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Report of the Green Climate Fund to the Conference of Parties
and guidance to the Green Climate Fund
Report of the Global Environment Facility to the Conference of Parties
and guidance to the Global Environment Facility

# Operation of the registry of nationally appropriate mitigation actions

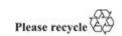
# Report by the secretariat

## Summary

This report provides an overview of the operation of the registry of nationally appropriate mitigation actions (NAMAs) in 2016. It also includes a chapter on the analysis of information relating to the operation of the registry, including its user base, NAMAs and support for NAMAs recorded in the registry as at 1 September 2016. The report furthermore presents the results of a survey of users of the NAMA registry undertaken in 2016.

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# FCCC/CP/2016/INF.1

| Contents |      |                                                                                                      |            |      |
|----------|------|------------------------------------------------------------------------------------------------------|------------|------|
|          |      |                                                                                                      | Paragraphs | Page |
| I.       | Intr | oduction                                                                                             | 1–4        | 3    |
|          | A.   | Mandate                                                                                              | 1–2        | 3    |
|          | B.   | Scope of the report                                                                                  | 3–4        | 3    |
| II.      | Ove  | erview of the operation of the registry in 2016                                                      | 5-25       | 3    |
|          | A.   | Participation in the registry                                                                        | 5–7        | 3    |
|          | B.   | Nationally appropriate mitigation action entries in the registry                                     | 8–13       | 4    |
|          | C.   | Nationally appropriate mitigation action cost and support required                                   | 14–16      | 5    |
|          | D.   | Support available and provided                                                                       | 17–20      | 5    |
|          | E.   | Efforts of the secretariat to support users of the registry                                          | 21–23      | 6    |
|          | F.   | Challenges in the operation of the registry                                                          | 24–25      | 6    |
| III.     | Ana  | alysis of information relating to the operation of the registry                                      | 26–71      | 7    |
|          | A.   | Participation in the registry                                                                        | 28-35      | 8    |
|          | B.   | Entries in the registry of nationally appropriate mitigation actions and entries on support for them | 36–71      | 10   |
| Annexes  |      |                                                                                                      |            |      |
| I.       |      | erview of supported nationally appropriate mitigation action outside registry                        |            | 27   |
| II.      |      | dings of a survey of the users of the registry of nationally appropriate igation actions             |            | 30   |

# I. Introduction

#### A. Mandate

- 1. The Conference of the Parties (COP), at its sixteenth session, decided to establish a registry to record nationally appropriate mitigation actions (NAMAs) seeking international support, and to facilitate the matching of financial, technology and capacity-building support with these actions.<sup>1</sup>
- 2. COP 17 requested the secretariat to provide information on the operation of the registry to the COP annually in order to inform discussions on the Financial Mechanism.<sup>2</sup> It noted that this mechanism could make use of information available in the registry when considering the provision of support for the preparation and implementation of individual NAMAs that are seeking support.<sup>3</sup>

# B. Scope of the report

- 3. This is the fourth annual report on the operation of the NAMA registry prepared for consideration by the COP.
- 4. This report presents an overview of the operation of the registry in 2016. It is organized as follows:
- (a) Chapter II provides an overview of the operation of the registry in 2016, including information contained in the registry and the main activities surrounding its use;
- (b) Chapter III presents an analysis of information relating to the operation of the registry, including on its user base, NAMAs and support for NAMAs recorded in the registry as at 1 September 2016;
- (c) Annex I provides an overview of supported nationally appropriate mitigation actions outside the registry;
- (d) In 2016, the secretariat undertook a survey of the users of the registry in order to assess the status of the NAMA entries recorded in the NAMA registry and to collect feedback on the registry and its functionalities. The results of a survey of registry users undertaken in 2016 are included in annex II.

# II. Overview of the operation of the registry in 2016

## A. Participation in the registry

5. The user base of the registry continued to grow in 2016. As at 1 September 2016, 102 developing country Parties (approximately 67 per cent) have access rights as NAMA approvers, compared with 95 developing countries (about 63 per cent) in 2015.

<sup>&</sup>lt;sup>1</sup> Decision 1/CP.16, paragraph 53.

<sup>&</sup>lt;sup>2</sup> Decision 2/CP.17, paragraph 52(b).

<sup>&</sup>lt;sup>3</sup> Decision 2/CP.17, paragraph 53.

Furthermore, between 2015 and 2016, the number of support editors<sup>4</sup> increased from 26 to 31 and that of NAMA developers from 8 to 12.

- 6. The registry also continued to experience an increase in the number of NAMA entries submitted for recording. As at 1 September 2016, the registry contained a total of 136 NAMAs seeking support for preparation or implementation and for recognition. The recorded number of NAMAs in the registry increased by nearly 35 per cent in 2016 compared with 2015. The situation of NAMA increment for various regional groups was as follows:
  - (a) African States: increased by 78 per cent;
  - (b) Asia-Pacific States: increased by 41 per cent;
  - (c) Eastern European States: increased by 19 per cent;
  - (d) Latin American and Caribbean States: increased by 16 per cent;
  - (e) Small island developing States (SIDS): increased by 29 per cent;
  - (f) Least developed countries (LDCs): increased by 115 per cent.
- 7. Despite the fact that the number of submissions to the registry and the number of registry users have increased, the extent of users' participation in the registry, assessed by comparing the number of entries against the number of access rights that have been granted, remained low in 2016. Approximately 35 per cent of countries that have access rights as NAMA approvers have recorded their NAMAs in the registry. Similarly, the participation rate of support editors was low (roughly 58 per cent). Moreover, 16 out of 136 NAMA entries recorded information on financial, technology and capacity-building support received and provided.

#### B. Nationally appropriate mitigation action entries in the registry

- 8. Nearly half (64 entries, 47 per cent) of the recorded NAMAs are seeking support for preparation, while 63 entries (46 per cent) are seeking support for implementation and 9 entries (7 per cent) for recognition.
- 9. The recorded NAMA entries have managed to demonstrate a wide regional distribution. Latin American and Caribbean States have the most recorded NAMAs (32 per cent) closely followed by Asia-Pacific States (30 per cent) and African States (24 per cent). The substantial number of NAMA entries recorded by Asia-Pacific States, African States, SIDS and LDCs are particularly noteworthy.
- 10. The recorded NAMA entries were found to be diverse in nature considering the main sectors that are targeted by these NAMA entries and the technologies to be adopted.
- 11. The preferred type of action as indicated in the recorded NAMA entries was found to be developing and implementing national/sectoral policies or programmes with an aim of reducing greenhouse gas emissions in a particular sector. The developing countries also showed interest in attaining their national/sectoral goals and strategies through the implementation of NAMAs.
- 12. With regard to NAMAs seeking support for preparation, the survey revealed that of the 44 surveyed entries:
  - (a) Eight entries were already under implementation;

<sup>&</sup>lt;sup>4</sup> Support editors are developed country Parties and multilateral, bilateral or other organizations that provide support to NAMAs.

- (b) Ten entries were looking for support for implementation;
- (c) Two entries had already secured support for implementation;
- (d) Six entries were still under preparation;
- (e) Eighteen entries were still awaiting support for preparation.
- 13. With regard to NAMAs seeking support for implementation, the survey indicated that of the 21 surveyed NAMA entries:
- (a) Six entries were under implementation having secured domestic and international support;
- (b) Eleven entries were ready for implementation but had not received any international support;
  - (c) Three entries were undergoing further preparatory work;
  - (d) One entry decided not to pursue international support.

# C. Nationally appropriate mitigation action cost and support required

- 14. In 2016, the total estimated cost of all NAMA entries reached USD 22.76 billion, the majority of which was estimated for implementation (USD 22.6 billion).
- 15. A total of USD 8.23 billion of international support was being sought by all NAMA entries in 2016. Looking at the various types of international support sought, financial support continues to be the greatest share with USD 6.81 billion, followed by technological support (USD 1.38 billion) and capacity-building support (USD 38 million).
- 16. Most financial, technological and capacity-building support, in terms of monetary value, was being sought for the implementation of NAMAs, followed by the preparation of NAMAs.

#### D. Support available and provided

- 17. The number of entries on support in 2016 was unchanged from 2015. As at 1 September 2016, the registry contained 18 entries on support, the majority of which (13 entries) offered support only for the preparation of NAMAs in all regional groups.
- 18. Some support entries (16 per cent) specified the total amount of support available, adding up to USD 4.09 million.
- 19. A total of 16 entries on the matching of NAMAs with the available support within the registry was recorded, with the amount of support that has been matched to NAMAs amounting to USD 34.93 million. Some support-providing agencies, however, did not record information on the amount of support provided; hence, the actual support provided could be higher than that recorded in the registry.
- 20. The amount of support that has been provided to NAMAs, low-carbon and climate-resilience projects and that was recorded as support provided outside the registry accumulated to approximately USD 2.8 billion. The support was provided in the form of technical support, grants and concessional loans.

