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Development and transfer of technologies and implementation of the Technology Mechanism

Poznan strategic programme on technology transfer

Evaluation of the Poznan strategic programme on technology transfer: final report by the Technology Executive Committee

Summary

The Technology Executive Committee (TEC) was mandated to evaluate the Poznan strategic programme on technology transfer with the aim of enhancing the effectiveness of the Technology Mechanism. The TEC has prepared this document, its final report on this evaluation, pursuant to a mandate issued by the Subsidiary Body for Implementation (SBI) at its forty-first session. This document contains the outcomes of the TEC's evaluation on the Poznan strategic programme, including key messages and recommendations to the Conference of the Parties at its twenty-first session through SBI 43.

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I. Introduction

A. Mandate

1. The Subsidiary Body for Implementation (SBI), at its fortieth session, invited the Technology Executive Committee (TEC) to evaluate the Poznan strategic programme on technology transfer (PSP) with the aim of enhancing the effectiveness of the Technology Mechanism. It further invited the TEC to report back on the matter to the Conference of the Parties (COP) at its twentieth session, through SBI 41.¹ In its report to COP 20, the TEC acknowledged that additional time would be required to evaluate the PSP.²

2. SBI 41 noted that the TEC would undertake the evaluation of the PSP in 2015, guided by the terms of reference that were to be developed by its task force on this matter. It invited the TEC to provide an interim report³ on its preliminary findings to SBI 42 and a final report to COP 21 through SBI 43.⁴

3. SBI 42 welcomed the interim report of the TEC on the evaluation of the PSP. At the same session, the SBI looked forward to the final report of the TEC on the findings of the evaluation that was to be submitted to COP 21. It encouraged those providing inputs to the evaluation of the PSP to consider how the programme may provide support for technologies for adaptation and take into account gender responsiveness. It also encouraged the TEC, in evaluating the PSP, to continue to consult Parties, the Green Climate Fund (GCF), implementing agencies of the Global Environment Facility (GEF) and other relevant entities on how to enhance the effectiveness of the Technology Mechanism.⁵

B. Scope of the report

4. This is the final report on the evaluation of the PSP, undertaken by the TEC with the aim of enhancing the Technology Mechanism. The TEC prepared this report in accordance with the terms of reference of the evaluation.⁶ The chapters of the report are based on the elements of the scope of work of the evaluation as outlined in the terms of reference. Effort has been made to ensure that the evaluation activities, as outlined in the terms of reference, are also covered within these chapters.

5. In the report's final chapter, the TEC builds on its evaluation of the PSP to identify key messages and recommendations to enhance the effectiveness of the Technology Mechanism and thereby support Parties to accelerate action on climate technology development and transfer.⁷

C. Methodology

6. The methodology undertaken to evaluate the PSP is consistent with the evaluation's terms of reference as prepared by the TEC. The terms of reference outline the:

- (a) Aim;

¹ FCCC/SBI/2014/8, paragraph 142.

² FCCC/SB/2014/3, paragraph 51.

³ FCCC/SBI/2015/INF.5.

⁴ FCCC/SBI/2014/21, paragraph 88.

⁵ FCCC/SBI/2015/10, paragraphs 82–84.

⁶ Refer to the annex to document FCCC/SBI/2015/INF.5.

⁷ Decision 1/CP.16, paragraph 113.

- (b) Scope of work;
- (c) Process for conducting the evaluation;
- (d) Activities undertaken in conducting the evaluation;
- (e) Information sources;
- (f) Timing of the delivery of the evaluation's key outputs.⁸

7. As mentioned above, the evaluation was undertaken with the aim of enhancing the effectiveness of the Technology Mechanism. Consequently, the evaluation and this final report focus on extracting experiences, good practices and lessons learned that are relevant to the Technology Mechanism and which support the achievement of the evaluation's aim. Annex VII describes information sources and limitations to the evaluation.

D. Possible action by the Subsidiary Body for Implementation

8. The SBI is invited to consider the report with a view to determining further action, as appropriate.

II. Background

A. The Poznan strategic programme

9. COP 13 requested the GEF to elaborate a strategic programme for scaling up the level of investment for technology transfer. This was undertaken with the aim of helping developing countries to address their needs for environmentally sound technologies.⁹

10. In 2008, the GEF Council approved a strategic programme on technology. The programme had three windows:

- (a) Technology needs assessments (TNAs);
- (b) Piloting priority technology projects linked to TNAs;
- (c) Dissemination of GEF experience and successfully demonstrated environmentally sound technologies.

11. COP 14 renamed this programme the PSP and requested the GEF to, inter alia, consider the long-term implementation of the PSP and report back to COP 16.¹⁰ The GEF submitted to COP 16 a plan for the long-term implementation of the PSP.¹¹ This plan contained five elements:

- (a) Support for climate technology centres and a climate technology network;
- (b) Piloting priority technology projects to foster innovation and investments;
- (c) Public-private partnership for technology transfer;
- (d) TNAs;

⁸ Further information on the methodology of the evaluation may be found in the evaluation's terms of reference, contained in the annex to document FCCC/SBI/2015/INF.5.

⁹ Decision 4/CP.13, paragraph 3.

¹⁰ Decision 2/CP.14, paragraphs 1 and 2.

¹¹ FCCC/SBI/2010/25, annex.

(e) GEF as a catalytic supporting institution for technology transfer.

12. The GEF noted that three of the long-term elements (piloting projects, TNAs and GEF as a catalytic supporting institution) were a direct continuation and scaling-up of the three elements of the initial PSP.¹²

13. The GEF funded the initial PSP under the fourth replenishment period of the GEF Trust Fund (GEF-4) and its long-term implementation under the fifth replenishment period of the GEF Trust Fund (GEF-5). Funding for the initial PSP totalled USD 50 million with USD 30 million coming from GEF Trust Fund country allocations, USD 5 million from the GEF Trust Fund set-aside and USD 15 million from the Special Climate Change Fund (SCCF) (see figure 1). The GEF reported co-financing for these activities to be USD 228.8 million.¹³

14. GEF-5 funding for the elements of the long-term implementation of the PSP was primarily through a combination of country allocations under the system for the transparent allocation of resources (STAR) (for mitigation projects) and global and cross-focal area set-asides (for TNA global projects and public-private partnerships (PPPs)) (see figure 1). The SCCF funds the adaptation pilot projects. The GEF reports that all mitigation and adaptation GEF-5 projects that have technology-related objectives are part of the PSP.¹⁴ In the sixth replenishment period of the GEF Trust Fund (GEF-6), funding for one of the elements, TNAs, has continued through a focal area set-aside.

15. The GEF does not set aside funding for the PSP in its replenishment periods. Nor does the PSP form part of the replenishment period strategies. Rather, as noted above, the GEF funds each element of the PSP under country allocations or set-asides in each replenishment period. These elements are then reported together as the elements of the PSP in the GEF periodic reports to the Conference of the Parties. Further background on the GEF and the PSP can be found in annex I.

16. The GEF adopted a series of policies on gender and seeks to support the mainstreaming of gender in all projects, including those of the PSP.¹⁵ In addition, all GEF implementing agencies have their own policies related to gender responsiveness. They also comply with GEF social and environmental safeguards and fiduciary standards.

¹² Refer to FCCC/CP/2013/3, annex, paragraph 140.

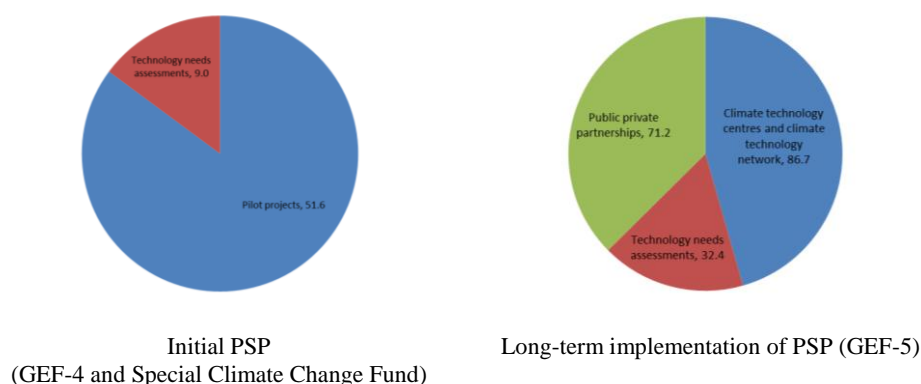
¹³ FCCC/SBI/2015/INF.4, appendix 3.

¹⁴ FCCC/CP/2014/2, annex, paragraphs 136 and 137.

¹⁵ <<https://www.thegef.org/gef/gender>>.

Figure 1
Financial support of the Global Environment Facility to the elements of the Poznan strategic programme

(Millions of United States dollars)



Source: Reports of the GEF to the Conference of the Parties and the Subsidiary Body for Implementation and correspondence with the GEF secretariat.

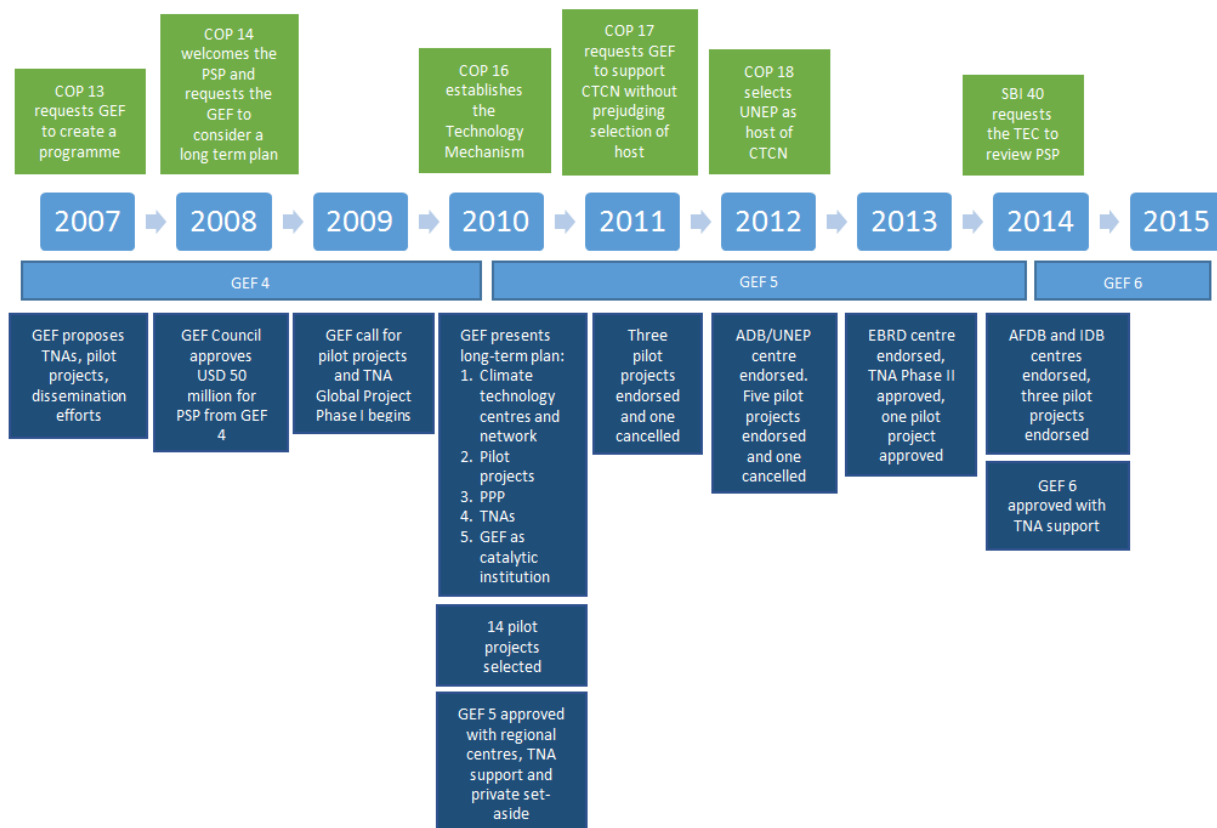
Notes: (1) The GEF did not report on financial support for the initial PSP element “Dissemination of GEF experience and successfully demonstrated environmentally sound technologies”; (2) The GEF did not report on financial support for the element of the long-term implementation of the PSP “GEF as a catalytic supporting institution for technology transfer”; (3) This figure does not include GEF funding for GEF-5 and SCCF climate change projects that include technology transfer among their objectives. See paragraph 28 for more information.

