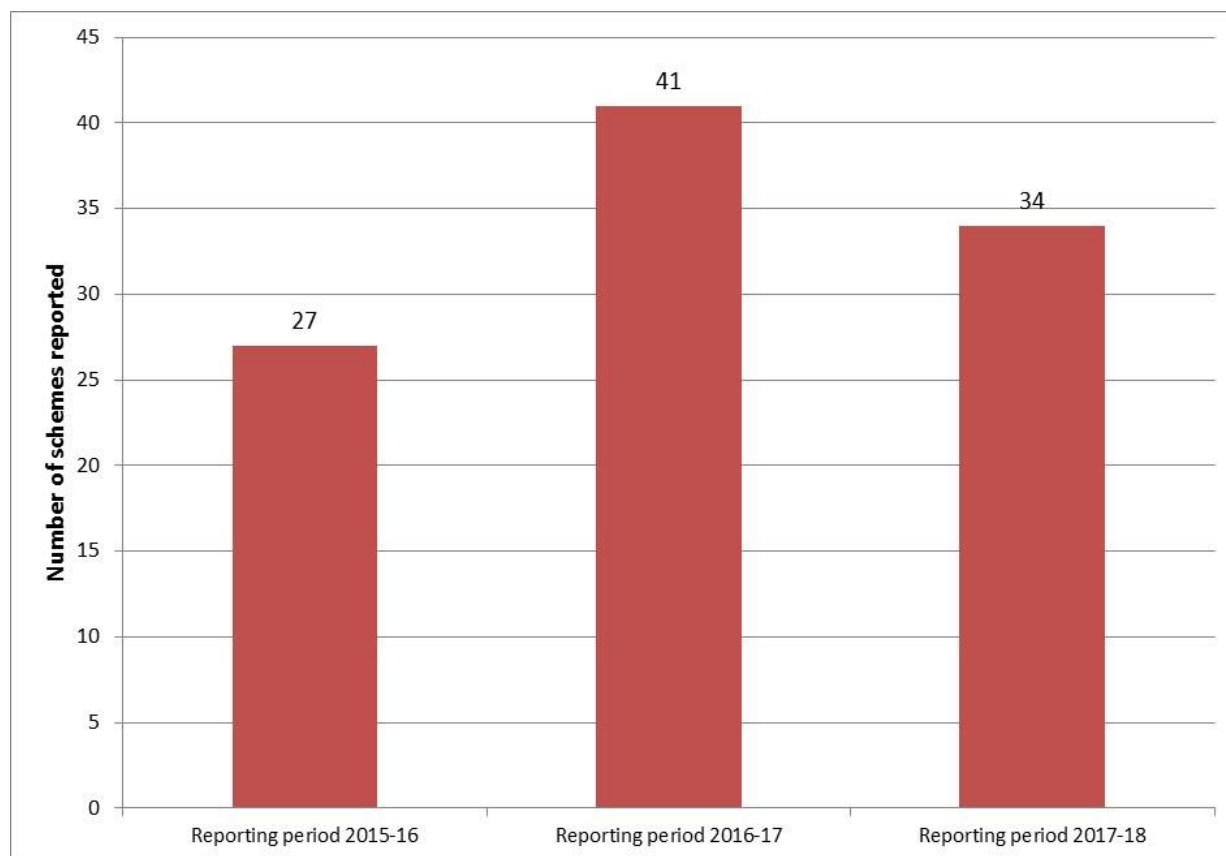
2.9. Other business activities

51. Twenty-eight DOEs reported other business activities that involve validation or verification of greenhouse gas assertions in schemes other than the CDM.
52. The most frequently listed schemes in addition to the CDM are provided in figure 15 below.

Figure 15. Number of DOEs reporting GHG validation and verification services in addition to the CDM



53. The comparison of the number of other schemes reported by the DOEs is shown in figure 16 below.

Figure 16. Number of other schemes reported by the DOEs

54. Most of the DOEs are active in GHG business activities that involve validation or verification of greenhouse gases in schemes other than the CDM, with the DOEs reporting 89 activities (*2015–2016: 91 activities; 2016–2017: 101 activities*).
55. Most the DOEs that reported working on other schemes listed the Gold Standard, Verified Carbon Standard and regional or national initiatives (e.g. China national carbon market and the European Union Emission Trading Scheme). The DOEs also identified synergies between the CDM and some of the schemes listed, which include using the status as DOE under the CDM, using the knowledge and competence under the CDM, and having similar methodologies to those under the CDM or methodologies developed from CDM methodologies.
56. These synergies, as reported by several DOEs, have enabled them to provide validation and verification services under other schemes and obtain more auditing experience for their auditors.
57. Some DOEs also recognized that the status of DOE under the CDM gives confidence to their clients and competitive advantages to enter other GHG schemes.

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