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气候变化框架公约

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缔约方会议

第二十三届会议

2017年11月6日至17日，波恩

临时议程项目 8 (b)

技术的开发和转让以及技术机制的实施

审查气候技术中心和网络的有效实施

## 关于气候技术中心和网络的有效实施的独立审查报告

### 内容提要

本报告载有对气候技术中心和网络的有效实施情况的独立审查结果。它详细介绍了气候技术中心和网络成立以来四年的历史，包括其运作和其核心服务的实施。此外，它还提供了所评估各个领域(相关性、有效性、效率、影响和可持续性)的主要结果，审查的结论和提高气候技术中心和网络绩效的建议。

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## 一. 导言

### A. 任务

1. 缔约方会议第十六届会议设立了技术机制，<sup>1</sup>目的是加强气候技术的开发和转让行动。该机制由两个机构组成：作为其政策部门的技术执行委员会(技执委)和作为其实施部门的气候技术中心和网络。
2. 缔约方会议第十七届会议商定了使技术机制在 2012 年投入全面运作的安排，并通过了气候技术中心和网络的职权范围<sup>2</sup>和气候技术中心东道方的甄选程序。<sup>3</sup>它还请秘书处资源许可的情况下，委托对气候技术中心和网络成立四年来的有效实施情况进行独立审查。审查结果，包括关于提高气候技术中心和网络绩效的任何建议，将由缔约方会议进行审议。随后，将每四年一次，定期审查气候技术中心和网络的有效性。<sup>4</sup>
3. 秘书处根据联合国条例进行采购，选定安永会计师事务所(以下简称顾问)对气候技术中心和网络有效实施情况进行独立审查。

### B. 缔约方会议可能采取的行动

4. 将请缔约方会议审议对气候技术中心和网络的独立审查得出的结论和建议，并确定是否应采取任何行动提高气候技术中心和网络的绩效。

## 二. 执行概要

### A. 审查工作的背景

5. 缔约方会议第十七届会议要求秘书处在资源许可的前提下在气候技术中心和网络成立四年之后对其实施的有效性进行一次独立审查。审查结果，包括关于提高气候技术中心和网络绩效的任何建议，将由缔约方会议审议。
6. 秘书处根据联合国条例进行采购，选定安永会计师事务所(以下简称顾问)对气候技术中心和网络的有效实施情况进行独立审查。
7. 气候技术中心和网络有三项核心服务：(1) 应发展中国家的请求提供技术援助；(2) 开辟获取气候技术信息和知识的渠道；(3) 组织气候技术利益攸关方的外联和网络活动。
8. 气候技术中心和网络的关键组成部分是其网络。气候技术中心和网络通过该网络，推动利益攸关方支持其三项核心服务。

<sup>1</sup> 第 1/CP.16 号决定，第 117 段。

<sup>2</sup> 第 2/CP.17 号决定，第 133 段。

<sup>3</sup> 第 2/CP.17 号决定，第 136 段。

<sup>4</sup> 第 2/CP.17 号决定，附件七，第 20 段。

9. 气候技术中心和网络的活动依靠作为国家利益攸关方和气候技术中心和网络联络点的国家指定实体。国家指定实体通过管理(对发展中国家的)国家技术援助请求, 促进参与网络, 协调区域和全球同行学习、协作、报告和反馈, 来支持气候技术中心和网络的国别活动。

## B. 气候技术中心和网络的成就

10. 截至 2017 年 4 月, 气候技术中心和网络收到了 181 项技术援助请求, 其中 13 项已完成, 49 项正在执行阶段, 40 项在设计阶段, 29 项正在审查中, 50 项处于停滞状态。

11. 气候技术中心和网络通过其通信工具和知识管理系统, 提供关于其活动和气候技术的信息。截至 2016 年 12 月, 网站上共有各种来源, 包括网络成员的 10,768 项信息资源。气候技术中心和网络为 2200 多名与会者举办了 75 次网络研讨会。

12. 2013 至 2016 年期间, 气候技术中心和网络举办了 21 次区域论坛和讲习班, 培训国家指定实体, 目的是确保发展中国家持续提出高质量请求。约有 650 名与会者出席, 包括超过 134 个国家的国家指定实体代表。气候技术中心和网络还组织了三次利益攸关方论坛, 以与私营部门接触。

13. 气候技术中心和网络特别通过孵化器方案支持最不发达国家的国家指定实体, 提供专门的强化培训。截至 2017 年 3 月, 已有 19 个国家参加, 提交了 14 项技术援助请求

## C. 审查结果

### 1. 相关性

14. 联合国环境规划署(环境规划署)与联合国工业发展组织(工发组织)合作设计了一个组织结构, 并为气候技术中心和网络核心小组提供行政和基础设施支持。环境规划署和工发组织在核心小组的支持下, 对缔约方会议赋予气候技术中心和网络的任务作出了很好的反应。气候技术中心和网络对发展中国家的需要保持敏感, 并已在气候技术支持组织的全球生态系统中显示出其重要性。气候技术中心和网络服务的受益者表现出很高的满意度; 它们赞赏气候技术中心和网络强有力的基础性工作, 以及其活跃的和因地制宜的援助。

15. 气候技术中心和网络促进了与全球环境基金和绿色气候基金等金融机构以及技术合作伙伴的协同, 以避免冗余现象并加强其活动的杠杆作用。

### 2. 有效性

16. 气候技术中心和网络在知识管理、同行学习和能力建设方面提供了预期水平的产出, 有时还超出了预期水平。但是, 它没有达到技术援助项目和网络活动目标, 如下文所示

(a) 虽然气候技术中心和网络交付的技术援助响应和项目少于预期, 但对国家指定实体和受益者的请求作出了妥善的反应;

(b) 知识管理系统有力支持实施了气候技术中心和网络的业务和活动;

(c) 所交付的能力建设活动，其数量与计划的数量相当，并且有效地赋予国家指定实体权能来确定和提交相关请求。气候技术中心和网络对国家指定实体的积极支持得到了这些实体的重视和赞赏；

(d) 气候技术中心和网络部分实现了外联、网络和利益攸关方参与的目标。它优先考虑技术援助服务的实施和赋予国家指定实体权能，导致其他利益攸关方和网络成员的参与较为有限。

17. 财务资源缺乏可预测性和安全性，极大影响了气候技术中心和网络提供预期水平服务的能力，气候技术中心和网络缺乏人力和组织资源以及国家指定实体的能力也造成了类似影响。