## E. Efforts of the secretariat to support users of the registry

- 21. Throughout 2016, while operating the registry, the secretariat managed to ensure: firstly, that the platform functions in accordance with the best technical standards; secondly, that users receive the support they need in order to record and access information; and finally, that the information in the registry is reliable.
- 22. The secretariat continued its efforts on engaging with and supporting Parties and entities in the effective and increased use of the registry by:
- (a) Providing the necessary assistance to individual NAMA proponents and support editors who sought assistance on recording their NAMAs and support entries in the registry;
- (b) Identifying potential sources of support and contacting them to explore support opportunities for developing countries in the preparation and implementation of their NAMAs. The focus was to increase the number of entries from support providers and on recording in the registry the matching of NAMAs with support available in the registry;
- (c) Organizing NAMA Market Place sessions at various events in order to initiate interaction among NAMA hosts and potential investors/support providers.<sup>5</sup> The developing countries that recorded NAMAs in the registry seeking support for preparation and implementation were invited to present their NAMAs in front of a panel of public and private investors. These sessions provided countries with invaluable feedback as to how best to design their NAMAs, making them more attractive to potential investors/supporters;
- (d) Organizing a technical briefing on the NAMA registry during sessions of the COP and the subsidiary bodies, with the aim of exchanging views on updated information on NAMAs and support for NAMAs in the registry. The briefing also intended to gather suggestions from Parties and entities for improving the registry and enhancing its use;<sup>6</sup>
- (e) Undertaking communication activities to raise the visibility of high-quality NAMAs recorded in the registry, including featuring them in the web-based platform NAMA News<sup>7</sup> and social media, and developing their NAMA profiles;<sup>8</sup>
- (f) Making up-to-date information on NAMAs and the registry available through the NAMA and registry website.<sup>9</sup>
- 23. In 2017, the secretariat will continue its ongoing efforts with a view to engaging with and supporting Parties and entities in the effective and increased use of the registry.

#### F. Challenges in the operation of the registry

24. According to its users, the registry is serving as a useful tool by which to exchange useful information and knowledge on the preparation and implementation of NAMAs, in order to showcase exemplary mitigation actions and to identify support sources. An increasing number of users since 2013 indicates that Parties and entities are keen to use the registry as a means to facilitate the design and implementation of NAMAs. However, as

6

<sup>5 &</sup>lt;a href="http://namanews.org/news/2016/06/21/africa-carbon-forum-turning-climate-challenges-into-opportunities/">http://namanews.org/news/2016/06/21/africa-carbon-forum-turning-climate-challenges-into-opportunities/</a>>.

<sup>&</sup>lt;sup>6</sup> <a href="http://unfccc.int/cooperation\_support/nama/items/9092.php">http://unfccc.int/cooperation\_support/nama/items/9092.php</a>.

<sup>&</sup>lt;sup>7</sup> <http://namanews.org/news/>.

<sup>&</sup>lt;sup>8</sup> <a href="https://facebook.com/namamarketplace">https://facebook.com/namamarketplace</a> and <a href="https://twitter.com/namamarketplace">https://twitter.com/namamarketplace</a> and <a href="https://twitter.com/namamarketplace</a> and <a href="https://twitter.com/namamarketplace</a> and <a href="https://twitter.com/namamarketplace

<sup>9 &</sup>lt;a href="http://unfccc.int/cooperation\_support/nama/items/7476.php">http://unfccc.int/cooperation\_support/nama/items/7476.php>.

documented in the 2015 report, the registry still faces the same challenges with regard to its effective use. 10

- 25. In order to further enhance the effectiveness of the registry, Parties and entities that could benefit from the registry may wish:
- (a) To realize the potential and usefulness of recording information in the registry, including: the exchange of knowledge, experiences and lessons learned; an overview of country context and support required; and the facilitation of matching of NAMAs with support;
- (b) To take the necessary actions in order to ensure that entries in the registry are accurate, complete and up to date;
- (c) To provide feedback and suggestions to the secretariat with a view to further improving the platform and increasing its use in 2017 and beyond;
- (d) To find ways of increasing their level of participation in the registry, including obtaining access rights and creating registry entries as follows:
  - (i) Developing country Parties may wish to decentralize the use of the registry by granting NAMA developer access rights to other agencies/organizations engaged in NAMA development and implementation in their countries;
  - (ii) Developing country Parties may wish to step up their efforts to record unilaterally implemented mitigation actions utilizing domestic resources for global recognition and knowledge- and experience-sharing;
  - (iii) Developed country Parties and the support agencies that have support programmes and/or have provided support for the preparation and implementation of NAMAs but have not yet used the registry are encouraged to record information in the registry;
  - (iv) Support providers may also wish to encourage recipient countries to record information on mitigation actions and support received, and to share their experience.

# III. Analysis of information relating to the operation of the registry

- 26. The analysis of information relating to the operation of the registry is divided into the following two main categories:
  - (a) Level of participation in the registry;
- (b) NAMA entries, the support available for NAMAs and the matching of NAMAs with the support sources recorded in the registry.
- 27. When considering the information contained in this document, Parties and other stakeholders may wish to take note of the following:
- (a) The report takes into account the information recorded as at 1 September 2016;
- (b) Each NAMA entry contains information developed independently by the NAMA proponent using self-determined assumptions, standards and methodologies;

7

<sup>&</sup>lt;sup>10</sup> FCCC/CP/2015/INF.2, paragraph 11.

therefore, the results of the analysis should be seen as approximate whenever sums or averages are presented;

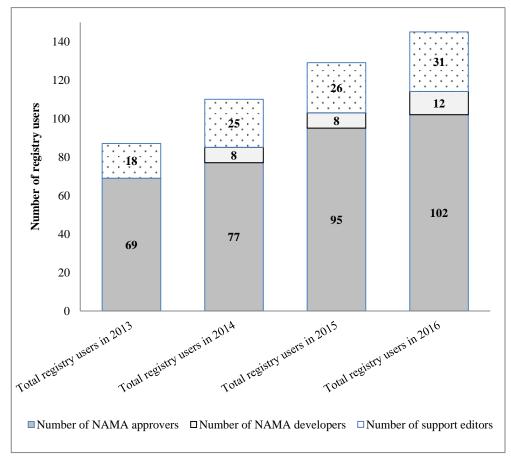
- (c) For ease of comparison, all financial figures have been converted into United States dollars using the exchange rates available at the time of recording entries in the registry; these conversions are approximate owing to exchange rate fluctuations;
- (d) As not all registry entries are complete, some of the analyses are based on a sample size smaller than the total number of NAMAs submitted. For this reason, the conclusions drawn are not necessarily representative of the complete set of NAMAs;
- (e) Some entries have been in the registry for quite some time; hence, some recorded information may be out of date.

# A. Participation in the registry

#### 1. Overview of the distribution of access rights

28. As at 1 September 2016, 145 access rights have been distributed, compared with 129 in the previous year. This represents an increase of 12 per cent in the number of registry users. In 2016, 16 new registry users were granted access rights. Figure 1 provides a comparison of the number of registry users from 1 September 2013 to 1 September 2016.

Figure 1 Comparison of the number of registry users from 2013 to 2016

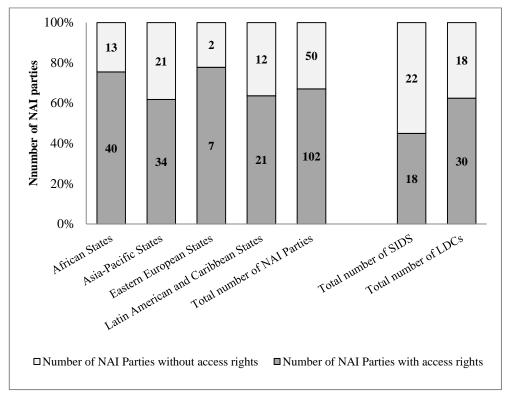


Abbreviation: NAMA = nationally appropriate mitigation action.

29. Out of the 152 developing country Parties eligible to record NAMA entries in the registry, 102 (approximately 67 per cent) now have access rights for the use of the registry. Figure 2 shows the distribution of developing country Parties with and without access rights by regional group, as well as the number of SIDS and LDCs with and without access rights.

Figure 2

Registry participation: nationally appropriate mitigation action approver access rights by regional group in 2016



*Abbreviations*: LDCs = least developed countries, NAI Parties = Parties not included in Annex I to the Convention, SIDS = small island developing States.

- 30. The number of NAMA developers in 2016 is 12, which is an increase from 8 in 2015. Parties may consider granting NAMA developer access rights to entities that are engaged in NAMA design and implementation.
- 31. The secretariat granted access rights to five support editors in 2016. This brings the total access rights granted to support editors to 31.