Abbreviations: GEF = Global Environment Facility, GEF-4 = Fourth replenishment period of the GEF Trust Fund, GEF-5 = Fifth replenishment period of the GEF Trust Fund, PSP = Poznan strategic programme on technology transfer.

B. The Technology Mechanism

17. The COP established the Technology Mechanism in 2010, two years after the PSP was created, with the objective of facilitating enhanced action on technology development and transfer. It mandated the TEC and the Climate Technology Centre and Network (CTCN), in accordance with their respective functions, to facilitate the effective implementation of the Technology Mechanism, under the guidance of the COP. Further information on the Technology Mechanism and its bodies can be found in annex I. Figure 2 illustrates key milestones of the PSP and the Technology Mechanism.

Figure 2
Timeline of the Poznan strategic programme



Abbreviations: ADB = Asian Development Bank, AFDB = African Development Bank, COP = Conference of the Parties, CTCN = Climate Technology Centre and Network, EBRD = European Bank for Reconstruction and Development, GEF = Global Environment Facility, GEF-4 = Fourth replenishment period of the GEF Trust Fund, GEF-5 = Fifth replenishment period of the GEF Trust Fund, GEF-6 = Sixth replenishment period of the GEF Trust Fund, IDB = Inter-American Development Bank, PPP = public–private partnership, PSP = Poznan strategic programme on technology transfer, SBI = Subsidiary Body for Implementation, TEC = Technology Executive Committee, TNA = technology needs assessments, UNEP = United Nations Environment Programme.

III. The effectiveness and efficiency of the Poznan strategic programme

18. In accordance with the evaluation terms of reference, this chapter analyses the effectiveness and efficiency of the PSP in meeting Party needs for each element of the long-term implementation of the PSP. Specifically, for each element, this chapter:

- (a) Describes the element;
- (b) Reviews the element’s progress and analyses how it has contributed to scaling up the level of investment in climate technologies, in accordance with the overall objective of the PSP;

(c) Reviews briefly the implementation by the GEF of UNFCCC mandates relevant to the element.

A. Support for climate technology centres and a climate technology network

1. Description

19. The first element of the long-term implementation of the PSP is support for climate technology centres and a climate technology network. The GEF has approved financing for four climate technology transfer and finance centres anchored in multilateral development banks (MDBs) (see annex II) and is in the process of providing support to the CTCN. The GEF approved a package of programming for the regional centres as part of GEF-5. This chapter focuses on where the majority of GEF funding for technology centres has occurred – the regional centres – and thus does not consider the national technology centres funded by country STAR allocations.¹⁶

20. The Pilot Asia-Pacific Climate Technology Network and Finance Centre, managed jointly by the Asian Development Bank (ADB) and the United Nations Environment Programme (UNEP), was approved in 2011 by the GEF Council and endorsed by the GEF Chief Executive Officer (CEO) in 2012, and will pilot a regional approach to facilitating the deployment of climate technologies. It will combine capacity development, enhancement of enabling environments for market transformation, financial investments and investment facilitation. Another GEF-supported regional centre project is the Finance and Technology Transfer Centre for Climate Change, implemented by the European Bank for Reconstruction and Development (EBRD). This centre aims to accelerate investments in climate technologies in countries with economies in transition in Eastern Europe and incentivize the deployment of climate technologies with low market penetration.

21. The GEF also supports the Climate Technology Transfer Mechanisms and Networks in Latin America and the Caribbean initiative administered by the Inter-American Development Bank (IDB). This centre promotes the regional development and transfer of climate technologies. The project's strategy is to build national capacities to identify, assess, develop and transfer climate technologies. Finally, the GEF supports the Pilot African Climate Technology Finance Centre and Network implemented by the African Development Bank (AfDB). This centre supports the deployment of technologies for both climate change mitigation and adaptation in sub-Saharan Africa.¹⁷

22. To support the activities of the CTCN, in 2014 the GEF approved a project concept proposal submitted by the United Nations Industrial Development Organization (UNIDO) titled "Promoting Accelerated Transfer and Scaled-up Deployment of Mitigation Technologies through the CTCN."¹⁸ The GEF CEO approved a three-year medium-sized project for USD 1.8 million in June 2015, with USD 7.2 million in co-financing. The proponents expect the project to serve as a pilot that highlights options for the development of CTCN-related outputs into country projects with concrete mitigation benefits under GEF-6. These country projects would use GEF country STAR allocations and be undertaken in a country-driven manner. The proponents also expect the GEF CTCN project to help the CTCN to design and test a framework for working with financing institutions. The framework's purpose is to help developing countries to design requests that comply

¹⁶ Total GEF funding for the national centres was USD 33.1 million.

¹⁷ FCCC/SBI/2015/INF.4, annex, appendix 1.

¹⁸ See <<http://goo.gl/PWul0Q>>.

with the requirements of financing institutions and are thus conducive to attaining financial support and achieving implementation.¹⁹

2. Review of progress and contribution to scaling up investment in climate technologies

23. To date there have been limited reporting or midterm evaluations and it is therefore difficult to measure current progress and impact. While the ADB- and EBRD-hosted centres are at a more advanced stage of implementation, no midterm reviews have yet been completed. In contrast, the AfDB and IDB only began implementing their centres in 2014. Further information on the progress of the centres can be found in annex II.

24. It should be noted that while there is a common concept behind the centres, each has taken a nuanced approach to execution that reflects its capacities and needs. Most centres focus on providing a range of measures to support mitigation activities, primarily in the energy sector, while also supporting adaptation-related technology transfer, particularly in the water sector. The ADB and EBRD centres also have a core focus on working with the private sector. While the IDB and AfDB seek to engage private sector actors, their emphasis is primarily on public sector investment.

25. With regard to scaling up investment, the GEF notes that the rationale for having the MDBs host the centres was to harness the investment capacity of these institutions in their regions.²⁰ The ADB centre has piloted new approaches to working with the private sector, though definitive evidence of impact within countries is not yet available. The EBRD notes that it also has several projects under way. In both cases, forthcoming midterm reviews should provide a richer empirical basis for assessing progress.

3. Review of the implementation of relevant decisions

26. COP 17 requested the GEF to support the operationalization and activities of the CTCN without prejudging the selection of the host (which was still in process at the time).²¹ In this context, the GEF continued to implement its GEF-5 strategy for supporting the regional technology centres that the GEF Council had endorsed prior to this COP mandate. Since this mandate, there have been ongoing discussions by the COP and the SBI on two related issues:

(a) Support for the operationalization and activities of the CTCN. Since the decision to establish the CTCN, guidance from the COP and the SBI has emphasized the need for the GEF to support the operationalization and activities of the CTCN, in accordance with decision 2/CP.17.²² In this context, the GEF is engaged in ongoing consultations with the CTCN to determine how it may support the CTCN while also satisfying its operational guidelines.²³ As noted above, the GEF has now approved a UNIDO-led project to support CTCN activities;

(b) Alignment of the regional centres with the activities of the CTCN. With the COP selecting UNEP as the host of the CTCN, the SBI stressed the need for the regional centres to be aligned with the operationalization and activities of the CTCN and invited the GEF to consult with the CTCN on this matter.²⁴ This has led to a series of consultations between the GEF, the regional centres and the CTCN regarding possible synergies between

¹⁹ FCCC/SBI/2015/INF.4, annex, appendix 1, paragraphs 5 and 6.

²⁰ <https://www.thegef.org/gef/sites/thegef.org/files/documents/document/GEF-report_UNFCCC_SBI_tech_transfer.pdf>.

²¹ Decision 2/CP.17, paragraph 140.

²² Decision 14/CP.18, paragraph 13, and FCCC/SBI/2012/15, paragraph 190.

²³ These consultations are discussed further in chapter V.

²⁴ FCCC/SBI/2014/8, paragraph 141.

their activities (see chapter VI). SBI 41 invited the GEF to include information on collaboration between the regional centres and the CTCN in future progress reports.²⁵

B. Piloting priority technology projects to foster innovation and investments

1. Description

27. Piloting priority technology projects to foster innovation and investments is the second element of the long-term implementation of the PSP. Under the PSP established in 2008, this element focused on financing pilot projects to support the deployment, diffusion and transfer of technologies identified under TNAs and national communications. Following this mandate, in 2009 the GEF issued a call for proposals on technology transfer.²⁶ The GEF selected 14 pilot projects with financing of USD 58 million from the GEF Trust Fund (as part of GEF-4), through a combination of country allocations and global set-asides, and the SCCF, and USD 241 million of co-financing from governments, agencies and the private sector. The majority of the projects support mitigation action, one is focused on adaptation and three have adaptation elements (see annex III for descriptions of all pilot projects). Eleven of these projects have been approved and are now being implemented.²⁷ Three of the selected projects were cancelled.²⁸ The pilot projects cover a wide range of technologies and approaches, including biomass and biofuel production, solar photovoltaic systems, and more-efficient road freight technologies.