### 3. 效率

18. 环境规划署与工发组织之间的伙伴关系以及机构集团伙伴下放权力的组织形式，一直是支持气候技术中心和网络活动有效运作的一个资产。该机构集团将核心专业知识和区域专业知识圆满结合在一起，并实现了全球覆盖。气候技术中心和网络咨询委员会提供的指导意见支持气候技术中心和网络确保了运作效率。

19. 气候技术中心和网络在优先考虑其活动和按照实际情况分配资源方面保证了效率。它在资金、发展中国家表达的需要以及政治指导方面对不断变化的外部背景作出了反应。

20. 已经确定了改进领域，以减少在技术援助项目的交付方面的拖延。这些拖延主要是因为：(1) 缺乏资源和地方管理的欠缺，导致发展中国家的国家指定实体不能始终以最有效的方式发挥作用；(2) 多个利益攸关方参与此一进程和决策；(3) 气候技术中心和网络核心团队和机构集团伙伴的人力资源有限。

### 4. 影响和可持续性

21. 已经报告了气候技术中心和网络的一些具体影响(例如能源政策和法律的设计，确定气候技术开发和转让路线图)，但却是以定性方式报告的。气候技术中心和网络展示了通过资金机制或多边开发银行启动可从更大规模融资中受益的项目的能力

22. 气候技术中心和网络的新颖性及其活动的性质是走向更广泛和更长期变革的第一步，这意味着迄今为止还难以评估气候技术中心和网络对缓解和适应气候变化的影响，因为影响将在交付技术援助数年后显现。此外，气候技术中心和网络目前还没有调整其监测和评估框架，用以把握其服务的宏观层面影响。

23. 利益攸关方指出，气候技术中心和网络可能有助于促成非预期的积极成果，如地方发展、环境保护和将性别观点纳入主流。

### D. 建议

24. 顾问已提出若干建议，以提高气候技术中心和网络的绩效(见下文第五章)。这些建议涉及与气候技术中心和网络的治理和组织、资金、三项核心服务以及监测、评估和报告有关的一些方面。

### 三. 审查方法

25. 顾问(见上文第 3 段)围绕四个评估领域组织了工作:

(a) **相关性**。就缔约方会议确定的优先事项和各国的支持需要而言,气候技术中心和网络的战略和资源是否相关和适当?这个问题调查了环境规划署和工发组织设计和实施的气候技术中心和网络行动框架的一致性,以及其与外部环境的相干性?

(b) **有效性**。气候技术中心和网络在三项核心服务方面是否实现了其目标?这个问题侧重于评估气候技术中心和网络交付的服务和产出,并与其目标和具体目标进行比较,同时考虑到实际运作情况;

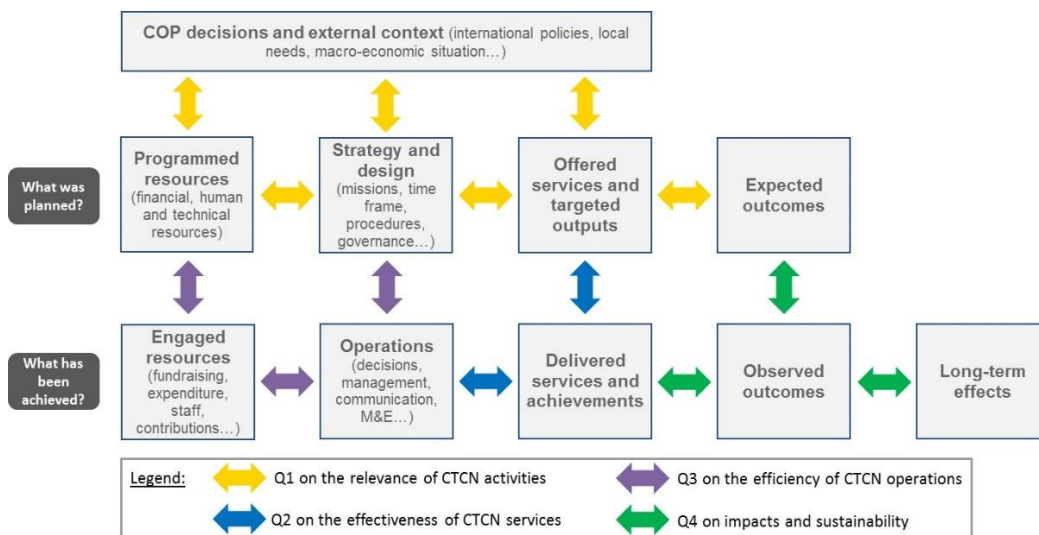
(c) **效率**。在建立气候技术中心和网络和部署其服务方面,是否实现了气候技术中心和网络在资金的最佳利用方面的目标和具体目标?这个问题的重点是评估气候技术中心和网络的业务实施情况,与计划进行比较,查明遇到的困难和成功因素;

(d) **影响和可持续性**。气候技术中心和网络是否达到预期成果并产生长期、积极和可复制的效应?这个问题旨在确定观察到的结果,将其与预期结果相比较,并评估其产生积极和长期影响的可能性以及这些影响的可复制性。

26. 对所有这些问题,顾问编制了一个评估网格,详细说明用于回答问题的子问题以及指标和数据来源(见附件四)。

27. 图 1 显示了每一评估问题的范围,以及各种问题之间的联系。

Figure 1  
Evaluation framework for the review



Source: Ernst and Young et Associés.

Abbreviations: COP = Conference of the Parties, CTCN = Climate Technology Centre and Network, M&E = monitoring and evaluation.

28. 顾问制定了下列方法,以完成独立审查任务:

(a) 起始阶段:

(b) 数据收集和分析阶段,包括下列活动:

(一) 广泛的文献综述，包括气候技术中心和网络的战略、治理、运作、服务和成果(见附件五)；

(二) 采访气候技术中心和网络的 36 个利益攸关方，包括秘书处、气候技术中心和网络主任、来自环境署和工发组织的气候技术中心和网络工作人员、捐助方、气候技术中心和网络咨询委员会成员和前成员、机构集团和战略伙伴、网络成员、国家指定实体和技术援助受益者(见附件六)；