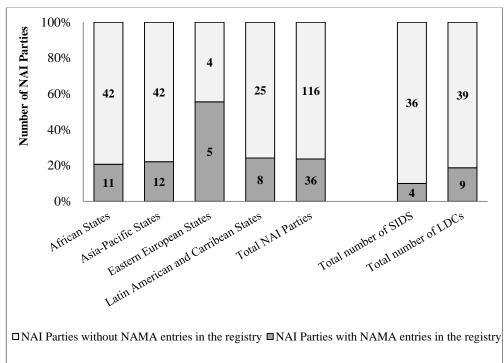
# 2. Registry participation as indicated by nationally appropriate mitigation action and support entries

- 32. Out of the 102 developing countries that have access rights for the use of the registry, 36 (approximately 35 per cent) have recorded their NAMAs in the registry. This figure is up from 28 per cent in 2015.
- 33. In 2016, roughly 58 per cent of support editors recorded information on the support available for their NAMAs, as compared with 69 per cent in 2015.
- 34. Figure 3 shows a different measure of participation in the registry: the number of Parties not included in Annex I to the Convention (non-Annex I Parties) that have created

entries in the registry. Each Party, participating or not, is counted as one entity and the number of entries recorded for a Party is disregarded.

35. In most regions, less than 25 per cent of non-Annex I Parties have recorded NAMAs in the registry, with the exception of Eastern European States (five entries, 56 per cent). This region is followed by Latin American and Caribbean States (eight entries, 24 per cent), Asia-Pacific States (12 entries, 22 per cent) and African States (11 entries, 21 per cent). The participation rates overall for non-Annex I Parties, SIDS and LDCs are 24, 10 and 19 per cent, respectively.

Figure 3 **Registry participation (registry entries) in 2016** 



Abbreviations: LDCs = least developed countries, NAI Parties = Parties not included in Annex I to the Convention, NAMA = nationally appropriate mitigation action, SIDS = small island developing States.

# B. Entries in the registry of nationally appropriate mitigation actions and entries on support for them

## 1. Entries of nationally appropriate mitigation actions

36. In 2016, the registry continued to experience an increase in the number of NAMA entries. The registry currently contains a total of 136 NAMAs submitted by 36 developing countries as compared with 101 NAMA entries in 2015, representing an increase of approximately 35 per cent. Similarly, the entries of NAMAs seeking support for implementation, NAMAs seeking support for preparation and NAMAs for recognition increased by 24 per cent, 49 per cent and 29 per cent, respectively, in 2016, compared with 2015. Figure 4 illustrates the increase in activity in the registry in 2016, compared with 2013, 2014 and 2015.

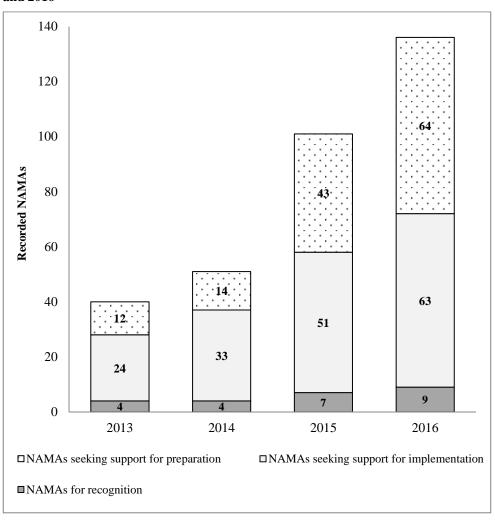


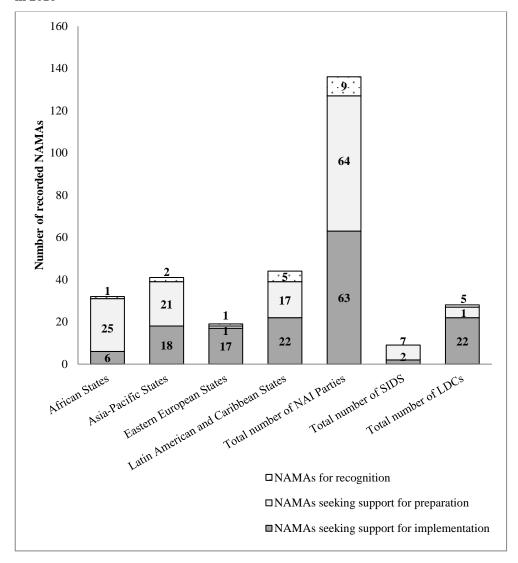
Figure 4
Registry entries by nationally appropriate mitigation action type in 2013, 2014, 2015
and 2016

Nationally appropriate mitigation action entries by type and regional group

- 37. As at 1 September 2016, nearly half (64 entries, 47 per cent) of the total recorded NAMAs were seeking support for preparation, while 63 entries (46 per cent) were seeking support for implementation and 9 entries (7 per cent) for recognition.
- 38. Similar to previous years, Latin American and Caribbean States recorded most of the NAMA entries. As at 1 September 2016, the region has 44 NAMA entries (32 per cent), 17 of which were seeking support for preparation, while 22 were seeking support for implementation. Latin American and Caribbean States are closely followed by Asia-Pacific States (41 entries, 30 per cent), while the remaining entries are distributed between African States (32 entries, 24 per cent) and Eastern European States (19 entries, 14 per cent). All regions have recorded all three categories of NAMA. As in earlier years, it is evident that there is a wide geographical distribution of recorded NAMAs. In particular, the NAMAs recorded by Asia-Pacific States, African States, SIDS and LDCs are notable. LDCs recorded approximately 21 per cent (5 entries seeking support for preparation, 22 entries seeking support for implementation and 1 for recognition) of the total NAMAs recorded,

while SIDS recorded 7 per cent (7 entries seeking support for preparation and 2 for implementation). Figure 5 illustrates the distribution of NAMA entries by regional group, as well as entries from SIDS and LDCs.

 $Figure \ 5 \\ \textbf{Distribution of nationally appropriate mitigation action categories by regional group in 2016}$ 



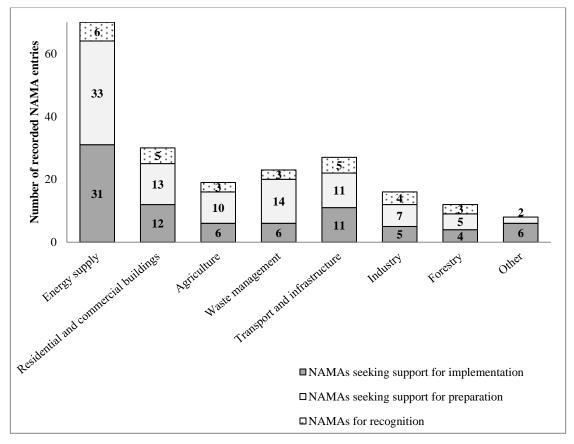
Abbreviations: LDCs = least developed countries, NAI Parties = Parties not included in Annex I to the Convention, NAMAs = nationally appropriate mitigation actions, SIDS = small island developing States.

39. The number of NAMA entries in 2016 compared with 2015 increased the most for African States (78 per cent), followed by Asia-Pacific States (41 per cent increase), Eastern European States (19 per cent increase) and Latin American and Caribbean States (16 per cent increase).

Nationally appropriate mitigation action entries by sector technology and type of action<sup>11</sup>

40. As in previous years, the main sectors that are targeted by NAMAs include energy supply (70 entries, 34 per cent), followed by residential and commercial buildings (30 entries, 15 per cent) and transport and infrastructure (27 entries, 13 per cent). The recorded NAMAs also cover waste management (23 entries, 11 per cent), agriculture (19 entries, 9 per cent), industry (16 entries, 8 per cent) and forestry (12 entries, 6 per cent). The number of NAMA entries covering the residential and commercial buildings, transport and infrastructure, waste management, agriculture and forestry sectors is particularly noteworthy as it diversified and expanded sectoral coverage. Figure 6 shows the distribution of NAMA entries by sector.

Figure 6
Distribution of nationally appropriate mitigation actions by sector in 2016



Abbreviation: NAMA = nationally appropriate mitigation action.

41. A total of 129 NAMA entries (94 per cent of all recorded NAMAs) identified an applicable technology. Figure 7 presents the distribution of NAMAs by identified technology.

Note that more than one sector, technology and type of action can be selected per NAMA entry.

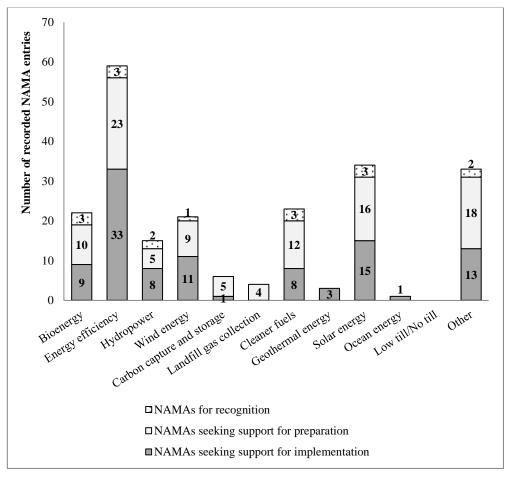


Figure 7
Characterization of nationally appropriate mitigation action by technology in 2016

- 42. The NAMAs targeting the energy sector mainly focus on energy efficiency, solar energy, bioenergy, cleaner fuels, wind energy and hydropower. In the reporting period, energy efficiency is the technology specified in the largest number of NAMA entries (59 entries, 27 per cent), followed by solar energy (34 entries, 15 per cent), cleaner fuels (23 entries, 10 per cent) and bioenergy (22 entries, 10 per cent).
- 43. The recorded NAMA entries cover a wide range of actions. In 2016, the majority of NAMAs (91 entries, 39 per cent) intend to implement national/sectoral policies or programmes for climate change mitigation actions, followed by national/sectoral goals (52 entries, 22 per cent), investments in infrastructure (41 entries, 17 per cent) and strategy (25 entries, 11 per cent). Figure 8 provides a summary of the types of action specified in NAMA entries.