28. Regarding the long-term implementation of the PSP in GEF-5, the GEF reports on GEF-5 climate change projects that include technology transfer among their objectives as being projects of the long-term implementation of the PSP.²⁹ The GEF funds the mitigation projects primarily through GEF Trust Fund country STAR allocations and adaptation projects primarily through the Least Developed Countries Fund and the SCCF. The GEF reports that it approved more than USD 2 billion during GEF-5 to support such projects.³⁰ This present evaluation is limited to a consideration of the 14 GEF-4 pilot projects described previously.

2. Review of progress and contribution to scaling up investment in climate technologies

29. Although the GEF selected the pilot projects in 2009, the implementation of the majority of them did not begin until 2011 or 2012; for one it began in 2014.³¹ Consequently, it is generally too early to reach definitive conclusions on their impact. It is also premature to reach conclusions on the pilot project's contribution to the wider scaling-up of investment in climate technologies in developing countries. The time between selection and endorsement highlights that implementation of the pilot projects has often been a relatively slow process. For the PSP pilot projects, the average time between project concept approval and final CEO endorsement was 27 months, which is 9 months longer than the GEF average processing time of 18 months.³²

²⁵ FCCC/SBI/2014/21, paragraph 87.

²⁶ FCCC/SBI/2015/INF.4, annex, paragraph 23.

²⁷ See document FCCC/SBI/2015/INF.4, annex, paragraphs 23–31 for further details on the pilot projects.

²⁸ Information on the cancellation of these projects may be found in annex III.

²⁹ FCCC/CP/2014/2, annex, paragraphs 136 and 137.

³⁰ Correspondence from the GEF to the TEC.

³¹ For information on the 2014 project, see document FCCC/SBI/2015/INF.4, annex, page 21.

³² Based on an analysis of data and comments provided by the GEF secretariat.

30. Delays have also occurred during project implementation. The project implementing agencies have reported on results for seven of the nine projects under way. Reports for all but two projects note delays in starting the projects and beginning implementation, and most projects remain in the formative stage. In some cases, implementers had to alter the project approach after it had been approved, for instance owing to political developments in the recipient country or a realization that the technology would not be as suitable as initially expected. Stakeholders highlighted several cases where the GEF allowed project implementers to make the necessary amendments to their plans after the project had already been approved. Aside from the delays, initial reporting suggests that progress is mostly satisfactory in meeting stakeholder expectations.³³

3. Review of implementation of relevant decisions

31. The SBI has noted the emphasis of the PSP pilot projects on mitigation technologies and has invited the GEF, Parties and organizations in a position to do so to provide financial support for project proposals related to technologies for adaptation.³⁴ However, the focus on mitigation technologies reflects the sectors that developing countries emphasized in their submissions to the GEF rather than selection preferences. The GEF received only one project proposal for an adaptation technology and approved it. Additionally, in 2011 and 2012, the SBI urged the GEF and Parties to expedite the process for the early implementation of pilot projects submitted in 2009.³⁵ However, project implementation has often been delayed for reasons described above.

C. Public–private partnership for technology transfer

1. Description

32. The third element of the long-term implementation of the PSP is supporting PPPs in technology transfer. Under GEF-5 there was a GEF-wide (i.e. not limited to climate change) private sector set-aside of USD 80 million. The GEF has included six PPP programmes in its reports to the COP on the implementation of the PSP (see annex IV). The GEF work programme on PPPs resulted from the “GEF-5 Revised Strategy for Enhancing Engagement with the Private Sector”, which the GEF Council approved in 2011.

33. While the majority of the PPP programme activities may contribute to technology transfer processes, the primary requirement is that they be anchored in the GEF-5 investment strategies. The GEF designed these activities to serve all of the focal areas; only one of the programme framework documents for the approved programmes directly refers to technology transfer.³⁶ The GEF PPP investments catalysed additional investment, resulting in USD 957 million of co-financing for climate technologies beyond the GEF investment of USD 71 million.³⁷ The documents do not refer specifically to UNFCCC efforts to support technology transfer, the PSP or the long-term implementation of the PSP. While the GEF expanded the private sector set-aside for GEF-6 to USD 110 million, that programming is broader than climate technology or even climate change: it will focus on a

³³ Based on information provided by the GEF secretariat.

³⁴ FCCC/SBI/2011/7, paragraph 136.

³⁵ FCCC/SBI/2011/17, paragraph 96, and FCCC/SBI/2012/15, paragraph 197.

³⁶ The EBRD South-Eastern Mediterranean Energy Efficiency and Energy Services Company Markets Platform. See <<http://goo.gl/DKR19p>>.

³⁷ Information provided by the GEF secretariat.

range of focal areas, including biodiversity, climate change, international waters, land degradation, and chemicals and waste management.³⁸

2. Review of progress and contribution to scaling up investment in climate technologies

34. While the GEF has reported on this element in its periodic reports to the COP and the SBI, the details on this element have been limited. The PPP programme activity which does relate directly to technology transfer was approved by the GEF CEO in September 2014 (see annex IV). It is thus too early to assess its impact on scaling up investment in climate technologies.

3. Review of implementation of relevant decisions

35. The COP and the SBI have not given direct guidance on this element, although the SBI has invited the GEF to further elaborate on experiences gained and lessons learned, including success stories and challenges faced, in carrying out the activities under the PSP.³⁹ More broadly, the issue of how to work effectively with the private sector to support climate technology development and transfer in developing countries has been a topic of substantial interest to various Parties and is reflected in COP decisions.⁴⁰

D. Technology needs assessments

1. Description

36. TNAs are the fourth element of the long-term implementation of the PSP. Through this PSP element, the GEF has provided financial support to countries to complete TNAs and technology action plans (TAPs). The GEF has provided funding for TNAs in GEF-4, GEF-5 and GEF-6.

37. In the initial PSP, the SCCF provided funding of USD 9 million to the global TNA project, phase I, to assist 36 developing countries with their TNAs. These countries undertook their TNAs from 2010 to 2013, with 32 countries submitting TNA reports.⁴¹ USD 6.1 million is being provided through a GEF-5 global set-aside to the global TNA project, phase II, to assist 28 developing countries. UNEP and the UNEP DTU Partnership⁴² are implementing both of these projects.⁴³ The UNEP DTU Partnership designed the phase II project taking into account experiences and lessons learned from phase I, with phase II countries starting their TNAs in 2015. Annex V shows the countries that have participated in the global TNA project, phases I and II.

38. In addition, between 2011 and 2015 the GEF supported 13 national projects that incorporated TNA support activities in projects otherwise focused on the preparation of national communications and biennial update reports (see annex V for a list of such countries). These projects were funded through country STAR allocations, with a total of USD 26.3 million allocated.⁴⁴ Going forward, a GEF-6 set-aside will provide further

³⁸ <<https://www.thegef.org/gef/sites/thegef.org/files/publication/NGI%20flyer.pdf>>.

³⁹ FCCC/SBI/2012/15, paragraph 199(b).

⁴⁰ See chapter VI, which outlines the TEC and CTCN mandates related to collaboration with the private sector.

⁴¹ See annex V for a list of all countries that participated in phase I.

⁴² The partnership, formerly known as the UNEP Risoe Centre, operates under a tripartite agreement between Denmark's Ministry of Foreign Affairs, The Technical University of Denmark (DTU), and UNEP.

⁴³ FCCC/SBI/2015/INF.4, annex, paragraphs 35–39.

⁴⁴ Information provided by the GEF secretariat.

support for TNAs, but only small island developing States and least developed countries are eligible for the funding.⁴⁵

2. Review of progress and contribution to scaling up investment in climate technologies

39. The GEF-4 phase I of the global TNA project was completed successfully, with the GEF-5 phase II now under implementation. Stakeholders involved in the TNA process noted that the process:

(a) Supports national planning by identifying priority climate technologies that may form part of national sustainable development;

(b) Builds national capacity and develops links among national stakeholders to support investment and barrier removal;

(c) Develops TAPs, which support technology implementation and demonstrate technology viability.

40. Some developing countries have used the outcomes of their TNA process to support the preparation of intended nationally determined contributions, national communications, nationally appropriate mitigation actions, national adaptation plans or national development project proposals. For example, Ecuador used its TNA results to prepare its national climate change strategy. Georgia is implementing a project based on its TNA results for adoption of energy-efficient lighting technologies.

41. Stakeholders from implementing agencies, national coordination teams and financial institutions note that further steps are needed to develop bankable implementation plans from the TNA results that enhance the more wide-spread implementation of such outcomes (this is discussed in chapters V and VI below).

3. Review of implementation of relevant decisions

42. The SBI has repeatedly welcomed GEF support to TNAs and encouraged the GEF to continue to provide such support to developing countries. The GEF approval of a phase II TNA project under GEF-5 and its allocation of funding in GEF-6 for TNA support are consistent with this guidance.

43. The SBI has invited the GEF to further support the implementation of the results of TNAs, including TAPs and project ideas.⁴⁶ In response, the GEF reported to COP 20 that it was encouraging countries and agencies to develop projects consistent with country TNAs where such existed, and that it systematically checked climate change project proposals to encourage such consistency. The GEF has encouraged UNEP and the UNEP DTU Partnership to undertake further efforts to enable the implementation of TAPs and project ideas resulting from TNAs, including by strengthening national coordination across agencies and stakeholders, and encouraging early engagement of financial institutions.⁴⁷

⁴⁵ See GEF document GEF/A.5/07/Rev.01, paragraph 82, available at <http://www.thegef.org/gef/gef_Documents_Publications>.

⁴⁶ FCCC/SBI/2014/8, paragraphs 144 and 145.

⁴⁷ Interviews with representatives of the GEF secretariat and UNEP.

E. The Global Environment Facility as a catalytic supporting institution for technology transfer

1. Description

44. The final element of the long-term implementation of the PSP is “GEF as a catalytic supporting institution for technology transfer”. The GEF notes that this is a continuation of the initial PSP element on the dissemination of GEF experience and successfully demonstrated environmentally sound technologies.⁴⁸

2. Review of progress and contribution to scaling up investment in climate technologies

45. The PSP has prompted the GEF to showcase its programming on technology and engage with climate technology stakeholders, especially those in the UNFCCC technology process. In reporting to the Conference of the Parties and the SBI, the GEF has highlighted its efforts to raise awareness of its programming to support technology transfer and focus attention on progress, opportunities and challenges related to supporting technology transfer. These efforts include:

- (a) Convening stakeholder dialogues and highlighting related issues in its expanded constituency workshops;⁴⁹
- (b) Holding high-level side events during COP 16, 17 and 18;
- (c) Producing brochures and outreach material;
- (d) Creating a dedicated GEF web page;⁵⁰
- (e) Participating in technology events convened by other organizations⁵¹ and meetings of the TEC and the CTCN Advisory Board.