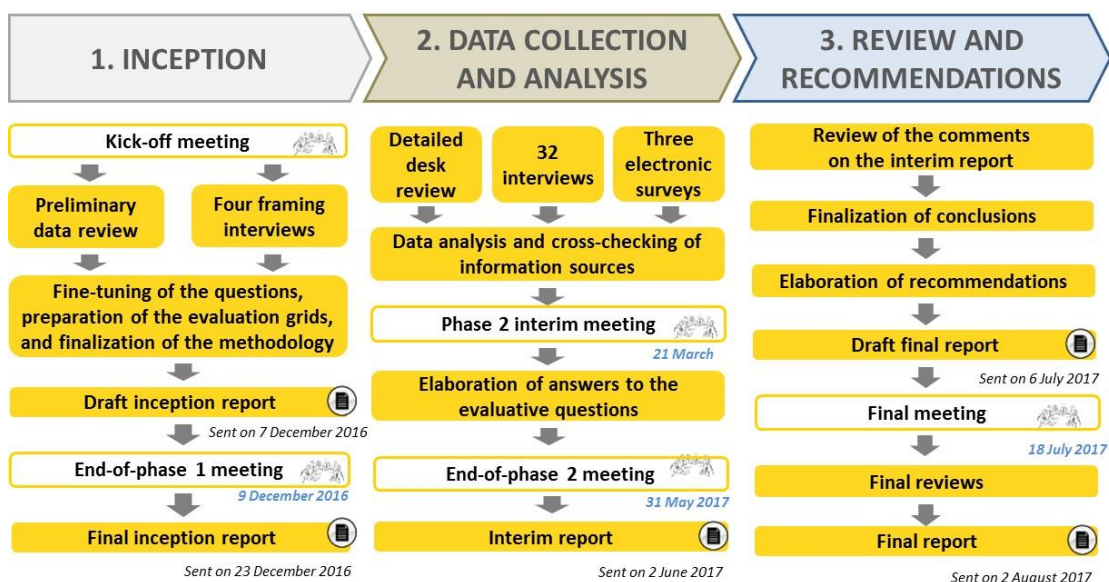
(三) 三项电子调查涉及 71 个国家指定实体、121 个网络成员和气候技术中心和网络活动的参加者、39 个技术援助受益者(见附件七)；

(四) 为观察目的参加 2017 年 4 月 3 日至 5 日举行的第 9 次咨询委员会会议；

(c) 审查和建议阶段。

29. 图 2 详尽显示了审查方法。相关工作是在 2016 年 10 月至 2017 年 8 月期间进行的。

Figure 2  
Methodological approach for the review



Source: Ernst and Young et Associés.

## 四. 气候技术中心和网络

### A. 背景和任务

30. 缔约方会议第十六届会议设立了由技术执行委员会(技执委)和气候技术中心和网络组成的技术机制(见上文第 1 段)。缔约方会议基于其对气候技术中心和网络的授权任务，<sup>5</sup> 在随后作出的决定中启动了气候技术中心和网络，这些决定规定气候技术中心和网络的结构和服务如下：

<sup>5</sup> 第 1/CP.16 号决定，第 123 段。



(a) 缔约方会议第十七届会议通过了气候技术中心和网络的职权范围，为它的使命、治理和组织结构提供了指导原则；<sup>6</sup>

(b) 缔约方会议第十八届会议选择了伙伴机构集团牵头者环境规划署作为气候技术中心和网络的东道方，最初任期为五年，但可能顺延，只要缔约方会议第二十三届会议(2017年11月)如此决定。<sup>7</sup> 缔约方会议第十八届会议通过并由环境规划署签署的谅解备忘录，<sup>8</sup> 正式确定了缔约方会议、环境规划署、气候技术中心和网络和机构集团伙伴的作用和职能，以及气候技术中心东道方的财务安排；

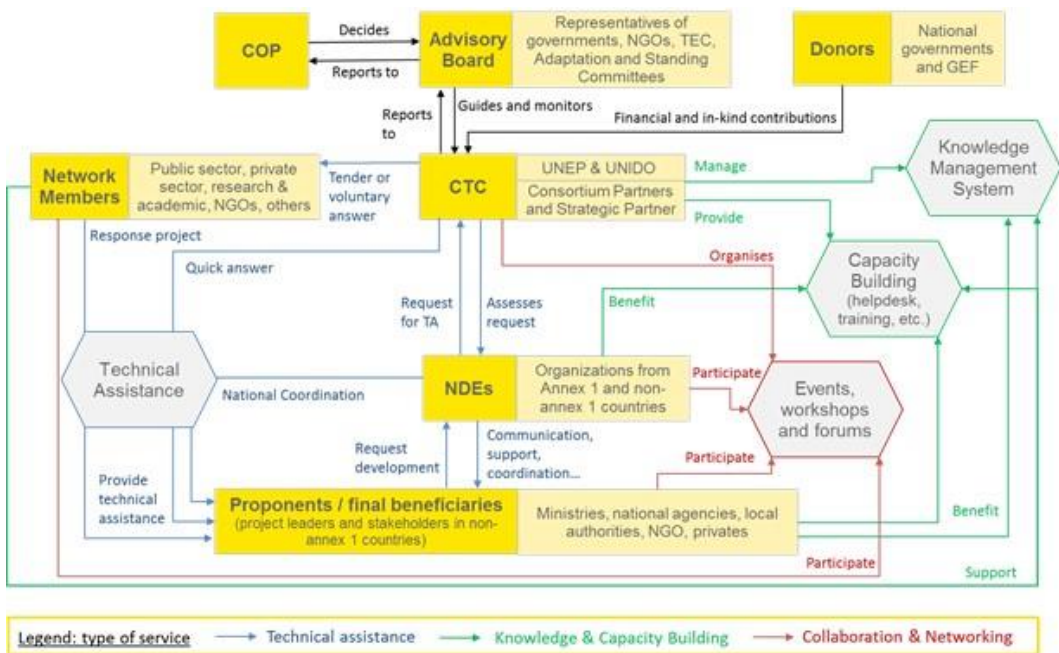
(c) 缔约方会议第十九届会议通过了气候技术中心和网络的形式和程序，<sup>9</sup> 有效促使气候技术中心和网络开始工作和运作。同一决定的附件一界定了气候技术中心和网络的作用和责任、与技执委的联系、其信息和知识共享方式以及准备提供的三项核心服务

## B. 结构

31. 图 3 显示了气候技术中心和网络的整体组织结构。参与气候技术中心和网络治理和业务的主要利益攸关方和机构如下。

Figure 3

**Organizational structure of the Climate Technology Centre and Network**



Source: Ernst and Young et Associés, based on data from the Climate Technology Centre and Network.

Abbreviations: COP = Conference of the Parties, CTC = Climate Technology Centre, GEF = Global Environment Facility, NDEs = national designated entities, NGOs = non-governmental organizations, TA = technical assistance, TEC = Technology Executive Committee, UNEP = United Nations Environment Programme, UNIDO = United Nations Industrial Development Organization.