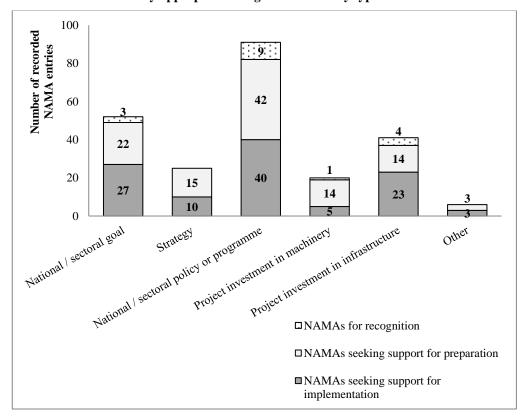


Figure 8

Distribution of nationally appropriate mitigation actions by type of action in 2016

Greenhouse gas coverage and emission reductions

- 44. More than two thirds of the NAMA entries (113 entries, 83 per cent) specified the greenhouse gases they cover. Carbon dioxide is covered by the majority of NAMA entries (107 entries, 60 per cent), followed by methane (38 entries, 21 per cent) and nitrous oxide (21 entries, 12 per cent).
- 45. A total of 41 entries (57 per cent) indicated emission reductions in millions of tonnes of carbon dioxide equivalent (Mt CO<sub>2</sub> eq) and 31 entries (43 per cent) specified Mt CO<sub>2</sub> eq per year. <sup>12</sup>
- 46. An estimation of the total emission reductions reflected in the registry (e.g. a sum of the data from all the entries) is not possible at this stage owing to the use of different standards, indicators and time frames, as well as to certain other issues. However, the following can be said about the estimated reductions:
- (a) NAMAs seeking support for implementation: total emission reductions range from 0.012 Mt CO<sub>2</sub> eq to 99 Mt CO<sub>2</sub> eq; annual emission reductions range from 0.000228 Mt CO<sub>2</sub> eq per year to 7.8 Mt CO<sub>2</sub> eq per year;
- (b) NAMAs for recognition: total emission reductions range from  $10.8 \text{ Mt CO}_2$  eq to  $113.34 \text{ Mt CO}_2$  eq; annual emission reductions range from  $0.275 \text{ Mt CO}_2$  eq per year to  $622 \text{ Mt CO}_2$  eq per year.

Percentages are based on the 72 implementation and recognition NAMAs recorded in the registry.

#### Time frames

47. Entries on preparation range from 3 to 84 months (median of 12 months), entries on implementation from 1 to 30 months (median of 5 months) and on recognition from 2 to 30 months (median of 9 months).

Total cost of nationally appropriate mitigation actions

- 48. Table 1 summarizes information on the total cost of NAMAs by type and regional group. A total of 124 entries (91 per cent) specified the total cost involved.
- 49. As noted in paragraph 27 above, it is difficult to sum up the data provided in different entries owing to the use of different assumptions, methods and standards, and these values should be treated as estimates. In addition to the information provided in table 1, the following can be stated:
- (a) In 2016, the total costs of preparation range from USD 60,000 to USD 20 million per NAMA;
- (b) In 2016, the total costs of implementation range from USD 70,000 to USD 6.2 billion per NAMA.

Table 1

Total cost of nationally appropriate mitigation actions by type and regional group in 2016

|                                          | Estimated full cost (USD)  |
|------------------------------------------|----------------------------|
| NAMAs seeking support for preparation    |                            |
| African States                           | 16 308 000                 |
| Asia-Pacific States                      | 112 469 835                |
| Eastern European States                  | 100 000                    |
| Latin American and Caribbean States      | 10 853 000                 |
| Subtotal                                 | 139 730 835                |
| NAMAs seeking support for implementation |                            |
| African States                           | 4 995 882 000              |
| Asia-Pacific States                      | 3 268 391 178              |
| Eastern European States                  | 2 822 289 634              |
| Latin American and Caribbean States      | 11 517 217 651             |
| Subtotal                                 | 22 603 780 463             |
| Other NAMAs – for recognition            |                            |
| African States                           | No entries for this region |
| Asia-Pacific States                      | No entries for this region |
| Eastern European States                  | 1 000 000                  |
| Latin American and Caribbean States      | 20 036 500                 |
| Subtotal                                 | 21 036 500                 |
| Total                                    | 22 764 547 798             |

Abbreviation: NAMA = nationally appropriate mitigation action.

- 50. In 2016, the sum of the estimated full cost of all types of NAMA is approximately USD 22.76 billion, compared with USD 15.44 billion in 2015, representing a 47 per cent increase, which is distributed as follows:
  - (a) NAMAs seeking support for implementation: USD 22.6 billion;
  - (b) NAMAs seeking support for preparation: USD 139 million;
  - (c) NAMAs for recognition: USD 21 million.

Incremental cost of nationally appropriate mitigation actions

51. A total of 20 entries (32 per cent) provided information on the incremental cost of NAMAs, all of which were NAMAs recorded for implementation and which had incremental costs ranging from USD 0.2 million to USD 1.3 billion, with an average of USD 158.75 million.

Support sought for nationally appropriate mitigation actions

- 52. Out of all the NAMA entries seeking support, 124 (53 per cent) specified financial support, 33 entries (14 per cent) technology support and 75 entries (32 per cent) capacity-building support.
- 53. Table 2 provides a summary of support being sought under each category and by regional group. As noted at the beginning of this chapter, the values in this table have been estimated.

Table 2 Support sought for nationally appropriate mitigation actions by type and grouping in 2016

| UNFCCC regional group by<br>NAMA category | Sum of financial support (USD) | Sum of technology support (USD) | Sum of capacity-building support (USD) |
|-------------------------------------------|--------------------------------|---------------------------------|----------------------------------------|
| NAMAs seeking support for preparation     | 103 442 835                    | 36 320 000                      | 3 430 000                              |
| African States                            | 13 798 000                     | 1 580 000                       | 1 880 000                              |
| Asia-Pacific States                       | 80 654 835                     | 33 940 000                      | 800 000                                |
| Eastern European States                   | 100 000                        | No entries for this region      | No entries for this region             |
| Latin American and<br>Caribbean States    | 8 890 000                      | 800 000                         | 750 000                                |
| NAMAs seeking support for implementation  | 6 712 559 955                  | 1 343 762 603                   | 35 131 604                             |
| African States                            | 1 014 511 000                  | 200 000                         | 4 469 000                              |
| Asia-Pacific States                       | 974 368 016                    | 32 250 000                      | 26 479 604                             |
| Eastern European States                   | 2 550 782 000                  | 1 101 800 000                   | 920 000                                |
| Latin American and<br>Caribbean States    | 2 172 898 939                  | 209 512 603                     | 3 263 000                              |
| Total                                     | 6 816 002 790                  | 1 380 082 603                   | 38 561 604                             |

Abbreviation: NAMA = nationally appropriate mitigation action.

Financial support sought for nationally appropriate mitigation actions

54. As indicated in table 2 above, in 2016, a total of USD 6.8 billion of financial support is being sought by the proponents of these NAMAs, representing a 4 per cent increase compared with USD 6.5 billion in 2015. Most financial support is being sought for the

implementation of NAMAs (USD 6.71 billion), followed by the preparation of NAMAs (USD 100 million).

- 55. In the case of NAMAs seeking support for preparation, most financial support is being sought by Asia-Pacific States (USD 80 million), followed by African States (USD 13 million) and Latin American and Caribbean States (USD 8 million). Most financial support for the implementation of NAMAs is being sought by Eastern European States (USD 2.55 billion), followed by Latin American and Caribbean States (USD 2.17 billion), African States (USD 1.01 billion) and Asia-Pacific States (USD 0.97 billion).
- 56. Table 3 shows the range of financial support sought for the implementation and preparation of NAMAs.

Table 3

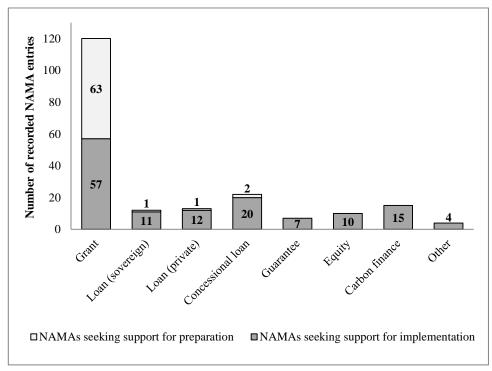
Financial support sought for nationally appropriate mitigation actions in 2016

|                |                 | Range ( | USD)        |               |
|----------------|-----------------|---------|-------------|---------------|
| NAMA category  | Number of NAMAs | Minimum | Maximum     | Total (USD)   |
| Preparation    | 59              | 40 000  | 19 657 335  | 103 442 835   |
| Implementation | 60              | 70 000  | 954 000 000 | 6 712 559 955 |

Abbreviation: NAMA = nationally appropriate mitigation action.