3. Review of implementation of relevant decisions

46. The COP and the SBI have not given direct guidance on this element, although the SBI has invited the GEF to further elaborate on experiences gained and lessons learned, including success stories and challenges faced, in carrying out the activities under the PSP.⁵²

IV. The operations of the Poznan strategic programme

47. This chapter brings together the outcomes of chapter III to look at the operations of the PSP at the programme level. It analyses the operations of the PSP in terms of: scaling up and replicating projects; PSP relevance in addressing global and regional issues; and the effectiveness and evolution of the PSP as a model of change.

48. It is difficult to draw conclusions on how PSP activities have led to the scaling-up and replicating of projects, as the implementation of most of the activities began only in 2012, 2013 or 2014. However, there are examples of engagement with PSP activities leading to countries seeking support from the Technology Mechanism. For instance, interviewees noted that, in some cases, regional centre engagement with countries on a

⁴⁸ FCCC/CP/2013/3, annex, paragraph 140.

⁴⁹ See <https://www.thegef.org/gef/TT_EST_dissemination>.

⁵⁰ See <https://www.thegef.org/gef/TT_poznan_strategic_program>.

⁵¹ Such as SBI and SBSTA forums and a COP 20 side event convened by UNEP.

⁵² FCCC/SBI/2012/15, paragraph 199(b).

particular sector was followed by those countries submitting requests to the CTCN on sector-related issues.⁵³

49. With regard to PSP relevance in addressing global and regional issues, it should first be emphasized that the COP decision to establish the PSP and GEF efforts to create it have significantly raised the profile of the important role that climate technology development and transfer plays in supporting countries in meeting the ultimate objective of the Convention. In addition, the COP invitation to the GEF to develop a long-term implementation plan prompted the GEF to consider how it could do more to support technology transfer. This consequently influenced GEF-5 planning and strategy.

50. Some stakeholders also stressed the importance of GEF PSP collaboration in creating a global climate technology institutional architecture that is enhancing support and bringing greater attention to climate technology issues. GEF programming for climate technology is playing a role in supporting technology efforts in developing countries.

51. The PSP has also been relevant with regard to country needs and priorities. Generally, the sectors of the pilot projects and the prioritized sectors of the phase I TNA mitigation reports are focused on energy. The single adaptation pilot project under the PSP similarly aligns with the tendency of TNA adaptation reports to prioritize the agriculture sector. However, the lack of adaptation-focused pilot projects does not reflect the importance of adaptation globally; all 32 phase I TNA countries that submitted TNA reports completed TNAs on adaptation.

52. There is some correlation between the technologies prioritized in TNAs and those of the pilot projects. Of the seven developing countries that have both participated in the global TNA project, phase I, and received approval for a pilot project under the PSP in GEF-4, four have displayed a shared focus on a certain sector. However, in practice it has not been possible for these two processes to be linked as the pilot project process began at the same time as the TNA project phase I, in 2009.

53. Regarding the effectiveness and evolution of the PSP as a model of change, two possible actions may support this objective. First, while the GEF has reported on the implementation of the PSP, there appears to have been a more limited focus on distilling lessons for wider dissemination. The GEF could support more enhanced sharing and catalysing of good practices, experiences and lessons learned on three levels:⁵⁴

- (a) At the PSP-element level (e.g. sharing between the centres and between the pilot projects);
- (b) At the PSP level (sharing between the elements);
- (c) At the global level (sharing between the PSP and the broader global climate technology institutional architecture, e.g. between the regional centres and the CTCN).

54. Secondly, there is value in increased coordination at the country level on climate technology efforts. Many national entities support interactions with the UNFCCC and related global institutions, and the range of actors is growing. Stakeholders noted that PSP effectiveness could be enhanced through strengthened links and coordination at the national level between the various national entities. These include a country's the national designated entity (NDE), GEF focal point, regional centre focal point, GCF national designated authorities and focal points, and other UNFCCC national focal points.

⁵³ Interviews with UNEP and ADB representatives.

⁵⁴ The GEF may achieve this, at least in part, through its current efforts to enhance its knowledge management platform. See <<https://goo.gl/OpL6dg>>.

Stakeholders noted the role that the NDE should play in coordinating national technology efforts.

V. Lessons learned in implementing the Poznan strategic programme, as relevant to the operationalization of the Technology Mechanism

A. Support for climate technology centres and a climate technology network

55. With regard to the regional centres, there are experiences and lessons learned of relevance to the Technology Mechanism. First, the regional centres have highlighted the value of a regional presence for climate technology efforts. There are early signs that they are having success in highlighting to the regions the importance of climate technology actions.

56. The regional centre projects have also encouraged the MDBs to develop an increased awareness of the issue and made it more central to their programming and strategy development. Interviews with regional centre stakeholders noted the importance of the projects in creating a dialogue on climate technology options. Yet it is premature to determine whether these have been effective in strengthening the overarching approach of MDBs to climate technology and their capacity to invest more widely in technology transfer. In some cases, stakeholders note that the centres are increasing attention to mitigation technology opportunities as part of their mainstream business.

57. Furthermore, the centres are beginning to help financial institutions engage on climate technology issues. The centres have solid financial expertise and strong links with domestic and regional financial institutions. Stakeholders note that these entities have important roles to play in creating a domestic institutional framework that facilitates technology transfer and innovation.

58. Linkages with the CTCN are key, and the MDBs express interest in strengthening them. Building on initial collaborations, several stakeholders noted the possible benefits of the institutionalization or formalization of linkages between these centres and the CTCN. Furthermore, some project development processes have been complementary to the CTCN's activities.

59. These experiences of the centres have demonstrated that there is a need to complement technical assistance efforts with more innovative finance that addresses risk. Stakeholders noted that some of the GEF funding under the PSP for regional centre projects supports the provision of technical assistance to the MDBs, helping them understand technology options and needs in the context of their ongoing programming. In practice, such assistance is seldom adequate to bridge risk barriers or cost gaps associated with realizing investments.

60. The regional centres have demonstrated potential to successfully engage with key actors at the country and regional levels. For example, the ADB reports that it is building on existing relationships to work with country ministries of finance that have substantial influence over national planning processes and spending priorities. The AfDB and EBRD have prioritized engagement with energy ministries and water agencies.

61. The continuity of the regional centre efforts when the GEF funding ends is an important issue for consideration, although several MDBs have raised additional donor finance for support to do more on climate investment. Some institutions, such as the IDB,

have decided to partner with a range of developed country institutions at the regional level in an effort to ensure the continuity of programming after the PSP funding in GEF-5 ends. However, it remains to be seen whether the regional partners will be able to continue the regional centre projects in the absence of continued funding.

B. Piloting priority technology projects to foster innovation and investments

62. Project implementers stressed the value of the dedicated GEF-4 programming for pilot projects. They noted that this created an opportunity for project developers to focus on barriers to technology development and transfer that they might not have been able to address under normal GEF project-selection processes.

63. Interviewees emphasized that technology transfer projects should be seen as complex processes rather than simple transactions. Projects should be expected to not proceed smoothly owing to their complexity and a combination of national factors. Changes in political conditions and support for projects could be a risk and in some cases led to implementation delays and changes to project scope. The flexibility of the GEF in allowing project implementers to make amendments to their plans subsequent to project approval was critical to enhancing the chances of success.

64. Some stakeholders suggested that the speed of the GEF project cycle was a barrier to engaging the private sector on technology transfer.⁵⁵ Private investors engaged at the project development stage generally could not commit to waiting the one to two years of the GEF project cycle. Some interviewees noted that they had expected expedition of the standard project cycle for the pilot projects given the desire for the pilots to target innovative new approaches and technologies.

65. Stakeholders highlighted the importance of having influential technology champions drive the technology transfer process in recipient countries, both on the ground and at the political level.

66. They also noted that the PSP-supported pilots were more effective and smooth-running when they responded to a demand from the technology users. In some cases, projects had taken more of a technology-push approach, resulting in weakened relevance for country stakeholders and a difficulty in finding partners willing to invest in the technology.

67. Project implementers noted that there had been little opportunity for shared learning across the PSP pilot projects. At the country level, there was usually no awareness that the pilot projects focusing specifically on technology transfer were different from other GEF projects under way. Some stakeholders noted that GEF agencies implementing multiple pilots considered these as individual projects rather than activities that share similar objectives.

C. Public-private partnership for technology transfer

68. Many interviewees highlighted the challenges that the UNFCCC technology transfer architecture faces in engaging the private sector in climate technology efforts. Climate technology institutions need to have networks, experience working in the private sector and a sound understanding of its decision-making structures, needs and incentives. Stakeholders

⁵⁵ Interviews with pilot project proponents and representatives of implementing agencies.

also stressed that financing that targets the private sector needs to be flexible (for instance, regarding its timing and terms and conditions) and tailored to its risks and needs.

69. Limited information on the PPP programmes in the GEF reports to the COP on the PSP has made it difficult to highlight specific experiences or lessons learned of relevance to the Technology Mechanism. However, important experiences and lessons learned with regard to private sector engagement have been accrued during the implementation of the other elements of the PSP, as noted in other sections of this report.

D. Technology needs assessments

70. The strengths of the TNA process include its country-driven nature, the considerable stakeholder engagement and the contributions the process makes to building technology-related capacity in participating institutions and countries. However, the SBI has noted the need for Parties to enhance and follow up on the TNA process by further promoting the development and implementation of economically, environmentally and socially sound project proposals.⁵⁶ In the joint annual report of the TEC and the CTCN for 2014, the TEC noted that the TNA process should be improved to facilitate the implementation of the project ideas emanating from it. This could be done through the provision of technical assistance and finance to each TNA process, which should also aim to integrate economic, environmental and social aspects into the development of the TNA. This would help to ensure that the TNA process results in bankable (commercial and concessional) projects, which is one of the objectives of TNAs.⁵⁷

71. The continuity of funding for TNA activities is an important factor in enhancing the influence and legitimacy of TNAs. The GEF provided funding for TNAs in GEF-4, GEF-5 and GEF-6, with each TNA project drawing on lessons learned from preceding efforts. The GEF treated the first phase of TNAs as a pilot and project implementers have welcomed its willingness to support a second phase building on lessons learned. Interviewees also stressed the importance of the learning process enabled by repeating this process over the years.

72. The COP's mandate to the GEF to support TNAs granted the process a higher level of importance and increased interest in involvement. Participating countries noted that the political legitimacy provided by this mandate had increased the commitment and interest of national actors.

73. Different national institutions being responsible for TNA coordination and for GEF project development creates coordination challenges. As noted previously, countries could be encouraged to enhance coordination and strengthen linkages between different national climate change entities (see chapter IV).

E. The Global Environment Facility as a catalytic supporting institution for technology transfer

74. The promotion by the GEF of the PSP has contributed to highlighting the needs of developing countries with regard to climate technology development and transfer. These efforts underline the importance of undertaking effective communication and outreach activities to highlight the relevance of technology action in achieving the ultimate objective of the Convention.