<sup>6</sup> 第 2/CP.17 号决定，第 133 段。

<sup>7</sup> 第 14/CP.18 号决定，第 2 段。

<sup>8</sup> 第 14/CP.18 号决定，第 3 段。

<sup>9</sup> 第 25/CP.19 号决定，第 2 段。



## 1. 咨询委员会

32. 气候技术中心和网络咨询委员会是在缔约方会议第十八届会议上设立的，<sup>10</sup> 负责提供指导，批准程序，报告和工作方案，核可预算和财务报表，并监督和评估气候技术中心和网络对相关请求的反应的及时性和适当性。<sup>11</sup> 咨询委员会的章程<sup>12</sup> 已在缔约方会议第十八届会议上商定。

## 2. 气候技术中心

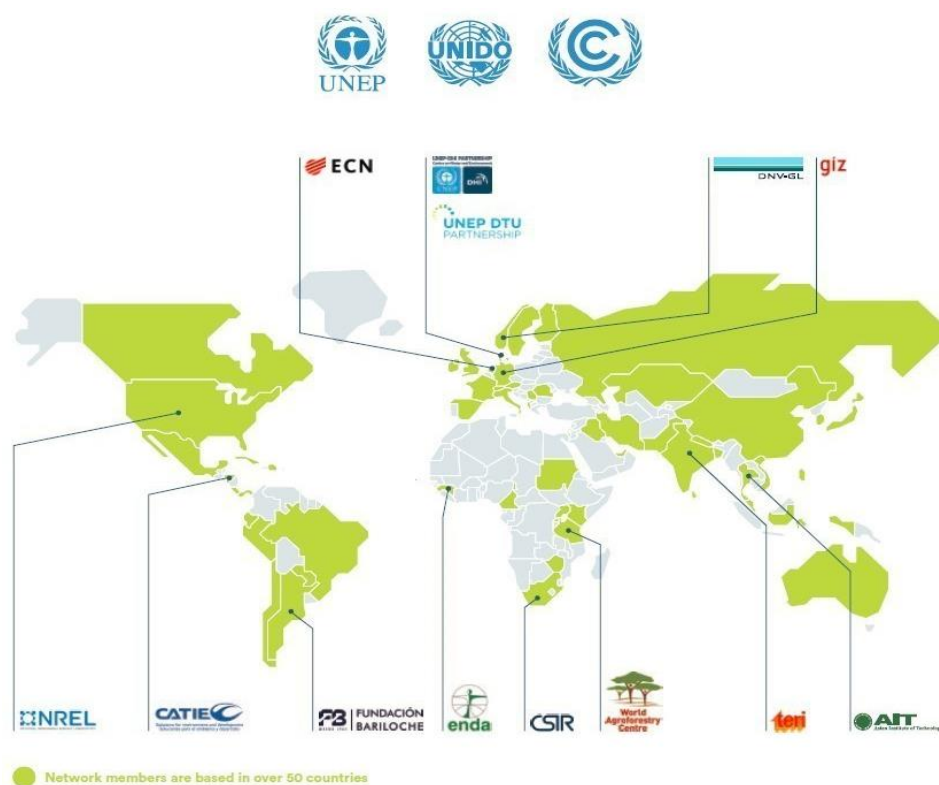
33. 气候技术中心由环境规划署与工发组织合作管理，得到 11 个伙伴组织的机构集团的支持(如图 4 所示)。气候技术中心负责协调和提供气候技术中心和网络的服务

34. 环境规划署和工发组织与机构集团成员之间的合作条款载于单独的谅解备忘录中。气候技术中心和网络不是作为独立机构管理，而是作为环境规划署和工发组织的一个项目，它依赖于这两个组织内的各种进程。

35. 缔约方会议第十八届会议鼓励环境规划署<sup>13</sup> 任命气候技术中心和网络主任和工作人员。五名专业人员和两名行政人员设在联合国驻哥本哈根办事处。他们得到顾问(区域专家和技术专家)以及环境规划署和工发组织的人力资源(包括两个组织各有一名协调员)的支持。

Figure 4

### Geographical coverage of the consortium partners of the Climate Technology Centre



Source: CTCN 2016 progress report. Available at <https://www.ctc-n.org/sites/www.ctc-n.org/files/ctcn-ar16-bookcover-lowres.pdf>.

<sup>10</sup> 第 14/CP.18 号决定，第 5 段。

<sup>11</sup> 第 2/CP.17 号决定，附件七，第 9 段。

<sup>12</sup> 第 14/CP.18 号决定，附件二。

<sup>13</sup> 第 14/CP.18 号决定，第 9 段。

### 3. 网络

36. 气候技术中心和网络的一个关键组成部分是其网络。该网络的目的是吸引可以通过以下方式支持气候技术中心和网络活动的各种利益攸关者：<sup>14</sup> (1) 应有关国家请求提供与自身专门知识相契合的技术援助；(2) 通过知识管理系统交流信息和派出专家举办网络研讨会、电子学习课程和其他类型培训；(3) 积极推动气候技术中心和网络的活动。

37. 加入网络是免费的。网络启动以来，一直呈指数级增长。截至 2017 年 3 月，有来自 64 个国家的 265 个组织加入了网络，它们具有以下特点：<sup>15</sup>

(a) 46%是在作为《公约》附件一所列缔约方的国家注册，50%是在作为《公约》附件一未列缔约方的国家注册，其余 4%为国际组织；

(b) 网络成员在气候技术中心和网络确认的部门具有专门知识，积极参与缓解的成员(229)多于参与适应的成员(161)；

(c) 私营部门组织为数最多(35%)，其次是研究和学术组织(24%)、非政府组织(14%)、非营利组织(10%)和公共部门组织(10%)。15 个国际组织、区域组织和伙伴关系成为该网络的一部分。

### 4. 国家指定实体

38. 国家指定实体<sup>16</sup>是相关国家利益攸关方和气候技术中心和网络之间的中介。气候技术中心和网络是在地方和国家所有权和国家驱动的需要基础上行事，缔约方确立一国家指定实体是参加气候技术中心和网络进程的必要步骤。截至 2017 年 4 月，共有 157 个发达国家和发展中国家的国家指定实体。国家指定实体作为气候技术中心和网络在它们各自国家内活动的联络点，协调有关部委、其他《气候公约》机制、私营部门、民间社会和学术界的请求。国家指定实体通过管理(发展中国家的)国家要求，促进参与网络，协调区域和全球同行学习、协作、报告和反馈来支持气候技术中心和网络的国家内活动。