57. In 2016, the most sought type of financial support is grants (120 entries), followed by concessional loans (22 entries), carbon finance (15 entries) and private loans (13 entries). Figure 9 summarizes the type of financial support sought for NAMAs.

Figure 9 **Type of financial support sought for nationally appropriate mitigation actions in 2016** 



Abbreviation: NAMA = nationally appropriate mitigation action.

Technology support sought for nationally appropriate mitigation actions

- 58. As is indicated in table 2 above, in 2016, a total of USD 1.38 billion of technology support is being sought by the proponents of NAMAs compared with USD 1.34 billion in 2015. Most technology support is being sought for the implementation of NAMAs (USD 1.344 billion), followed by the preparation of NAMAs (USD 36 million).
- 59. For the preparation of NAMAs, most technology support is being sought by Asia-Pacific States (USD 33 million), followed by African States (USD 1.58 million) and Latin American and Caribbean States (USD 0.8 million). Eastern European States did not specify the technology support required. In the case of NAMAs seeking support for implementation, most technology support is being sought by Eastern European States (USD 1.1 billion), followed by Latin American and Caribbean States (USD 209 million), Asia-Pacific States (USD 32 million) and African States (USD 0.2 million). Table 4 shows the range of technology support sought for implementation and preparation of NAMAs.

Table 4

Technology support sought for nationally appropriate mitigation actions in 2016

|                |                 | Range   |             |               |
|----------------|-----------------|---------|-------------|---------------|
| NAMA category  | Number of NAMAs | Minimum | Maximum     | Total (USD)   |
| Preparation    | 18              | 20 000  | 9 058 000   | 36 320 000    |
| Implementation | 15              | 125 290 | 954 000 000 | 1 343 762 603 |

Abbreviation: NAMA = nationally appropriate mitigation action.

Capacity-building support sought for nationally appropriate mitigation actions

- 60. As indicated in table 2 above, in 2016, USD 38.56 million of capacity-building support is being sought by the proponents of NAMAs. The majority of the support is being sought for the implementation of NAMAs (USD 35.13 million), followed by the preparation of NAMAs (USD 3.43 million).
- 61. In the case of NAMAs seeking support for preparation, most capacity-building support is being sought by African States (USD 1.88 million), followed by Asia-Pacific States (USD 0.8 million) and Latin American and Caribbean States (USD 0.75 million); Eastern European States did not specify capacity-building support. For the implementation of NAMAs, most support is being sought by Asia-Pacific States (USD 26 million), followed by African States (USD 4.46 million), Latin American and Caribbean States (USD 3.26 million) and Eastern European States (USD 0.92 million). Table 5 shows the range of capacity-building support sought for the implementation and preparation of NAMAs.

Table 5

Capacity-building support sought for nationally appropriate mitigation actions in 2016

|                |                 | Range   | (USD)      |             |
|----------------|-----------------|---------|------------|-------------|
| NAMA category  | Number of NAMAs | Minimum | Maximum    | Total (USD) |
| Preparation    | 19              | 50 000  | 700 000    | 3 430 000   |
| Implementation | 15              | 20 000  | 10 000 000 | 35 131 604  |

Abbreviation: NAMA = nationally appropriate mitigation action.

62. Figure 10 illustrates the type of capacity-building support sought. Such support for the preparation and implementation of NAMAs is most commonly sought at the institutional level, followed by the individual and systemic levels.

actions in 2016

| The second of the second

Figure 10 **Type of capacity-building support sought for nationally appropriate mitigation actions in 2016** 

#### 2. Entries on support

63. In 2016, the number of entries on support did not change compared with 2015. As at 1 September 2016, the registry contained a total of 18 entries on support.<sup>13</sup>

■NAMAs seeking support for implementation □NAMAs seeking support for preparation

Systemic level

Other

# 3. Entries on the matching of nationally appropriate mitigation actions with support sources

Institutional level

Support received within the registry

Individual level

- 64. During the reporting period, the registry recorded 2 additional entries on the matching of NAMAs with support sources within the registry, making a total of 16 entries on supported NAMAs, compared with 14 entries in 2015. Out of the 16 supported NAMAs, 8 received support for preparation whereas 8 received support for implementation.
- 65. Table 6 provides an overview of the matching of NAMAs with support sources within the registry. The amount of support that has been matched to NAMAs amounts to USD 34.93 million compared with USD 34.78 million in 2015. Most financial support is provided for the implementation of NAMAs (USD 28.5 million), followed by the preparation of NAMAs (USD 6.43 million). Some support-providing agencies did not mention information on the amount of support provided; hence, the actual support provided could be higher than that recorded in the registry.

20

<sup>&</sup>lt;sup>13</sup> For further details of entries on support, see document FCCC/CP/2015/INF.2, paragraph 62–75.

Table 6 **Overview of supported nationally appropriate mitigation action in the registry in 2016** 

| Origin                        | Support source                                                                                                     | NAMA                                                                                                                             | Party      | Type of support                                      | Amount of support<br>(USD) |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------|----------------------------|
| Austria                       | Support for<br>activities related<br>to the sustainable<br>management of<br>forests (S-99)                         | Adaptive sustainable<br>forest management in<br>Borjomi-Bakuriani<br>Forest District (NS-85)                                     | Georgia    | Financial                                            | 1 940 492                  |
| International                 | GEF Trust Fund<br>(S-63)                                                                                           | NAMAs for<br>low-carbon end-use<br>sectors in Azerbaijan<br>(NS-95)                                                              | Azerbaijan | Financial                                            | 100 000                    |
| International                 | GEF Trust Fund<br>(S-63)                                                                                           | NAMAs for<br>low-carbon urban<br>development in<br>Kazakhstan (NS-124)                                                           | Kazakhstan | Financial                                            | 5 930 000                  |
| Japan                         | Official development assistance for climate change measures (S-122)                                                | Expansion of existing<br>heating network in<br>Valjevo (NS-31)                                                                   | Serbia     | Technical                                            | 960 000                    |
| Japan                         | Official<br>development<br>assistance for<br>climate change<br>measures<br>(S-122)                                 | Introduction of a metering system and billing on the basis of measured consumption in district heating systems in Serbia (NS-32) | Serbia     | Capacity-<br>building                                |                            |
| Japan                         | Official development assistance for climate change measures (S-122)                                                | Use of solar energy for<br>domestic hot water<br>production in the Cerak<br>heat plant in Belgrade<br>(NS-33)                    | Serbia     | Capacity-<br>building                                |                            |
| Spain                         | Spanish NAMA<br>platform (S-143)                                                                                   | High Integration<br>Program of Wind<br>Energy (NS-4)                                                                             | Uruguay    | Financial,<br>technical and<br>capacity-<br>building |                            |
| Germany,<br>United<br>Kingdom | NAMA Facility<br>(S-62)                                                                                            | Colombia TOD<br>NAMA (NS-127)                                                                                                    | Colombia   | Financial                                            | 18 500 000                 |
| International                 | IDB – support for<br>the design,<br>development and<br>implementation<br>of NAMAs in the<br>LAC region (S-<br>130) | NAMA low-carbon coffee Costa Rica                                                                                                | Costa Rica | Financial                                            |                            |

| Origin                                                          | Support source             | NAMA                                                                                              | Party                                  | Type of support                                          | Amount of support (USD) |
|-----------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------------------------|-------------------------|
| Australia                                                       | UNDP MDG<br>carbon (S-186) | Rural development in<br>Namibia through<br>electrification with<br>renewable energies<br>(NS-196) | Namibia                                | Financial,<br>capacity-<br>building,<br>technological    | 70 000                  |
| Denmark,<br>European<br>Union,<br>Germany,<br>United<br>Kingdom | NAMA Facility<br>(S-62)    | Thailand refrigeration<br>and air-conditioning<br>NAMA (NS-198)                                   | Thailand                               | Financial                                                | 120 879                 |
| International                                                   | GEF Trust Fund<br>(S-63)   | Development of a feed-<br>in tariff NAMA for<br>renewable energy (NS-<br>121)                     | Sudan                                  | Financial                                                | 3 500 000               |
| Australia                                                       | UNDP MDG<br>carbon (S-186) | Rural electrification<br>with renewable energy<br>in the Gambia (NS-199)                          | Gambia                                 | Financial                                                | 60 000                  |
| International                                                   | GEF Trust Fund (S-93)      | NAMA support for the<br>Tunisian solar plan<br>(NS-201)                                           | Tunisia                                | Financial                                                | 3 600 000               |
| Australia                                                       | UNDP MDG<br>carbon (S-186) | NAMA for rural<br>development in the Lao<br>People's Democratic<br>Republic (NS-227)              | Lao People's<br>Democratic<br>Republic | Financial,<br>capacity-<br>building and<br>technological | 70 000                  |
| Australia                                                       | UNDP MDG<br>carbon (S-186) | Rural electrification in<br>Vanuatu (NS-227)                                                      | Vanuatu                                | Financial,<br>capacity-<br>building and<br>technological | 81 000                  |

Abbreviations: GEF = Global Environment Facility, IDB = Inter-American Development Bank, LAC = Latin America and the Caribbean, NAMA = nationally appropriate mitigation action, NS = code for NAMA seeking support, S = code for an entry on support, TOD = transit-oriented development, UNDP MDG = United Nations Development Programme Millennium Development Goal.