⁵⁶ FCCC/SBSTA/2014/2, paragraph 37.

⁵⁷ FCCC/SB/2014/3, paragraph 53(a)(i).

75. There is potential for the GEF to enhance the way it reports to the COP on climate technology activities. As noted previously, the GEF considers all mitigation and adaptation GEF-5 projects that have technology-related objectives to be part of the PSP. The GEF does not set aside funding for the PSP in its replenishment periods. Nor does the PSP form part of the replenishment period strategies. Rather, the GEF funds each element of the PSP under country allocations or set-asides in each replenishment period. This is in line with GEF operating procedures and reflects the decisions of the GEF Council. The GEF then reports on these elements together with those of the PSP in its periodic reports to the Conference of the Parties and the SBI. The Technology Mechanism is the key stakeholder of the PSP and was established after the creation of the PSP.

76. There is potential for the GEF to enhance its interactions with key players in the climate technology space, such as private sector entrepreneurs, investors and research centres, either directly or through its partnerships with implementing agencies. The GEF has a strong profile within the climate community and has a large stakeholder base and network.

VI. Mandates: overlap and complementarity

77. The COP and its subsidiary bodies have given mandates to the GEF regarding the PSP and to the Technology Mechanism's bodies, the TEC and the CTCN. This chapter summarizes the overlap and complementarity in such UNFCCC mandates.

78. The climate technology centres and a climate technology network were not the result of a COP decision; the GEF provided funding for the regional centre projects as part of GEF-5. On the Technology Mechanism, COP 16 established the CTCN and decided that the Climate Technology Centre would facilitate a network of national, regional, sectoral and international technology networks, organizations and initiatives with a view to engaging the participants of the Network effectively in agreed functions.⁵⁸ While there are thus no overlaps and complementarities in the COP mandates of the centres and the CTCN, there are overlaps, complementarities and possible synergies in the activities of the centres and those of the CTCN, as noted in chapter VII.

79. On the GEF-4 pilot projects, COP 14 welcomed the initial PSP and requested the GEF to initiate and expeditiously facilitate the preparation of the pilot projects.⁵⁹ Regarding the CTCN, COP 16 decided that the CTCN would provide technical assistance to developing countries, at their request, on climate technology issues.⁶⁰ Although there is no overlap in these mandates, there are complementarities. The following chapter describes how these bodies may build upon such complementarities. It also notes possible opportunities for synergy.

80. On the PPPs, COP 14 requested the GEF to consider the long-term implementation of the PSP, including addressing the gaps identified in current GEF operations relating to, inter alia, leveraging private sector investment in technology transfer.⁶¹ The GEF provided funding for PPPs as part of GEF-5. There are some possible complementarities between the mandates of the CTCN and the TEC to promote, stimulate and facilitate the collaboration

⁵⁸ Decision 1/CP.16, paragraphs 117 and 123. Paragraph 123 lists the functions.

⁵⁹ Decision 2/CP.14, paragraphs 1 and 2(a).

⁶⁰ Decision 1/CP.16, paragraph 123.

⁶¹ Decision 2/CP.14, paragraph 2(c).

of the private sector in climate technology development and transfer.⁶² Chapter VII discusses opportunities for complementarities and synergies in activities on PPPs.

81. Regarding TNAs, there are some complementarities in mandates. COP 14 welcomed the initial PSP and requested the GEF to collaborate with its implementing agencies to provide technical support to developing countries in preparing or updating, as appropriate, their TNAs.⁶³ For the Technology Mechanism, COP 16 mandated the CTCN to provide advice and support related to the identification of technology needs.⁶⁴ The COP also mandated the TEC to provide an overview of technology needs and analysis of policy and technical issues related to technology development and transfer.⁶⁵ Chapter VII discusses complementarities and synergies in their activities.

82. There are also complementarities regarding the mandates of the PSP and of the Technology Mechanism to disseminate experience on climate technologies. COP 14 welcomed the initial PSP, which contained the element on dissemination of GEF experiences and successfully demonstrated environmentally sound technologies. Regarding the Technology Mechanism, the COP mandated the CTCN to facilitate a network to, inter alia, identify, disseminate and assist with developing analytical tools, policies and best practices related to climate technologies.⁶⁶ The following chapter describes complementarities and possible synergies of activities emanating from these mandates.

VII. Activities: overlap, complementarity and synergies

83. Drawing on the previous chapters, this chapter summarizes the overlaps, complementarities and synergies among activities undertaken under the PSP and the Technology Mechanism. Figure 3 shows the geographic overlap between the activities of the GEF under the PSP and the activities of the CTCN as at April 2015. However, the figure does not show the countries in which the regional centres are active. It highlights that, while there are four countries in which both programmes are active, overall there is relatively little geographic overlap.

⁶² For the CTCN, see decision 1/CP.16, paragraph 123(b). For the TEC, see decision 1/CP.16, paragraph 121(d).

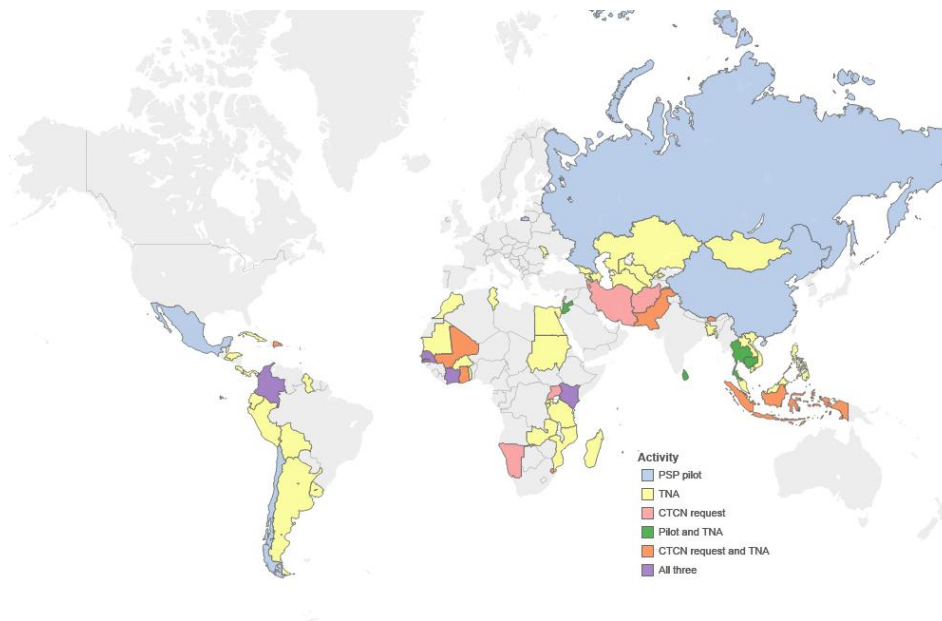
⁶³ Decision 2/CP.14, paragraphs 1 and 2(b).

⁶⁴ Decision 1/CP.16, paragraph 123(a)(i).

⁶⁵ Decision 1/CP.16, paragraph 121(a).

⁶⁶ Decision 1/CP.16, paragraph 123(v).

Figure 3
Geographical distribution of activities of the Poznan strategic programme and activities of the Climate Technology Centre and Network as at April 2015



Abbreviations: CTCN = Climate Technology Centre and Network, PSP = Poznan strategic programme on technology transfer, TNA = technology needs assessments.

A. Support for climate technology centres and a climate technology network

84. There is significant overlap and opportunities for complementarities and synergy among the activities of the regional centres and the CTCN. As noted previously, while each regional centre has slightly different objectives, the overall concept of the centres is to undertake a regional approach to facilitating the deployment of climate technologies. Reported activities often focus on providing technical assistance for scaling up the investment in and technology assessment of climate technologies for country climate change projects. These activities appear to be similar and perhaps overlap with some of those of the CTCN, a core activity of which is providing technical assistance at the request of developing countries. There may also be some overlap in geographical presence. MDB centres have a fixed regional focus based around an institution with a developed regional presence. While the CTCN is a global institution, it consists of a consortium of regional partners. Furthermore, its Network consists of entities located throughout the world.

85. There are also complementarities in the work of the regional centres and the CTCN. The regional centres, as hosted by development banks, have clear expertise in and links to development finance and investment. This may complement the more broad-ranging expertise of the CTCN host institutions (including the consortium partners) and its global Network in supporting developing countries in designing bankable project proposals and implementing climate technology projects. Furthermore, the centres often have direct communication channels with ministries of finance or energy. This may complement the channels of the CTCN, which are often NDEs housed within the ministry of environment. This complementary has the potential to raise the profile of climate technology efforts and make them more central to national sustainable development plans.

86. Building on these complementarities, strengthened coordination and enhanced sharing of experiences between the regional centres and the CTCN have the potential to create synergies and accelerate climate technology development and transfer in the regions. Steps have been taken in this direction, with the COP, the CTCN, the GEF and the regional centres initiating efforts to support closer collaboration and information sharing and encourage emerging linkages.⁶⁷ These efforts include regular meetings between the GEF, the regional centres and the CTCN.

B. Piloting priority technology projects to foster innovation and investments

87. There are no fundamental overlaps between the support of the GEF for pilot projects and the CTCN technical assistance to developing countries. The clear difference is that the GEF provides financial support, while the CTCN provides non-financial technical assistance related to climate technology matters. In the GEF project identification form for the CTCN project, UNIDO, which prepared the proposal, highlighted that the primary difference between the two was that a GEF project facilitated enabling conditions for market transformation while a CTCN request response facilitated enabling conditions for technology decision-making.⁶⁸ Annex VI provides further information on similarities and differences between the GEF projects and CTCN, as identified by UNIDO.

88. The recently approved GEF–CTCN project, described in chapter III, is a clear effort by both bodies to work within their organizational frameworks to appreciate the complementarities and create synergies between the work of the PSP and the Technology Mechanism. Additionally, there is potential for the GEF and the CTCN to explore how the core services of the CTCN could support the ongoing implementation of the current pilot projects.

89. There are also potential complementarities and synergies between the work of the TEC and the pilot projects. The TEC could complement PSP projects by analysing the experiences, good practices and lessons learned during their implementation. It could do so with the aim of providing guidance to the COP to support enhanced project implementation.⁶⁹ In particular, the current work of the TEC on climate technology financing, enabling environments and barriers, and technologies for mitigation and adaptation could be linked to such efforts.