## C. 服务

39. 环境规划署和工发组织一直在努力将缔约方会议的使命转化为业务活动。2013 年，咨询委员会批准了气候技术中心和网络的《2013-2017 年五年期工作方案》，<sup>17</sup>详细列明了气候技术中心和网络的业务、服务、活动、时间安排和预算。

40. 在工作方案中，气候技术中心和网络的愿景被定义为“《气候公约》的发展中国家缔约方获得能力，工具和专门知识，以推动气候变化的缓解和适应技术的开发和升级”。

<sup>14</sup> 见气候技术中心和网络咨询委员会文件 AB/2015/5/9。

<sup>15</sup> <https://www.ctc-n.org/network/network-visualizations>。

<sup>16</sup> <http://unfccc.int/ttclear/support/national-designated-entity.html>。

<sup>17</sup> 气候技术中心和网络，2013 年。《工作方案草案：气候技术中心和网络》，见 <https://www.ctc-n.org/sites/www.ctc-n.org/files/f2137b4434244bdeafe3a24bad2c5273.pdf>。

41. 此外，确定了气候技术中心和网络的三项核心服务：(1) 应发展中国家的请求提供技术援助；(2) 开辟获取关于气候技术的信息和知识的渠道；(3) 组织气候技术利益攸关方的宣传和网络活动。这些核心服务随着时间的推移略有变化。

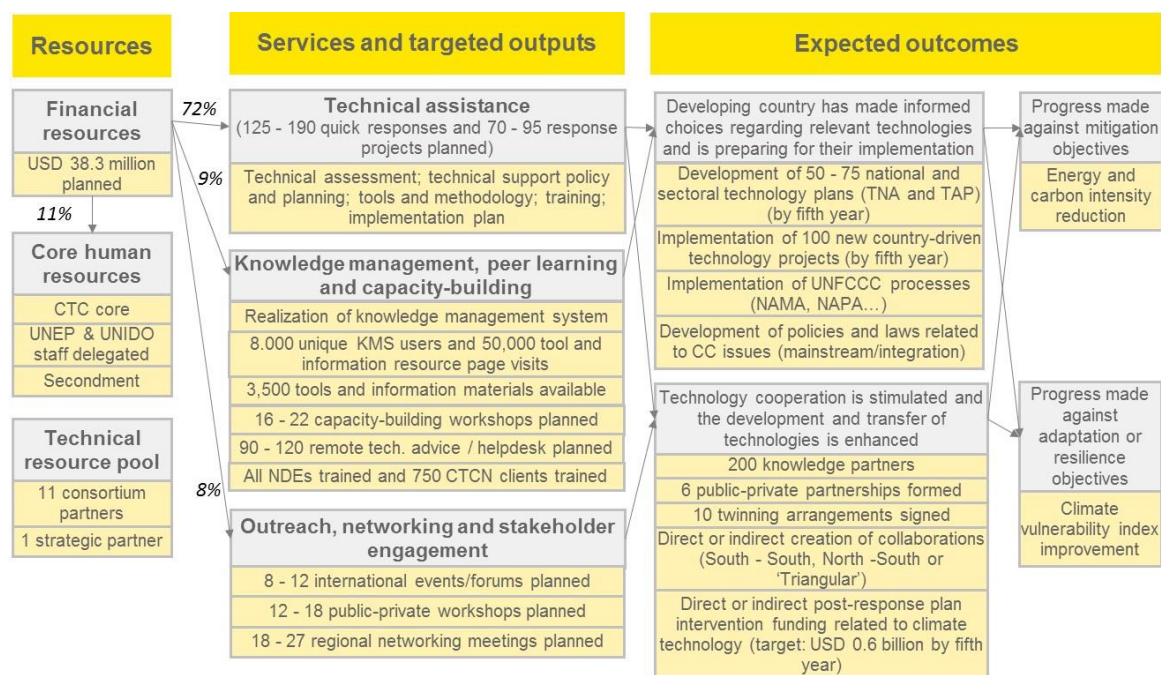
42. 该工作方案是在第一个五年业务期预期 1 亿美元的筹资基础上编制的(见表 1)。

表 1  
指示性筹资

要素/子要素/产出	费用估计(美元)
应国家请求提供的技术援助	75 500 000
外联、网络和私营部门参与	7 000 000
知识管理、同行学习和能力建设	7 250 000
创建和业务费	10 250 000
<b>总计</b>	<b>100 000 000</b>

43. 气候技术中心和网络利用 2013-2017 年工作方案编制年度业务计划，已由咨询委员会核准。这些年度计划为气候技术中心和网络业务的产出和成果提供了量化目标。图 5 显示了前三年运作的逻辑框架，临时预算为 3,830 万美元：11%用于资助气候技术中心和网络业务，89%用于核心服务。气候技术中心和网络已经确定了每项活动的产出方面的具体目标。产出的直接结果也作了确定和量化。气候技术中心和网络的最终目标影响如图 5 右侧栏目所示。

Figure 5  
Intervention logic, with cumulative targets for the first three years of operations



Source: Ernst and Young et Associés, based on data from the CTCN.

Note: Except when noted otherwise, values are cumulated resources and outputs in the third year of implementation as based on the first three annual operating plans. This intervention logic has been revised by the consultant and is different from the logical framework contained in the programme of work.

*Abbreviations:* CC = climate change, CTC = Climate Technology Centre, CTCN = Climate Technology Centre and Network, KMS = knowledge management system, NAMA = nationally appropriate mitigation action, NAPA = National Adaptation Programmes of Action, NDEs = national designated entities, TAP = technology action plan, TNA = technology needs assessment, UNEP = United Nations Environment Programme, UNFCCC = United Nations Framework Convention on Climate Change, UNIDO = United Nations Industrial Development Organization.