- 66. The supported NAMAs were found to be equally distributed among different regional groups. Similarly, the provided support also equally aimed at NAMAs seeking support for preparation and implementation. Figure 11 provides a summary of the supported NAMAs by type of NAMA and regional group.
- 67. The provided support mainly focused on providing financial support for the preparation and implementation of NAMAs. Financial support was provided for 10 NAMAs out of 16 supported NAMAs, followed by capacity-building support (2 NAMAs) and technological support (1 NAMA). For three NAMAs, all the three types of support were provided.

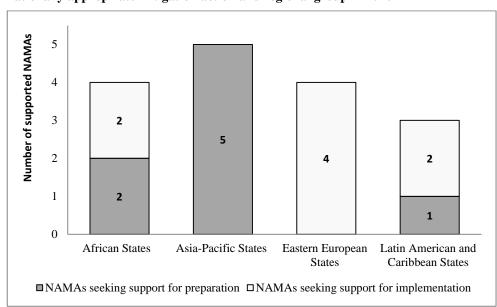


Figure 11 Characterization of the supported nationally appropriate mitigation actions by type of nationally appropriate mitigation action and regional group in 2016

68. Most of the support was provided to those NAMAs that identified energy supply as an applicable sector (11 entries), followed by residential and commercial buildings (7 entries) and transport and infrastructure (3 entries). Figure 12 summarizes the distribution of supported NAMAs by sector.

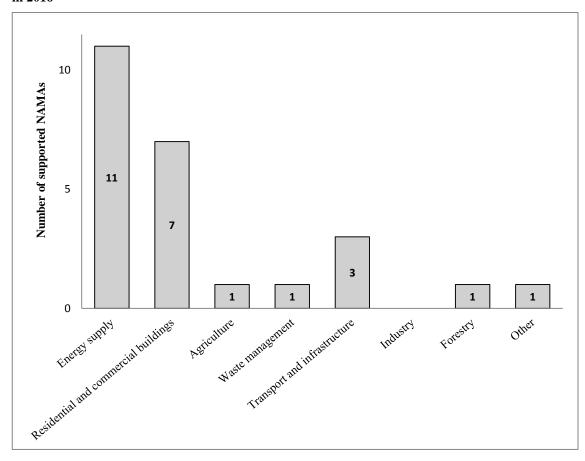


Figure 12 Characterization of the supported nationally appropriate mitigation actions by sector in 2016

69. Most of the supported NAMAs were aimed at national/sectoral policies and programmes (7 entries) and national/sectoral goals (7 entries), followed by project investment in infrastructures (3 entries). Figure 13 summarizes the type of action specified within the supported NAMAs.

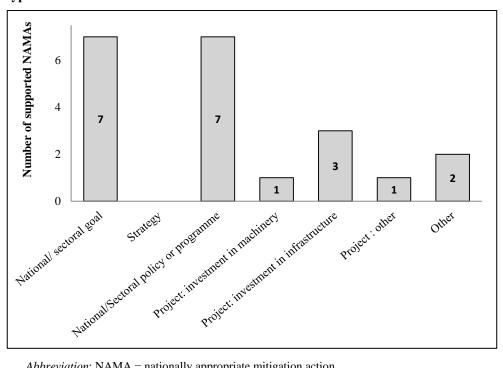


Figure 13 Characterization of the supported nationally appropriate mitigation actions by action type in 2016

70. Wind energy (six entries) and solar energy (six entries), followed by energy efficiency (five entries), hydropower (four entries) and bioenergy (three entries) were the most commonly used technologies by the supported NAMAs. Figure 14 highlights the types of technology adopted by the supported NAMAs.

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Figure 14 Characterization of the supported nationally appropriate mitigation actions by type of technology in 2016

#### Support received outside the registry

71. The registry also allows users to enter information on support provided to a NAMA or received from the support source that are not listed in the registry, as support received "outside the registry". Based on the recorded information in the registry, the support provided to NAMAs and climate change mitigation actions recorded as "outside the registry" accumulates to approximately USD 2.8 billion. All the support-providing agencies did not mention information on the amount of support provided outside the registry; hence, the actual support provided could be higher than that recorded in the registry. Annex I provides an overview of the matching of NAMAs with support sources outside the registry.

Annex I

Overview of supported nationally appropriate mitigation actions outside the registry

|                                                                            |                                                                           |            |                 | Amount of support |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------|------------|-----------------|-------------------|
| Support source                                                             | NAMA                                                                      | Party      | Type of support | (USD million)     |
| NAMA Facility<br>(S-62)                                                    | Implementation of the new housing NAMA                                    | Mexico     | Financial       | 15.6              |
|                                                                            | Sustainable urban transport programme                                     | Indonesia  | Financial       | 15.6              |
|                                                                            | Chilean self-supply renewable energy NAMA                                 | Chile      | Financial       | 3.34              |
|                                                                            | Costa Rican low-carbon NAMA                                               | Costa Rica | Financial       | 7.8               |
|                                                                            | Sustainable urban transport NAMA                                          | Peru       | Financial       | 10                |
|                                                                            | Refrigeration and air-conditioning NAMA                                   | Thailand   | Financial       | 16.8              |
| KfW                                                                        | Sustainable urban transport NAMA                                          | Peru       | Financial       | 390               |
| EU-Latin American<br>Investment<br>Infrastructure Facility                 |                                                                           |            | Financial       | 9                 |
| World Bank                                                                 |                                                                           |            | Financial       | 300               |
| Andean Development<br>Corporation—<br>Development Bank of<br>Latin America |                                                                           |            | Financial       | 750               |
| Inter-American<br>Development Bank                                         |                                                                           |            | Financial       | 300               |
| EU–Africa<br>Infrastructure Trust<br>Fund                                  | Various mitigation actions in different countries                         |            | Financial       | 429               |
| Neighbourhood<br>Investment Facility                                       | Various low-carbon and climate resilience projects in different countries |            | Financial       | 370               |
| Latin America<br>Investment Facility                                       | Various climate change initiatives in different countries                 |            | Financial       | 178               |
| GEF Trust Fund (S-63)                                                      | NAMAs for low-carbon urban<br>development in Kazakhstan<br>(NS-124)       | Kazakhstan | Financial       | 0.14              |

|                                                                                |                                                                                                                                                                         |                           |                 | Amount of                       |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------|---------------------------------|
| Support source                                                                 | NAMA                                                                                                                                                                    | Party                     | Type of support | Amount of support (USD million) |
| Low-emission capacity-building programme                                       | Detailed study of a sustainable NAMA financing mechanism for reactivating renewable energy based on clean development mechanism project activities in Malaysia (NS-203) | Malaysia                  | Financial       |                                 |
|                                                                                | Support to the integrated e-waste management system for the state of Sabah (NS-202)                                                                                     | Malaysia                  | Financial       |                                 |
| University of Banja<br>Luka and the<br>Government of the<br>Republic of Srpska | Sustainable and energy-efficient<br>building of the Faculty of<br>Architecture, Civil Engineering and<br>Geodesy<br>(NS-220)                                            | Bosnia and<br>Herzegovina | Financial       | 3.23                            |
| Andean Development<br>Corporation—<br>Development Bank of<br>Latin America     | NAMA for the domestic refrigeration sector (NS-218)                                                                                                                     | Colombia                  | Technical       |                                 |
| Germany                                                                        |                                                                                                                                                                         |                           | Financial       |                                 |
| Latin American<br>Energy Organization                                          | Energy with renewable sources in<br>non-interconnected areas<br>(NS-222)                                                                                                | Colombia                  | Technical       |                                 |
| International Centre<br>for Tropical<br>Agriculture                            | Sustainable bovine livestock (NS-225)                                                                                                                                   | Colombia                  | Technical       |                                 |
| Centre for Research<br>on Sustainable<br>Farming Systems                       |                                                                                                                                                                         |                           |                 |                                 |
| Colombian<br>sustainable livestock<br>project                                  |                                                                                                                                                                         |                           |                 |                                 |
| Low-emission capacity-building programme                                       |                                                                                                                                                                         |                           |                 |                                 |
| Mitigation action<br>plans and scenarios<br>programme                          |                                                                                                                                                                         |                           |                 |                                 |
| GEF Trust Fund (S-63)                                                          | Nationally appropriate mitigation<br>actions in the construction sector in<br>Mongolia<br>(NS-242)                                                                      | Mongolia                  | Financial       | 0.109                           |