C. Public–private partnership for technology transfer

90. The broad scope of the PSP PPPs and infancy of the TEC and the CTCN work with the private sector currently result in an absence of overlap between the activities of these entities. However, as the Technology Mechanism bodies develop their activities with regard to private sector engagement, and noting that the Network of the CTCN contains

⁶⁷ Emerging linkages include the following: UNEP is co-implementing the Asian regional centre project with the ADB and has nominated the UNEP project coordinator as the UNEP regional focal point for the CTCN in Asia-Pacific. IDB, the host of the Latin America regional centre, has engaged in a partnership with the CTCN partner institutions based in Latin America (Centro Agronómico Tropical de Investigación y Enseñanza and Fundación Bariloche) for delivering various activities of the regional centre.

⁶⁸ <<http://goo.gl/gh3C1K>>.

⁶⁹ For example, decision 17/CP.20 requested the TEC to provide guidance on how the TNA results, in particular TAPs, can be developed into projects that can be ultimately implemented.

private sector entities, efforts should be made to ensure that the Technology Mechanism and the GEF, through the PSP, appreciate possible complementarities and build synergies between their activities.

D. Technology needs assessments

91. Currently, the institutions of the PSP and the Technology Mechanism are working in collaboration to ensure that there is no overlap of activities in supporting developing countries to undertake TNAs. UNEP is the implementing agency of the GEF TNA global projects and gives technical assistance to countries for undertaking TNAs. However, there are potential complementarities and synergies that could be appreciated and explored with regard to both supporting TNAs and implementing TNA results. First, the CTCN may, at the request of a developing country, provide technical assistance to that country in undertaking its TNA. Such support may be additional to that provided by the UNEP DTU Partnership.

92. Indeed, the CTCN has noted that it has already been approached by some developing countries seeking technical support for implementing TNA priorities. The CTCN is currently developing a TNA implementation support programme to assist countries in this regard.⁷⁰

93. With an ongoing focus on TNAs, the TEC also undertakes complementary activities that have the potential to create synergies with CTCN efforts and those under the PSP to catalyse the implementation of the TNA results. In particular, COP 20 requested the TEC to provide guidance on how the results of the TNAs could be developed into projects that could be ultimately implemented.⁷¹ The TEC will provide a report on its findings to the subsidiary bodies at their forty-third sessions.

E. The Global Environment Facility as a catalytic supporting institution for technology transfer

94. Rather than simply overlapping, the ongoing communication and outreach efforts of the GEF, the TEC and the CTCN to promote technology development and transfer and disseminate information on their activities are complementary in nature. They have the potential to build synergies that effectively highlight the importance of technology in enhancing country efforts on climate change. Indeed, their efforts are beginning to build a broad network of coordinated key technology actors, and there are opportunities to enhance complementarities. At present, the sub-networks that have been catalysed by the MDBs, the GEF pilot programmes and now the CTCN operate somewhat independently. Going forward, there are opportunities to consider how to strengthen and sustain engagement across this wide range of actors, and to engage new actors in the international climate architecture, recognizing that there will also continue to be a need for smaller sub-communities that focus on particular aspects of the technology challenge.

⁷⁰ The activities of this paragraph are to be undertaken in accordance with decision 1/CP.16, paragraph 123(a)(i).

⁷¹ Decision 17/CP.20, paragraph 13.

VIII. Key messages and recommendations

95. The TEC drew on the evaluation undertaken as described in this report to provide the following key messages and recommendations regarding the PSP with a view to enhancing the effectiveness of the Technology Mechanism.

A. Key messages

96. The TEC has the following key messages:

(a) The TEC recognizes that technology transfer projects are not simple transactions. They are complex processes owing to a combination of national and international factors. Changes in political conditions and support for projects can be a risk and in some cases lead to implementation delays and changes to project scope;

(b) The TEC further recognizes the challenges in engaging the private sector in UNFCCC climate technology efforts. To effectively engage the private sector, climate technology institutions must understand its decision-making structures, needs and incentives. The TEC will continue its work on engaging the private sector in its future work programmes;

(c) The PSP has contributed to raising the profile of the important role that climate technology development and transfer plays in supporting countries to meet the ultimate objective of the Convention. It has also created opportunities for a range of institutions, including the GEF and the MDBs, to support climate technology development and transfer and mainstream these considerations in their programming strategies;

(d) The Technology Mechanism and the PSP are central to advancing global climate technology efforts. In addition, the TEC recognizes that the GCF will play an important role in the future;

(e) The PSP climate technology transfer and finance centres have the potential for significant impact at the regional level. With their significant regional network and expertise in development finance, the climate technology transfer and finance centres can play an important role in technology project implementation. The continuity of these regional centre efforts when the GEF funding ends is an important issue for consideration, although several MDBs have raised additional donor finance for support to do more on climate investment;

(f) The complementary efforts of the PSP and the Technology Mechanism on TNAs have the potential to enhance the implementation of TNA results. The CTCN has the potential to play a critical role in bridging the gap between the TNA process and project implementation. The TEC will complement these efforts by providing guidance on how the results of the TNAs, in particular the TAPs, can be developed into projects that can be ultimately implemented;⁷²

(g) As the operating entities of the Financial Mechanism primarily support specific projects, they have not been able to support the administrative functions of programmes such as the CTCN or the PSP climate technology transfer and finance centres;

(h) To achieve funding for specific projects from the operating entities of the Financial Mechanism, the CTCN will need to adhere with these entities' funding criteria, as was done with the GEF–CTCN project.

⁷² In accordance with decision 17/CP.20.

B. Recommendations

97. With a view to enhancing the effectiveness of the Technology Mechanism, the TEC has the following recommendations:

(a) The TEC encourages the GEF to further catalyse the scaling-up of good practices under the PSP and the sharing of experiences and lessons learned among PSP elements and with relevant stakeholders;

(b) To enhance the sharing of PSP experiences, the TEC recommends that the GEF be invited to share the midterm evaluations of the PSP climate technology transfer and finance centres and the GEF-4 pilot projects with the TEC as soon as available. These would be shared with the aim of the TEC preparing a synthesis report on the experiences and lessons learned from these activities for consideration by COP 23 through the SBI;

(c) Institutional linkages between the PSP climate technology transfer and finance centres and the CTCN could strengthen coordination, enhance information-sharing and create synergies that accelerate regional climate technology development and transfer. Such efforts could build on the informal systems that are already in place. The TEC recommends that the centres and the CTCN be encouraged to strengthen such linkages;

(d) Countries can enhance coherence and effectiveness of national climate technology efforts by strengthening links between the different national entities. The TEC encourages countries to explore how they may strengthen links between their NDE, GEF focal point, regional centre focal point, GCF national designated authority or focal point, and other UNFCCC national focal points. The NDE should play a role in coordinating national technology efforts and engaging with the focal points for the operating entities of the Financial Mechanism;

(e) The TEC recommends that the COP invite the GEF to structure its report on the PSP under the areas of (1) regional and global climate technology activities, (2) national climate technology activities, and (3) TNAs, with a view to enhancing the clarity of GEF reporting, strengthening coherence and building synergies between the activities of the PSP and the Technology Mechanism;

(f) The TEC recommends that the GEF report annually to the COP through the SBI on the progress made in carrying out its activities under the PSP, including its long-term implementation, instead of twice per year as stipulated in document FCCC/SBI/2011/7, paragraph 137.

Annex I

[English only]

Further information on the Poznan strategic programme and the Technology Mechanism

1. This annex complements chapter II of the report by providing further information on the Poznan strategic programme on technology transfer (PSP) and the Technology Mechanism.

I. Poznan strategic programme

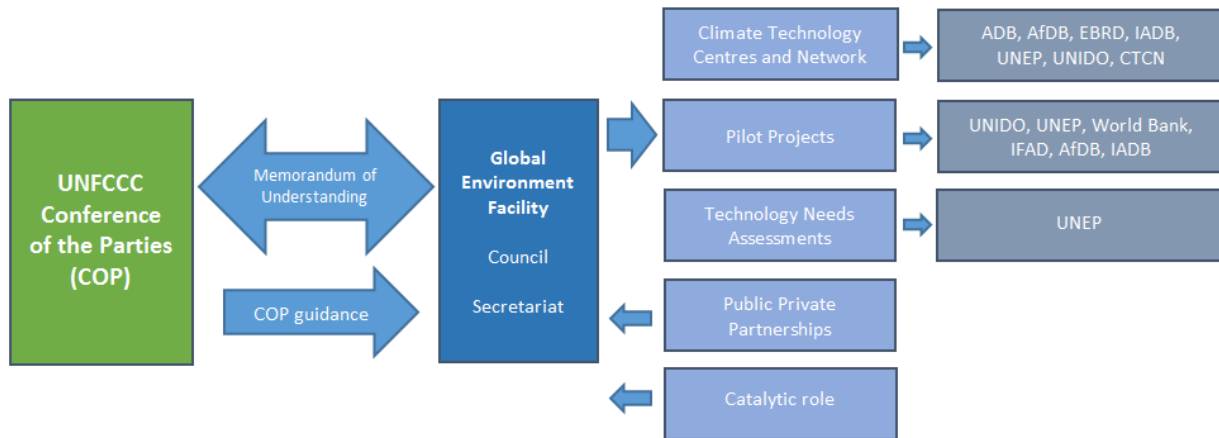
2. The Global Environment Facility (GEF), as an operating entity of the Financial Mechanism and as per the memorandum of understanding between the Conference of the Parties (COP) and the GEF, provides financial resources, including for the transfer of technology. The COP communicates to the Council of the GEF any policy guidance approved by the COP concerning the Financial Mechanism.¹

3. In accordance with the memorandum of understanding, the COP tasked the GEF with executing the PSP in its capacity as an operating entity of the Financial Mechanism of the Convention. Figure 4 illustrates the decision-making structures of the GEF in delivering the PSP, with arrows indicating execution responsibility. Accredited GEF agencies implement most PSP activities.

4. GEF funding, including for the PSP, is provided by GEF participant countries every four years through a replenishment process; currently, the GEF is in its sixth replenishment period (GEF-6). The GEF Council approves the fund allocations for the GEF replenishment periods after reviewing its operational performance and developing a replenishment strategy. Primarily, the GEF allocates funding from its trust fund to developing countries through a country-based system for the transparent allocation of resources. The GEF also allocates set-aside funding for global programmes and activities to support Convention reporting (such as national communications and biennial update reports); this tends to be a modest share of the GEF overall programming budget.

¹ Decision 12/CP.2, annex, paragraph 3.

Figure 4
The decision-making structures of the Global Environment Facility for executing the Poznan strategic programme



Abbreviations: ADB = Asian Development Bank, AfDB = African Development Bank, CTCN = Climate Technology Centre and Network, EBRD = European Bank for Reconstruction and Development, IADB = Inter-American Development Bank, IFAD = International Fund for Agricultural Development, UNEP = United Nations Environment Programme, UNIDO = United Nations Industrial Development Organization.