44. 关于气候技术中心和网络三项核心服务的执行进展的进一步详情，见附件八。

#### D. 筹资和支出

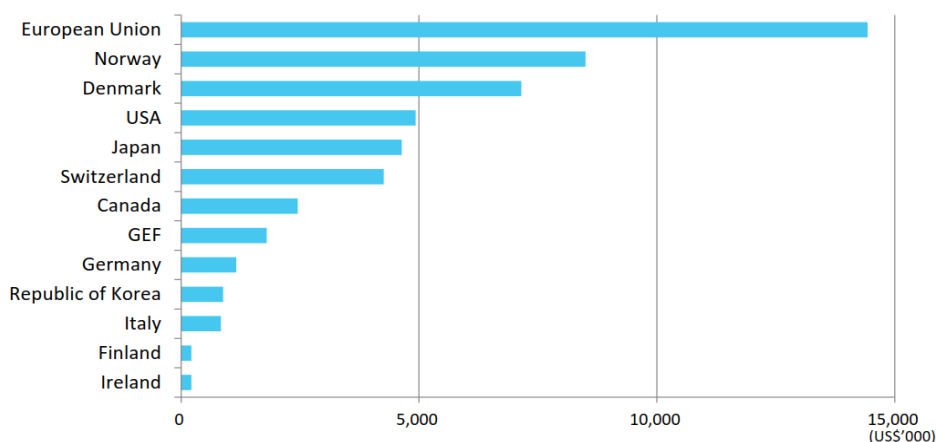
45. 气候技术中心和网络根据第 2/CP.17 号决定进行筹资。气候技术中心和网络在 2014 年 9 月之前已经筹得 2,660 万美元。<sup>18</sup> 在接下来的两年中，已落实 430 万美元。<sup>19</sup> 2015 年 6 月，全球环境基金保证了 180 万美元。此外，环境规划署、工发组织和机构集团伙伴提供了价值超过 580 万美元的资金和实物捐助。<sup>20</sup>

46. 截至 2017 年 3 月，气候技术中心和网络可保证筹得的资金，大部分(4,960 万美元)来自双边捐助者。在缔约方会议第二十二届会议期间，缔约方认捐 2,300 万美元，截至 2017 年 3 月，已签署了价值 2,050 万美元的捐助协定。

47. 截至 2017 年 4 月，气候技术中心和网络正在与加拿大和美利坚合众国政府讨论剩余的 250 万美元。图 6 显示了对气候技术中心和网络的捐助一览。

Figure 6

#### Donor contributions



Source: CTCN Advisory Board document AB/2017/9/8.1.

Note: As at March 2017. Includes donor agreements.

48. 气候技术中心和网络资金的 44% 已由捐助者指定用于具体活动或具体地区。<sup>21</sup> 气候技术中心和网络在前三年(2014 至 2016 年，包括 2013 年最后几个月)总计支出 2,560 万美元。

<sup>18</sup> 见文件 FCCC/SB/2014/3。

<sup>19</sup> 见文件 FCCC/SB/2016/1。

<sup>20</sup> 见文件 FCCC/SB/2013/1。2014 年以来，又提供了额外的实物捐助，但未作监测。

<sup>21</sup> 气候技术中心和网络咨询委员会文件 AB/2017/9/8.1。

## E. 监测和评估

49. 缔约方会议的若干决定要求咨询委员会和气候技术中心和网络本身监测和评估气候技术中心和网络的活动。<sup>22</sup> 气候技术中心和网络的财务监测由环境规划署和工发组织的财务报告机制负责。非技术援助活动的监测和关于气候技术中心和网络服务型服务的指标计算已经通过最初在咨询委员会第七次会议上提交，此后又加以更新的程序作了详细说明。<sup>23</sup> 技术援助活动监测和关于气候技术中心和网络技术援助服务的指标计算，已经通过相关程序作了详细说明，这些程序最初是在咨询委员会第五次会议上提交并经咨询委员会第六次会议通过。<sup>24</sup> 计划在2017年对投资组合进行质量和有效性审查，并对监测和评估框架进行系统评估。作为战略伙伴，挪威船级社认证中心<sup>25</sup> 协助环境规划署和工发组织设计了该监测和评估系统。

## 五. 审查的主要结果、结论和建议

### A. 主要结果

50. 下列主要结果来自各类利益攸关方的投入，这些投入与经由案头审查收集的数据进行了交叉核对(审查工作的详情，见上文第三章，以及附件五、六、七和八)。这些结果是建立在附件九中所载对气候技术中心和网络绩效的详细审查基础上。它们构成了顾问如何来判断对审查初始阶段所确定评估问题的答复(见上文第26段和附件四)。

#### 1. 相关性

51. 气候技术中心和网络在支持发展中国家获得国际资金和建立适宜的扶持环境过程中的额外价值得到了审查工作参与者的一致承认。尽管在气候变化技术的开发和转让方面，存在多个捐助者和技术援助提供者。

52. 总的来说，气候技术中心和网络的活动对发展中国家的需要作出了回应，这些发展中国家感谢其大力开展的基础工作以及其灵活和因地制宜的援助。应咨询委员会的要求，气候技术中心和网络进一步在技术援助申请表中正式提及国家计划和自主贡献，以确保各国就其在国家文件中确定的优先事项所提出请求的正当性。<sup>26</sup>

<sup>22</sup> 见第2/CP.17号决定，附件七，以及第25/CP.19号决定，附件一。

<sup>23</sup> 气候技术中心和网络咨询委员会文件 AB/2016/8/7.6。见 [https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20168\\_7.6\\_mande\\_process\\_and\\_procedures\\_v2\\_from\\_ab7.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20168_7.6_mande_process_and_procedures_v2_from_ab7.pdf)。

<sup>24</sup> 气候技术中心和网络咨询委员会文件 AB/2015/6/7b。

<sup>25</sup> 挪威船级社认证中心是气候公约确定的气候技术中心和网络东道方最终候选者之一。在选定环境署作为东道方后，缔约方会议鼓励伙伴机构集团与其他投标人合作。因此，该机构集团与挪威船级社认证中心建立了战略伙伴关系。

<sup>26</sup> 气候技术中心和网络，2015年。咨询委员会第五次会议讨论要点。见 [https://www.ctc-n.org/sites/www.ctc-n.org/files/resources/AB%205\\_Key%20discussion%20points%20v1.5%20final\\_0.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/resources/AB%205_Key%20discussion%20points%20v1.5%20final_0.pdf)。



53. 气候技术中心和网络 2013-2017 年工作方案与缔约方会议的授权任务保持一致。年度业务计划也与任务规定以及影响气候技术中心和网络业务的历届缔约方会议决定保持一致。气候技术中心和网络对缔约方会议的决定反应如下：

(a) 《巴黎协定》生效后，气候技术中心和网络在 2017 年的年度业务计划中纳入了国家自主贡献、研究、开发和示范以及内生能力等议题；

(b) 气候技术中心和网络继续并试图通过咨询委员会会议、联合年度报告和其他手段加强与技执委<sup>27</sup>的合作，但在审查期间，受访者表示可以进一步加强合作；