|                                                                                                  |                                                                                                                                                          |                       |                         | Amount of support |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------|-------------------|
| Support source                                                                                   | NAMA                                                                                                                                                     | Party                 | Type of support         | (USD million)     |
| Joint Crediting<br>Mechanism of Japan                                                            | National energy-efficient lighting programme (NS-90)                                                                                                     | Mongolia              | Technical               |                   |
| Germany                                                                                          | NAMA in the cement/co-processing<br>and waste sectors<br>(NS-52)                                                                                         | Dominican<br>Republic | Financial               | 4.97              |
| UNDP                                                                                             | Reducing greenhouse gas emissions in pig farms (NS-149)                                                                                                  | Dominican<br>Republic | Financial               | 0.06              |
| Embassy of the<br>United Kingdom of<br>Great Britain and<br>Northern Ireland in<br>Mexico        | Emission reduction actions program<br>in natural gas processing, transport<br>and distribution system, through<br>fugitive emission reduction<br>(NS-68) | Mexico                | Financial               | 0.065             |
| Germany                                                                                          | Low-emission schools (NS-170)                                                                                                                            | Mexico                | Financial               | 0.315             |
| United Kingdom                                                                                   |                                                                                                                                                          |                       | Financial               | 0.118             |
| Prosperity Fund,<br>Embassy of the<br>United Kingdom of<br>Great Britain and<br>Northern Ireland | Santiago transport green zone (NS-126)                                                                                                                   | Chile                 | Financial               | 0.084             |
| Inter-American<br>Development Bank                                                               |                                                                                                                                                          |                       | Financial               | 0.03              |
| UNDP                                                                                             | Energy-efficient public buildings and housing (NS-144)                                                                                                   | Armenia               | Technical               |                   |
| Deutsche Gesellschaf<br>für Internationale<br>Zusammenarbeit                                     | t                                                                                                                                                        |                       | Technical               |                   |
| Germany                                                                                          | Energy-efficient refurbishment in the Georgian public building sector (NS-228)                                                                           | Georgia               | Technical and financial |                   |

*Note*: Based on the recorded information on amount of support provided outside the registry by the registry users.

 $\label{eq:Abbreviations: EU = European Union, GEF = Global Environment Facility, NAMA = nationally appropriate mitigation action, NS = code for NAMA seeking support, S = code for an entry on support, UNDP = United Nations Development Programme.$ 

#### Annex II

# Findings of a survey of the users of the registry of nationally appropriate mitigation actions

- 1. In 2016, the secretariat undertook a survey of the users of the nationally appropriate mitigation actions (NAMAs) registry in order to assess the status of the information included in the NAMA registry and to offer support to users in updating information on the platform. The specific objectives of the survey were to: (1) obtain information regarding the current status of the entries recorded in the registry; (2) gather the information required to maintain an up-to-date registry; and (3) collect feedback on the registry and its functionalities.
- 2. The survey was carried out by conducting a telephone or Skype interview with the registry users who have recorded information on NAMAs. The secretariat contacted all focal points for 136 NAMA entries; however, just 65 of them (48 per cent) were available for interview. The survey includes 44 entries seeking support for preparation and 21 entries seeking support for implementation.

Status of the surveyed entries

3. Tables 7 and 8 provide an overview of the current status of the surveyed NAMAs.

Table 7

Information on nationally appropriate mitigation actions seeking support for preparation in 2016

| NAMA                                                                                           | Status                                                  | Comments                                                                                                          |
|------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| NAMAs for the low-carbon end-use<br>sectors in Azerbaijan<br>(NS-95)                           | In preparation                                          | No support received so far                                                                                        |
| Ethiopia railways – Addis Ababa<br>light rail transit-oriented<br>development NAMA<br>(NS-167) | Feasibility study completed                             | Request for technical assistance<br>submitted to the CTCN in order to<br>develop a fully fledged NAMA<br>proposal |
| Ethiopian railways – railway<br>academy NAMA<br>(NS-173)                                       | Waiting support for the preparation                     | Request for technical assistance<br>submitted to the CTCN in order to<br>develop a fully fledged NAMA<br>proposal |
| Rural electrification with renewable<br>energy in the Gambia<br>(NS-199)                       | In preparation                                          | The African Development Bank has pledged a grant of USD 1.5 million to carry out feasibility studies              |
| Improvement of energy efficiency in the Jordanian water sector (NS-25)                         | Implementation expected to start around the end of 2016 | Loan has been secured through bilateral agreement with KfW                                                        |
| NAMAs for the industrial sector of Jordan (NS-27)                                              | Awaiting support for preparation                        | Looking for international support to prepare a fully fledged NAMA proposal                                        |

| NAMA                                                                                                                                                                              | Status                                                           | Comments                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| NAMAs for low-carbon urban<br>development in Kazakhstan<br>(NS-124)                                                                                                               | Under implementation since November 2015                         | Received support/funding from the GEF, the Government of Kazakhstan, the Eurasian Development Bank and the private sector in Kazakhstan |
| Detailed study of sustainable<br>NAMA financing mechanism for<br>reactivating renewable energy-based<br>clean development mechanism<br>project activities in Malaysia<br>(NS-203) | Awaiting support for preparation                                 |                                                                                                                                         |
| Multipurpose utilization of biochar<br>in Mongolia<br>(NS-217)                                                                                                                    | Awaiting support for preparation                                 | Requires some modifications in NAMA concept                                                                                             |
| Support mechanisms for promoting distributed generation in Pakistan (NS-134)                                                                                                      | Awaiting support for preparation                                 |                                                                                                                                         |
| Strategizing for grid<br>strengthening/improvement for<br>evacuation of power from solar<br>power projects in Pakistan<br>(NS-135)                                                | Preparation completed;<br>awaiting support for<br>implementation | Received support pledges covering partial implementation                                                                                |
| Development and installation of CO <sub>2</sub> sequestration technologies in Pakistan (NS-138)                                                                                   | Awaiting support for preparation                                 |                                                                                                                                         |
| Harnessing municipal waste of large cities in Pakistan to generate electricity (NS-139)                                                                                           | Preparation completed;<br>awaiting support for<br>implementation | Received support from UNESCAP for preparation                                                                                           |
| Strategizing for grid<br>strengthening/improvement for<br>evacuation of power from wind<br>power projects in Pakistan<br>(NS-140)                                                 | Preparation completed;<br>awaiting support for<br>implementation | Received support from UNESCAP for preparation                                                                                           |
| Bioenergy generation<br>and greenhouse gas mitigation<br>through organic-waste utilization in<br>Pakistan<br>(NS-147)                                                             | In preparation                                                   | NAMA geographical scope extended                                                                                                        |
| Energy-efficient lighting in residential, commercial, industrial and outdoor sectors of Pakistan (NS-88)                                                                          | Preliminary stakeholder consultations completed                  | Project proposal submitted to the GEF                                                                                                   |
| Support to Sierra Leone for NAMA preparation (NS-238)                                                                                                                             | Awaiting support for preparation                                 |                                                                                                                                         |

| NAMA                                                                                                                              | Status                                          | Comments                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Thailand refrigeration and air-<br>conditioning NAMA<br>(NS-198)                                                                  | Preparation completed; ready for implementation | Received a pledge of EUR 14.7 million from the NAMA Facility for its implementation                                                                           |
| Sustainable fertilizer production and use in Rwanda (NS-206)                                                                      | Awaiting support for preparation                |                                                                                                                                                               |
| Developing a sustainable charcoal value chain in Rwanda (NS-207)                                                                  | In preparation                                  | Received support from the Government of Belgium for preparation                                                                                               |
| Electrification with solar<br>photovoltaic mini-grids in rural<br>villages in Rwanda<br>(NS-208)                                  | Under implementation                            | Received support from the Government of Rwanda, the EU and Mobisol, a local private company                                                                   |
| Promoting the use of renewable energy solutions for households and buildings in Rwanda (NS-209)                                   | Preparation completed; ready for implementation | Secured support from the Government of Rwanda and the EU for its implementation                                                                               |
| Energy-efficiency improvement in the tea and coffee sector in Rwanda (NS-210)                                                     | Awaiting support for preparation                | Requires modifications in the NAMA concept based on feedback received from potential supporters and investors                                                 |
| Bus rapid transit in Kigali with linkage to non-motorized transport (NS-211)                                                      | In preparation                                  | No support has been received thus far                                                                                                                         |
| Waste to energy and improved waste management practices in Kigali (NS-212)                                                        | In preparation                                  | Received support from the European Investment Bank                                                                                                            |
| Reduction, recycling and reuse of solid waste in Kampala (NS-150)                                                                 | Preparation completed; ready for implementation | Waiting for political and legal issues to<br>be settled before seeking donor support<br>for implementation                                                    |
| Bus rapid transit for Kampala (NS-153)                                                                                            | Awaiting support for preparation                | Waiting for political and legal issues to<br>be settled before seeking donor support<br>for implementation                                                    |
| Developing appropriate strategies and techniques to reduce CH <sub>4</sub> emissions from livestock production in Uganda (NS-154) | In preparation                                  | Plan to merge the two agricultural<br>NAMAs (one on livestock and one on<br>rice) with a view to establishing climate<br>smart livestock production in Uganda |
| Fuel efficiency in motor vehicles in<br>Uganda<br>(NS-155)                                                                        | Awaiting support for preparation                | Needs further modification                                                                                                                                    |
| Integrated wastewater treatment for agro-process water in Uganda (NS-156)                                                         | Under implementation                            | Rebranded as the "NAMA for integrated waste management and biogas production in Uganda" and received USD 2.17 million from the GEF for its implementation     |