II. Technology Mechanism

5. The Technology Executive Committee is the Technology Mechanism’s policy arm, addressing policy and strategic issues related to climate technology development and transfer. It analyses key climate technology policy issues and provides recommendations to support countries in enhancing climate efforts. The Committee consists of 20 technology experts representing developing and developed countries alike. It meets several times per year and holds climate technology events that support efforts to address key technology policy issues.

6. The Climate Technology Centre and Network (CTCN) is the Technology Mechanism’s implementation arm, supporting country efforts to enhance the transfer and implementation of climate technologies. It is hosted by the United Nations Environment Programme in collaboration with the United Nations Industrial Development Organization, with the support of 11 consortium members located in developing and developed countries. The CTCN has three core services: (1) providing technical assistance at the request of developing countries; (2) creating access to knowledge on climate technologies; and (3) fostering collaboration among climate technology stakeholders. The Climate Technology Centre coordinates the Network and engagement with national designated entities, which serve as national counterparts for engagement on climate and technology issues.

Annex II

[English only]

Further information on support for climate technology centres and a climate technology network of the Poznan strategic programme

Table 1
Support of the Global Environment Facility for climate technology centres and a climate technology network

<i>Project title</i>	<i>Region</i>	<i>Agency</i>	<i>GEF financing (USD millions)</i>		<i>Co-financing (USD millions)</i>	<i>Date of approval/ endorsement</i>
			<i>GEFTF</i>	<i>SCCF</i>		
Promoting accelerated transfer and scaled-up deployment of mitigation technologies through the Climate Technology Centre and Network	Global	UNIDO	1.8	0	7.2	GEF Chief Executive Officer approved (June 2015)
Pilot Asia-Pacific Climate Technology Network and Finance Centre	Asia-Pacific	ADB/ UNEP	10.0	2.0	74.7	GEF Chief Executive Officer endorsed (May 2012)
Pilot African Climate Technology Finance Centre and Network	Africa	AfDB	10.0	5.8	89.0	GEF Chief Executive Officer endorsed (April 2014)
Regional Climate Technology Transfer Centre	Europe and Central Asia	EBRD	10.0	2.0	77.0	GEF Chief Executive Officer endorsed (July 2013)
Climate Technology Transfer Mechanisms and Networks in Latin America and the Caribbean	Latin America and the Caribbean	IDB	10.0	2.0	63.4	GEF Chief Executive Officer endorsed (September 2014)

Abbreviations: ADB = Asian Development Bank, AfDB = African Development Bank, EBRD = European Bank for Reconstruction and Development, GEF = Global Environment Facility, GEFTF = Global Environment Facility Trust Fund, IDB = Inter-American Development Bank, SCCF = Special Climate Change Fund, UNIDO = United Nations Industrial Development Organization.

1. To date, reporting and midterm evaluations have been limited and it is therefore difficult to measure the impact so far. The African Development Bank and the Inter-American Development Bank (IDB) only just began implementing their centre projects, while no midterm reviews had been completed yet for the centres hosted by the Asian Development Bank (ADB) and the European Bank for Reconstruction and Development, which were at a somewhat more advanced stage. Refer to table 1 for further details. The following focuses on the ADB centre, which is the most advanced in terms of implementation.

2. The ADB, in collaboration with United Nations Environment Programme (UNEP), established the Asian centre with the goal of incorporating a climate technology component into ongoing ADB programming in relevant sectors, as well as harnessing the ADB investment capacity, particularly in the emerging venture capital and private investment space in developing Asia. Stakeholders interviewed observed that the objective of shifting and reshaping how the ADB approaches technology and supports technology transfer remained a work in progress. The funding of the Global Environment Fund (GEF) for the

centre has often been used to provide technical assistance and assessment support alongside programming by operational leads.

3. The ADB-UNEP centre has also placed a strong emphasis on mobilizing private investment in climate technologies, particularly low-carbon technologies. The initial approach that the ADB took to partner with its own venture capital funds proved challenging, in part as a result of timing: the programme was launched just after the financial crisis when there were few venture capital funds focused on the climate technology space. These were also new areas for ADB investment teams.

4. The Asian centre has also placed a strong emphasis on mobilizing private investment in climate technologies, particularly low-carbon technologies. The initial approach that the ADB took to partner with its own venture capital funds proved very challenging, in part as a result of timing: the programme was launched just after the financial crisis when there were very few venture capital funds focused on the climate technology space. These were also new areas for ADB investment teams. Ultimately, it took three years to identify three possible investments, only two of which ultimately materialized. It also became clear that specialist investor funds did not necessarily want technical assistance from the Bank on technology assessment. Instead, they needed support to address risks impeding investment in the sectors in which they already had a record.

5. The ADB sought to learn from this experience, providing more direct support to firms and small companies in response to demand. The centre has supported three capacity development programmes for clean technology entrepreneurs to help create a pipeline of climate technology businesses that will attract investments by venture capital and private equity funds. The centre is also supporting the Asia Climate Partners, a joint private equity venture through the ADB private sector operations. In addition, the ADB centre has supported IPEX Cleantech Asia, a clean technology intellectual property transfer marketplace in Asia, as a match-making platform that brings low-carbon technology holders together with those seeking such technologies.

6. The IDB-administered centre was approved in late 2014 and has just over six months' of implementation to date. It funds technology transfer in the transport sector through the EMBARQ centre on sustainable transport at the World Resources Institute; renewable energy and energy efficiency through Fundación Bariloche; forests through the Centro Agronómico Tropical de Investigación y Enseñanza; and agriculture through the Fundagro fund, which it helped establish. This approach of building on the operations of established regional organizations has been taken in part as a means to ensure that the capacities built up through the project can continue once the GEF funding has ended.

7. The GEF notes that the rationale for grounding centres in regional development banks was to be able to harness the investment capacity of these institutions in their respective regions.¹ In the case of the ADB, some new approaches to working with the private sector have been piloted, though evidence of concrete impact within countries was not yet definitively available. Similarly, the European Bank for Reconstruction and Development noted that several projects were well under way, and some successful transactions, such as upgrading cooling systems in the beverage industry in Kyrgyzstan, for example, had been carried out. In both cases, forthcoming midterm reviews should provide a richer empirical basis for assessing progress and drawing lessons.

¹ See <https://www.thegef.org/gef/sites/thegef.org/files/documents/document/GEF-report_UNFCCC_SBI_tech_transfer.pdf>.

Annex III

[English only]

Further information on the pilot projects of the Poznan strategic programme from the fourth replenishment period of the Trust Fund of the Global Environment Facility

Table 2

Information on the pilot projects of the Poznan strategic programme from the fourth replenishment period of the Trust Fund of the Global Environment Facility

<i>Project</i>	<i>Country</i>	<i>Counter-part(s)</i>	<i>Technology</i>	<i>Approach taken</i>	<i>GEF funding at the GEF CEO Endorsement (USD millions)</i>
Climate change related technology transfer for Cambodia: using agricultural residue biomass for sustainable energy solutions	Cambodia	UNIDO	Agro-waste biomass energy systems	Technical assistance and investment to assist transfer of biomass plants to two pilot firms. Capacity building for national suppliers and relevant government departments.	1.9 GEF grant, 4.6 co-finance
Promotion and development of local solar technologies in Chile	Chile	IDB	Solar: photovoltaic and concentrated solar power	Project will include: (1) the development of standards and monitoring protocols for solar panels and solar systems; (2) training for public and private stakeholders on concentrated solar power and photovoltaic systems, and (3) public awareness campaign to promote solar technology projects for both solar water heating and power generation.	3.0 GEF grant, 31.8 co-finance
Green truck demonstration project	China	World Bank	Energy-efficient trucks	Investment for retrofitting of 150 trucks, purchase of 150 new trucks, driver training, intellectual property right purchase/transfer. Technical assistance for all key partners e.g. on greenhouse gas measurement/verification, policy and institutional frameworks for scale-up.	4.9 GEF grant, 9.8 co-finance
Solar chill: commercialization and transfer	Colombia, Kenya, Swaziland	UNEP	Solar refrigeration (for rural medical application)	Testing of two solar chill technologies, investment in procurement/installation of 100 units in each country	3.0 GEF grant, 8.0 co-finance
Construction of 1000 ton per day municipal solid wastes composting unit in Akouedo Abidjan	Côte d'Ivoire	AfDB	Municipal solid waste composting unit	Investment in construction and operation of a pilot 1,000 tonnes/day industrial composting unit in Abidjan, Côte d'Ivoire	3.0 GEF grant, 36.9 co-finance
Dutyion root hydration system irrigation technology pilot project to face climate change impact	Jordan	IFAD	Innovative irrigation system	Investment in pilot demonstration of irrigation technology, technical assistance to train local farmers and stakeholders	2.4 GEF grant, 5.5 co-finance
Promotion and development of local wind technologies in Mexico	Mexico	IDB	Wind	Technical assistance to increase capacity for local development and implementation of wind power technology, investment to develop	5.5 GEF grant, 33.7 co-finance

<i>Project</i>	<i>Country</i>	<i>Counter-part(s)</i>	<i>Technology</i>	<i>Approach taken</i>	<i>GEF funding at the GEF CEO Endorsement (USD millions)</i>
Phase-out of hydrochlorofluorocarbons and promotion of hydrofluorocarbon-free energy efficient refrigeration and air-conditioning systems in the Russian Federation through technology transfer	Russian Federation	UNIDO	Energy efficient refrigeration and air-conditioning systems	and test prototype wind turbine built using high component of national technology and manufacturing. Technical assistance to build institutional capacity for phase out of ozone-depleting substance technologies, investment to support phase out and destruction, technical assistance and investment to stimulate market growth for non-hydrofluorocarbon options.	20.0 GEF grant, 40.0 co-finance
Typha-based thermal insulation material production in Senegal	Senegal	UNDP	Organic building insulation (using invasive plant material)	Technical assistance / investment for basic evaluation and research, transfer of tech and know-how, establishing local production, adapting the material for local application, a demonstration project and dissemination.	2.3 GEF grant, 5.6 co-finance
Bamboo processing for Sri Lanka	Sri Lanka	UNIDO	Bamboo cultivation (as land rehabilitator and sustainable energy source)	Scientific and technical analysis / technical assistance / investment to develop policy framework, laboratory for bamboo tissue reproduction, 10,000 hectares of bamboo plantation, machinery for wood flooring production and biomass pelletization production, along with associated capacity/know-how for sustainable operation	2.7 GEF grant, 21.3 co-finance
Overcoming policy, market and technological barriers to support technological innovation and south-south technology transfer: the pilot case of ethanol production from cassava	Thailand	UNIDO	Bioethanol production	The project aims at removing barriers and promoting technology transfer in the production of ethanol and at enhancing South-South cooperation. Also aims to increase fermentation efficiency in ethanol production, to promote private sector engagement, and to transfer the associated technologies to other countries in South-Eastern Asia. Includes technology demonstrations to enhance and motivate full-scale technology investments (e.g., it offers to establish a demonstration plant in collaboration with an interested partner). In order to remove policy and financial barriers, the project also provides training to policymakers, banks, and entrepreneurs.	3.0 GEF grant, 31.6 co-finance

Source: FCCC/SBI/2015/INF.4, appendices 2 and 3, and information provided by the GEF secretariat.