(c) 为了加强与资金机制业务实体的合作与协作，<sup>28</sup>气候技术中心和网络自 2016 年以来一直在发展与绿色气候基金的伙伴关系，在这方面，气候技术中心和网络技术援助和能力建设活动促进了拟定将提交给绿色气候基金的概念说明，并加强了与绿色气候基金联络点(国家指定当局)的合作。这种合作正在提供额外的财政资源，同时，气候技术中心和网络确定的技术援助项目将通过绿色气候基金的“国家准备”资金资助。<sup>29</sup>

(d) 全球环境基金为气候技术中心和网络业务提供的资金是以特设项目为基础，而不是持续的资金，因此相当有限(180 万美元)。全球环境基金已经发展并资助了区域气候技术中心网络，由多边开发银行(非洲开发银行、亚洲开发银行、欧洲复兴开发银行和美洲开发银行)担任东道方，并提供类似的服务。这些区域中心的一些代表一直在参加国家指定实体的研讨会和其他气候技术中心和网络会议。<sup>30</sup>亚洲和美洲区域中心与气候技术中心和网络的国家指定实体和机构集团伙伴之间的合作的发展势头良好，并形成了正式制度，但与欧洲和非洲区域中心的合作则较为有限。

54. 2013-2017 年初步工作方案中所述的大部分但并非全部活动已经实施(例如，服务台的开发尚未进行)。气候技术中心和网络启动了该方案不曾计划的一些活动，包括最不发达国家孵化器方案、借调方案和组织网络研讨会。方案的这些变化得到咨询委员会的认可，并被视为与利益攸关者相关。

55. 在审查期间，大多数受访者表示，气候技术中心和网络基于自愿的供资模式是不合适的，因为这限制了它实施和完成其任务。据报告，资金短缺使气候技术中心和网络的业务面临风险。<sup>31</sup>财政资源有限一直是实现初步工作方案确定的目标，特别是技术援助项目方面目标的主要障碍。截至 2017 年 3 月，由于资金短缺，31 个符合标准的请求不曾得到优先处理。<sup>32</sup>没有额外的资金来源，气候技术中心和网络将无法继续按照发展中国家日益强烈的期望提供服务。

56. 供资模式的自愿性质导致气候技术中心和网络难以对中短期的情况作出预测，限制了其预先计划活动水平的能力。

<sup>27</sup> 第 25/CP.19、1/CP.21、12/CP.21、13/CP.21 和 15/CP.22 号决定。

<sup>28</sup> 见第 13/CP.21 号决定，第 7 段。

<sup>29</sup> 截至 2017 年 7 月，在汤加和加纳的两个援助项目已得到接受，一个正由绿色气候基金进行分析，一个将很快提交。

<sup>30</sup> 见文件 FCCC/CP/2016/6。

<sup>31</sup> 见文件 FCCC/SB/2016/1。

<sup>32</sup> 一些请求是由于资金短缺，另一些则是由于有关国家提交请求较多因而没有得到优先处理，二者的分布不详。

57. 另一个问题是，气候技术中心和网络的财政资源中有相当大的份额(44%)已指定了专门用途，不能与气候技术中心和网络当前的优先考虑保持一致。12%的资金用于特定领域或特定活动(例如技术图书馆)，不可用于对气候技术中心和网络来说或许是当务之急的那些活动。资金总额中有 32%是根据与捐助者的协定列入核定预算，在这些协定中，最初已对所资助的活动作了为期几年的业务安排。但是，相对于年度业务计划或捐助协定，气候技术中心和网络认为有实效的活动可能会有所变化(例如，技术援助的请求比预期的少，可能提供新的服务，例如孵化器方案)。虽然由于某些活动是在预算内交付，因而可能获得额外的财政资源，但除非修改捐助协定(捐助者在大多数情况下允许进行修改)，否则这些资源不能用于资助有关活动。

58. 尽管有气候技术中心和网络秘书处的努力和咨询委员会的参与，以及缔约方会议第二十二届会议作出认捐和与绿色气候基金进行了合作，但已经落实的资金低于初步工作方案中的计划数额。为了加强其杠杆作用，气候技术中心和网络与绿色气候基金、全球环境基金和多边开发银行积极接触，推动在可提升的投资潜力得到确认后，协同实施了一些技术援助项目。

## 2. 有效性

59. 气候技术中心和网络所提供服务的优先顺序与其任务规定是一致的：最初的努力主要集中在实施(国家指定实体的培训、程序的定义、知识管理系统的开发、沟通等)，这些功能正在支持部署技术援助和网络活动。气候技术中心和网络始终注意确保对受益者均衡的地理覆盖，侧重于最不发达国家并由孵化器方案予以支持。

60. 气候技术中心和网络的权力下放结构(在环境规划署、工发组织和区域机构集团伙伴的参与下)、在各区域开展气候技术中心和网络活动的三名专职顾问，以及发展区域能力建设活动(区域论坛和孵化器方案)，都有助于赋予国家指定实体权能和提交有关的技术援助请求。对技术援助请求的地理和专题分布作出了平衡。然而，气候技术中心和网络收到的请求数量低于预期，因此气候技术中心和网络提供的技术援助响应和项目数量也低于预期(见表 2)。交付的项目切实对应了国家指定实体和受益者的需要。

表 2

### 技术援助目标和成就

创建后的年份	预期的反应数 <sup>a</sup>	修订的预期反应数 <sup>b</sup>	国家指定实体的新请求数	正在设计或实施或已经完成的新项目数
年份 1 (2014)	6–10	6–10	20	15
年份 2 (2015)	70–105	70–100	55	27
年份 3 (2016)	120–170	120–170	82	55
年份 4 (2017)	160–230	90–130	28 (半年)	8 (半年)
年份 5 (2018)	180–250	—	—	—
<b>总计</b>	<b>550–780</b>	<b>266–410</b> (4 年以上)	<b>185</b> (3.5 年以上)	<b>105</b> (3.5 年以上)

资料来源：安永会计师事务所，基于气候技术中心和网络的数据，见 <https://www.ctc-n.org/technical-assistance/request-visualizations>。

<sup>a</sup> 最初的 2013-2017 年工作方案的产出。

<sup>b</sup> 年度业务计划的经修订的目标产出。



61. 气候技术中心和网络开发了知识管理系统，通过确保其可见度，协助报告其活动和向利益攸关方通报即将举办的活动，支持其开展业务和活动。已经实现在知识管理系统的开发和运作上的定量目标(材料数量、访问次数和用户数)都(见表 3)，用户对该系统表示满意。然而，在审查期间，大多数受访者表示，他们很少使用知识管理系统，其中一些表明了浏览气候技术中心和网络网站时遇到的具体困难(例如，网络的结构没有充分面向用户，缺少信息)。据认为，集中了大量资源的技术图书馆没有得到充分利用，这证明咨询委员会关于限制其开发的决定是有道理的。