| NAMA                                                                                                                                      | Status                                                                            | Comments                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Periodic vehicle inspection for emissions and roadworthiness in Uganda (NS-158)                                                           | Ready for implementation                                                          | Development of the infrastructure<br>needed for its implementation is under<br>way; there is a need for a political will<br>to see its full implementation                             |
| Rural electrification in Vanuatu (NS-230)                                                                                                 | Preparation partially completed; awaiting further support                         | Requires support to undertake some feasibility studies and cost-benefit analysis                                                                                                       |
| National solar water heating programme in Zimbabwe (NS-240)                                                                               | Under implementation                                                              | Prepared with support from the<br>Zimbabwean Water Regulatory<br>Authority; local financial resources<br>were mobilized for implementation                                             |
| Provision of sustainable energy in<br>Zimbabwe through use of biogas<br>(NS-241)                                                          | Under implementation                                                              | Received support of EUR 1 million<br>from the EU for implementation; the<br>Zimbabwean Ministry of Finance also<br>mobilized local resources                                           |
| Lighting system optimization by<br>replacing incandescent and other<br>lights with energy-efficient LED<br>lights in Zimbabwe<br>(NS-243) | Awaiting support for preparation                                                  |                                                                                                                                                                                        |
| Efficient biomass stove<br>development, dissemination and<br>commercialization in Zimbabwe<br>(NS-244)                                    | Implementation ceased                                                             | Efforts made to revive this NAMA with<br>support from the Zimbabwean Ministry<br>of Finance, the Zimbabwean Ministry<br>of Environment and the United Nations<br>Development Programme |
| Cogeneration in the Mexican oil and gas sectors (NS-73)                                                                                   | Preparation completed; ready for implementation                                   | Currently on standby due to lack of funds and technical capacity for implementation                                                                                                    |
| Efficient cookstoves in Mexico (NS-159)                                                                                                   | Preparation completed;<br>ready for implementation,<br>with international support |                                                                                                                                                                                        |
| Solar water heaters in Mexico (NS-160)                                                                                                    | Preparation completed; ready for implementation                                   | Likely to receive technical support<br>from the National Institute of Housing<br>and Deutsche Gesellschaft für<br>Internationale Zusammenarbeit for<br>implementation                  |
| Car fleet renewal in Mexico (NS-162)                                                                                                      | Awaiting support for preparation                                                  |                                                                                                                                                                                        |
| Disposal and use of waste and solid<br>and biomass residues in Mexico<br>(NS-163)                                                         | Preparation completed; ready for implementation, with international support       |                                                                                                                                                                                        |
| Fuel switch in industry in Mexico (NS-164)                                                                                                | Preparation completed; ready for implementation, with international support       |                                                                                                                                                                                        |
| Fuel switch for power generation in<br>Mexico<br>(NS-165)                                                                                 | Preparation completed;<br>ready for implementation,<br>with international support |                                                                                                                                                                                        |

| NAMA                                                                                        | Status                                                                            | Comments |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------|
| Renewable energies and energy-<br>efficiency in the private sector in<br>Mexico<br>(NS-166) | Preparation completed;<br>ready for implementation,<br>with international support |          |

 $Abbreviations: \ CTCN = Climate \ Technology \ Centre \ and \ Network, \ EU = European \ Union, \ GEF = Global \\ Environment \ Facility, \ IDB = Inter-American \ Development \ Bank, \ LED = light-emitting \ diode, \ NAMAs = nationally \\ appropriate \ mitigation \ actions, \ NS = code \ for \ NAMA \ seeking \ support, \ S = code \ for \ an \ entry \ on \ support, \ UNESCAP \\ = United \ Nations \ Economic \ and \ Social \ Commission \ for \ Asia \ and \ the \ Pacific$ 

 $\begin{tabular}{llll} Table 8 \\ \hline \textbf{Information on nationally appropriate mitigation actions seeking support for implementation in 2016} \\ \hline \end{tabular}$ 

| implementation in 2010                                                                                                   |                                     |                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| NAMAs                                                                                                                    | Status                              | Comments                                                                                                                  |
| Energy-efficient public buildings<br>and housing in Armenia<br>(NS-144)                                                  | Awaiting support for implementation | Full-scale implementation has not<br>begun due to lack of funds and<br>technical capacity, and some<br>legislative issues |
| Tourism and waste in the<br>Dominican Republic<br>(NS-51)                                                                | Awaiting support for implementation | Received technical support from IDB for preparation                                                                       |
| NAMA in cement/co-processing<br>and waste sector in the Dominican<br>Republic<br>(NS-52)                                 | Under implementation                | Received support from the Government of Germany                                                                           |
| Energy-efficiency in the public sector in the Dominican Republic (NS-118)                                                | Awaiting support for implementation | NAMA design needs to be revisited to make it more attractive to potential donors and investors                            |
| Reducing greenhouse gas<br>emissions in pig farms in the<br>Dominican Republic<br>(NS-149)                               | Awaiting support for implementation | Received technical support from IDB for preparation                                                                       |
| Ethiopian Railways Corporation: establishment of climate vulnerability infrastructure investment framework NAMA (NS-168) | Awaiting support for preparation    |                                                                                                                           |
| Energy-efficient refurbishment in<br>the Georgian public building sector<br>(NS-228)                                     | Awaiting support for implementation |                                                                                                                           |
| Efficient use of biomass for equitable, 'climate proof' and sustainable rural development in Georgia (NS-229)            | Awaiting support for implementation | Received support from the EU for preparation                                                                              |
| Sustainable urban transport initiative in Indonesia (NS-65)                                                              | Implementation ceased               | Received support of EUR 15 million from the NAMA Facility                                                                 |

| NAMAs                                                                                                                            | Status                              | Comments                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Support to integrated e-waste<br>management system for the State<br>of Sabah, Malaysia<br>(NS-202)                               | Awaiting support for implementation |                                                                                                                                         |
| National energy-efficient lighting programme in Mongolia (NS-90)                                                                 | Awaiting support for implementation | Plan to modify this NAMA to align<br>with newly introduced policy on<br>energy efficiency                                               |
| Transforming construction in<br>Mongolia using supplementary<br>cementitious materials<br>(NS-91)                                | No longer looking for support       | NAMA became obsolete                                                                                                                    |
| Rural development in Namibia<br>through electrification with<br>renewable energies<br>(NS-197)                                   | Awaiting support for implementation | Plan to revisit the NAMA proposal taking into account feedback and suggestions received from donor agencies                             |
| Expansion of existing heating network in Valjevo, Serbia (NS-31)                                                                 | Awaiting support for implementation | Portion of the NAMA has been implemented using domestic resources                                                                       |
| Introduction of a metering system and billing on the basis of measured consumption in district heating systems in Serbia (NS-32) | Under implementation                | Domestic resources being used for implementation                                                                                        |
| Use of solar energy for domestic<br>hot water production in the Cerak<br>heat plant in Belgrade<br>(NS-33)                       | Awaiting support for implementation | Received funding from Denmark to carry out a pre-feasibility study and support from the Government of Austria for the feasibility study |
| Introduction 1,000 MW of small biomass boilers in Serbia (NS-35)                                                                 | In preparation                      | Plan to undertake pre-feasibility<br>studies with support of EUR 0.3<br>million from KfW                                                |
| Thermal power project with capacity and efficiency increase II – TPP Nikola Tesla Unit A3, Serbia (NS-34)                        | Implemented                         | Domestic resources being used for implementation                                                                                        |
| Revitalization of existing small<br>hydropower plants and<br>construction of new small<br>hydropower plants in Serbia<br>(NS-37) | Implemented                         | Domestic resources being used for implementation                                                                                        |
| Thermal power project with capacity and efficiency increase I – TPP Nikola Tesla Unit B2 in Serbia (NS-39)                       | Awaiting support for implementation |                                                                                                                                         |

## FCCC/CP/2016/INF.1

| NAMAs                                                                                 | Status               | Comments                                                                                                                                |
|---------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Construction of a super-critical lignite power plant TPP Kostolac B in Serbia (NS-40) | Under implementation | Secured a loan from the Government of China for implementation                                                                          |
| Rural electrification in Vanuatu (NS-232)                                             | In preparation       | Received a support pledge of USD 0.3 million from the Government of Austria for implementation provided that the NAMA is fully prepared |

Abbreviations: EU = European Union, IDB = Inter-American Development Bank, NAMA = nationally appropriate mitigation action, NS = code for NAMA seeking support, S = code for an entry on support, TPP = thermal power project.