Abbreviations: AfDB = African Development Bank, GEF = Global Environment Facility, IDB = Inter-American Development Bank, IFAD = International Fund for Agricultural Development, UNDP = United Nations Development Programme, UNEP = United Nations Environment Facility, UNIDO = United Nations Industrial Development Organization.

Table 3

Information on the cancelled pilot projects of the Poznan strategic programme from the fourth replenishment period of the Trust Fund of the Global Environment Facility

<i>Title</i>	<i>Country</i>	<i>Agency</i>	<i>GEF Poznan Programme Funding (USD millions)</i>	<i>Total GEF Funding (USD millions)</i>	<i>Co-financing (USD millions)</i>	<i>Status of Project</i>
Renewable CO ₂ capture and storage from sugar fermentation industry in Sao Paulo State	Brazil	UNDP	3.0	3.0	7.7	The project was cancelled in February 2012 upon request from the Agency. The project preparation identified investment costs far higher than initially expected, exceeding the available financing.
Introduction of renewable wave energy technologies for the generation of electric power in small coastal communities	Jamaica	UNDP	0.8	0.8	1.4	The project was cancelled in October 2011 upon request from the Agency.
Realizing hydrogen energy installations on small island through technology cooperation	Turkey, Cook Islands	UNIDO	3.0	3.0	3.5	The project was cancelled in March 2012 upon request from the agency following changes in the concerned governments' priorities.

Source: FCCC/SBI/2015/INF.4, appendix 3.

Abbreviations: GEF = Global Environment Facility, UNDP = United Nations Development Programme, UNIDO = United Nations Industrial Development Organization.

Annex IV

[English only]

Further information on the public–private partnerships of the Poznan strategic programme

<i>Title</i>	<i>Region</i>	<i>Agency</i>	<i>GEF financing (USD millions)</i>	<i>Co-financing (USD millions)</i>	<i>Date of approval/ endorsement</i>
AfDB Public-Private Partnership Programme	Africa	AfDB	20.0	240.0	GEF Chief Executive Officer endorsed (June 2012)
IDB Public-Private Partnership Programme	Latin America and the Caribbean	IDB	15.0	266.3	GEF Council approved (June 2012)
Public-Private Partnership-EBRD South Eastern Mediterranean Energy Efficiency and Energy Services Company Markets Platform	Africa, Asia	EBRD	15.0	150.0	GEF Chief Executive Officer endorsed (September 2014)
Sustainable Caribbean Basin Private Equity Fund	Latin America and the Caribbean	IDB	15.0	200.0	GEF Council approved (June 2013)
IDB-GEF Climate Smart Agriculture Fund for Latin America and the Caribbean	Latin America and the Caribbean	IDB	5.0	50.9	GEF Chief Executive Officer endorsed (March 2015)
International Lighting Efficiency Facility	Global	World Bank	1.2	50.3	GEF Chief Executive Officer approved (June 2015)

Source: GEF correspondence to the Technology Executive Committee.

Abbreviations: AfDB = African Development Bank, EBRD = European Bank for Reconstruction and Development, GEF = Global Environment Facility, IDB = Inter-American Development Bank.

Annex V

[English only]

Further information on technology needs assessments of the Poznan strategic programme¹

Countries that participated in technology needs assessment activities under the Poznan strategic programme

Global technology needs assessment project, phase I

Africa

Cote d'Ivoire, Ethiopia,² Ghana, Kenya, Lebanon, Mali, Mauritius, Morocco, Rwanda, Senegal, Sudan, Zambia

Asia-Pacific

Bangladesh, Bhutan, Cambodia, Indonesia, Kazakhstan,³ Lao People's Democratic Republic,⁴ Mongolia, Nepal,⁵ Sri Lanka, Thailand, Viet Nam

Eastern Europe

Azerbaijan, Georgia, Republic of Moldova

Latin America and the Caribbean

Argentina, Bolivia (Plurinationalist State of),⁶ Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala,⁷ Peru

Global technology needs assessment project, phase II

Africa

Burkina Faso, Burundi, Egypt, Gambia, Jordan, Madagascar, Mauritania, Mozambique, Seychelles, Swaziland, Tanzania, Togo, Tunisia

Asia-Pacific

Kazakhstan,⁸ Lao People's Democratic Republic,⁹ Malaysia, Pakistan, Philippines

Eastern Europe

Armenia, Turkmenistan, Uzbekistan

Latin America and the Caribbean

Belize, Bolivia (Plurinationalist State of), Grenada, Guyana, Honduras, Panama, Uruguay

Other technology needs assessment activities

The GEF reports approving 13 national projects that incorporate TNA-support activities in projects otherwise focused on the preparation of national communications and biennial update reports between September 2011 and March 2015 in Bosnia and Herzegovina,

¹ Source: FCCC/SBI/2015/INF.4, annex, and correspondence with the GEF secretariat and UNEP.

² Country did not submit TNA reports; GEF funding for these countries was returned to the GEF.

³ Country was unable to complete its TNA and was invited to continue in phase II (with no additional funding).

⁴ As footnote 3 above.

⁵ Country project was rolled over from first generation TNAs in 2004 (with no additional funding).

⁶ As footnote 3 above.

⁷ As footnote 2 above.

⁸ Participating in phase II to conclude its TAP report.

⁹ As footnote 8 above.

Botswana, China, Côte d'Ivoire, India, Jamaica, Kuwait, Nicaragua, Namibia, Papua New Guinea, South Africa, Togo and Tunisia.

Annex VI

[English only]

Comparison of projects of the Global Environment Facility and request responses of the Climate Technology Centre and Network

GEF project – enabling conditions for market transformation *CTCN request response – enabling conditions for technology decision-making*

Conditions for selection

Achieving real, measurable and verifiable global environment benefits	Generates demonstrable positive benefits to Climate Change mitigation and/or adaptation
Demonstrating incremental costs reasoning, and thus requiring to secure co-financing	Aligned with national priorities
Driven by country needs	Enhances local capacities

Types of activities

Policy support	Policy assessment and road mapping
Technical assistance to transfer and diffuse technologies	Expert assistance to assess and select low-emission/adaptation technologies for transfer
Capacity-building	Access to knowledge on climate technologies
Investment promotion	Strengthen networks, partnerships and capacity-building

Execution

Undertaken by national execution or regional agencies with supervision by GEF implementing agency	Undertaken by CTCN Consortium partners and/or Network members
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Monitoring and evaluation

Undertaken by GEF implementing agency following GEF evaluation policy	Undertaken by national agencies (national designated entity led) as described in individual request response plans
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Typical time frame and scale for projects

Project preparation phase: up to 12 months for medium-sized project	Request assessment up to 6 weeks
Project execution: 3 to 5 years	Request response: < 1 year
Medium-sized project < USD 2 million	About USD 50–250 for quick and large response, respectively
Full-sized project > USD 2 million	

Source: UNIDO project identification form for GEF project in support of the CTCN and comments by the GEF secretariat.

Abbreviations: CTCN = Climate Technology Centre and Network, GEF = Global Environment Facility, United Nations Industrial Development Organization.

Annex VII

[English only]

Information sources and limitations to the evaluation of the Poznan strategic programme on technology transfer

I. Information sources

1. The evaluation by the Technology Executive Committee (TEC) of the Poznan strategic programme on technology transfer (PSP) was undertaken in accordance with the evaluation's terms of reference as prepared by the TEC. In accordance with the terms of reference chapter V, "Information Sources", the evaluation was based on information requested from Parties and the Global Environment Facility (GEF) and its agencies. Information for the evaluation was drawn from:

- (a) Relevant decisions of the Conference of the Parties and conclusions of the Subsidiary Body for Implementation;
- (b) GEF reports on progress in implementing the PSP, including project reports;
- (c) Reports of the TEC and the Climate Technology Centre and Network (CTCN);
- (d) Information shared by the GEF in the process of consultation with the internal TEC task force;
- (e) Information shared by the CTCN during consultations with the internal TEC task force;
- (f) Information shared by external experts and stakeholders, including Parties, beneficiary countries of the PSP, GEF agencies and international financial institutions.

2. With regard to paragraph 1(f) above, semi-structured interviews were conducted with a wide range of participants in the implementation of the PSP and relevant stakeholders. All nine countries participating in the pilot projects from the fourth replenishment period of the GEF Trust Fund were contacted. Interviewees included representatives of:

- (a) African Development Bank;
- (b) Asian Development Bank;
- (c) CTCN secretariat;
- (d) European Bank for Reconstruction and Development;
- (e) GEF secretariat;
- (f) Green Climate Fund secretariat;
- (g) Inter-American Development Bank;
- (h) International Fund for Agricultural Development;
- (i) Ministry of Environment, Colombia;
- (j) Ministry of Environment, Republic of Moldova;
- (k) National Science Technology and Innovation Policy Office, Ministry of Science and Technology, Thailand;

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- (l) Radboud University Nijmegen, The Netherlands;
 - (m) University of Sussex, United Kingdom of Great Britain and Northern Ireland;
 - (n) United Nations Environment Programme (UNEP);
 - (o) UNEP DTU Partnership;¹
 - (p) United Nations Industrial Development Organization.

3. Interviews were based on a common questionnaire tailored to each interviewee's particular experience and expertise. They were conducted on a not-for-attribution basis to ensure the interviewees were candid in sharing their views. While interview transcripts were compiled, all material gleaned through these interviews has been made anonymous. The report also draws on relevant secondary literature on effective financing for technology transfer and the role of the GEF in technology transfer. There were no third-party reviews of the PSP on which the evaluation could draw.

II. Limitations

4. While the exercise has sought to be thorough and incisive, it does not constitute a full evaluation of the PSP. First, the emphasis of the exercise, in accordance with guidance from the Conference of the Parties and the Subsidiary Body for Implementation, has been to understand the PSP-related experiences and lessons learned with the aim of building on them to enhance the Technology Mechanism's effectiveness. Secondly, with the exception of the technology needs assessment activities, no projects have been completed, nor have any midterm reviews for any of the pilot projects or regional centre projects. This means that little quantitative data on impact or results of programmes financed is available. Thirdly, the report has been completed in a limited time frame and on the basis of desk reviews and interviews.

¹ The partnership, formerly known as the UNEP Risoe Centre, operates under a tripartite agreement between Denmark's Ministry of Foreign Affairs, The Technical University of Denmark (DTU), and UNEP.