62. 气候技术中心和网络的能力建设服务侧重于赋予国家指定实体权能，其他当地利益攸关方的参与程度较为有限。总的说来，这些活动的参与者感到满意，认为它们很有用。能力建设和培训活动导致了提交更多的请求。然而，一些国家指定实体和网络成员表示，活动和材料没有使用足够多的语种(特别是网络研讨会)，对即将举办的活动缺乏明确性(会议的日期和地点通知太晚)，活动不够频繁。

表 3  
知识管理、同行学习和能力建设目标和成就

产出	最初三年的累计目标(2013-2017年工作方案)	截至 2016 年的成就	相对于目标而言的成就
通过服务台作出的远程技术咨询反应次数	90-120	未充分执行 <sup>a</sup>	由于各国缺少请求，成就低于目标
能力建设研讨会和培训活动次数	16-22	21 次区域论坛	成就与目标相符
工具和材料，包括所掌握的经验教训和最佳做法的覆盖面	3 500	气候技术中心和网络网站上 10 768 件	成就高于目标
经培训的气候技术中心和网络国家指定实体数	260	2015 和 2016 年培训了 255 个气候技术中心和网络国家指定实体 <sup>b</sup>	成就高于目标 <sup>b,c</sup>
经培训的气候技术中心和网络客户数	750	>1 500	
特定的知识管理系统用户数	8 000	104 851 个气候技术中心和网络网站用户	成就高于目标
工具和信息来源页面浏览数	50 000	145 138 次气候技术中心和网络网站页面浏览	成就高于目标

资料来源：安永会计师事务所，基于气候技术中心和网络的数据。

缩略语：CTCN=气候技术中心和网络，KMS = 知识管理系统，NDE = 国家指定实体。

<sup>a</sup> 详见附件九关于相关性的 A 节和关于工作方案演进情况的小节。

<sup>b</sup> 气候技术中心和网络报告，根据对参加区域论坛和孵化器方案的国家指定实体代表的监测，2015 年培训了 150 名代表(气候技术中心和网络咨询委员会文件 AB/2015/6/6a)2016 年培训了 105 名代表(气候技术中心和网络咨询委员会文件 AB/2016/8/6b)。但是，只监测了参加者人数，而不是具体国家指定实体接受培训的代表的人数。

<sup>c</sup> 气候技术中心和网络报告，根据对参加区域论坛和网络研讨会的参加者的监测，2015 年培训了 1200 名客户(气候技术中心和网络咨询委员会文件 AB/2015/6/6a)，2016 年培训了 3775 名客户(气候技术中心和网络咨询委员会文件 AB/2016/8/6b)。但对接受培训的具体客户的人数未作监测。

63. 气候技术中心和网络部分实现了外联、网络和利益攸关方参与的目标(见表 4)。除了与能力建设有关的区域网络活动外,气候技术中心和网络还举办了数次国际活动和研讨会。直到最近,除利益相关者论坛外,气候技术中心和网络始终侧重于其实施。外展、网络和参与活动主要致力于赋予国家指定实体权能(在区域网络活动期间),并提高潜在受益者和网络成员对气候技术中心和网络及其服务的认识(通过气候技术中心和网络代表参加国际活动)。网络成员之间的互动和当地利益相关者的参与始终有限。气候技术中心和网络在于私营部门的接触方面遇到了困难,尽管其与挪威船级社认证中心和私人融资咨询网络建立了伙伴关系,并在网络活动中发起了几项倡议。

表 4  
外联、网络和私营部门参与的目标和成就

产出	最初三年的累计 目标(2013-2017 年工作方案)	截至 2016 年底 的成就	相对于目标而言 的成就
国际技术活动/论坛次数	8-12	参加 17 次活动 <sup>a</sup>	成就高于目标,但
区域公私部门讲习班次数	12-18	参加 20 次讲习班 <sup>a</sup>	一些活动被重复计
区域网络会议次数	18-27	组织 21 次区域论坛 <sup>b</sup>	入一个以上的关键 绩效指标
知识伙伴数(为知识管理系统提供工具和材料 的伙伴)	200	265 个(截至 2017 年 3 月)	成就高于目标

资料来源:安永会计师事务所,基于气候技术中心和网络的数据。

<sup>a</sup> 气候技术中心和网络组织了其中一些活动,例如 2016 年在内罗毕举办的气候无害型技术东非利益攸关者论坛。

<sup>b</sup> 这些活动还被计为能力建设活动。

64. 自气候技术中心和网络建立以来头三年(2014 至 2016 年)的支出总额比年度业务计划的设想低 40%(见表 5)。这个差额可归因于以下因素:

(a) 气候技术中心和网络的实施(确立程序、培训国家指定实体、沟通工作等)所花费的时间超出最初计划,因而延误了着手提供服务;

(b) 气候技术中心和网络收到的发展中国家的技术请求少于预期,特别是在第一年,因此没能按计划数目实施技术援助项目;

(c) 气候技术中心和网络财政资源有限,限制了其活动。

表 5  
预算与支出  
(美元)

创建后的年份	总收入 (自愿捐款)	初步预算 (2013-2017年 工作方案)	订正预算 (2015、2016、 2017年年度 业务计划)	总支出 (年度财务 报表)	差额 (支出/订正 预算)(%)
年份 0(2013)	12 020 000	–	–	410 000	–
年份 1 (2014)	4 670 000	4 300 000	4 300 000	6 760 000	+57
年份 2 (2015)	10 790 000	12 000 000	14 500 000	11 000 000 <sup>a</sup>	-24
年份 3 (2016)	10 990 000	22 000 000	23 700 000	7 380 000	-69
合计	<b>38 470 000</b>	<b>38 300 000</b>	<b>42 500 000</b>	<b>25 630 000</b>	<b>-40</b>

资料来源：安永会计师事务所，基于气候技术中心和网络的数据。

注：预算不包括环境规划署、工发组织和机构集团伙伴的现金和实物捐助。

<sup>a</sup> 在考虑到前此在初步报表中没有确认的待付款后作出调整的 2015 年支出。2016 年的数字是基于初步报表得出的。

### 3. 效率

65. 咨询委员会就气候技术中心和网络秘书处的任务执行情况和战略事项向其提供了适当指导。情况表明，可为需要进一步调查的问题设立特别工作组。鉴于气候技术中心和网络工作的性质和发展中国家日益强烈的期望，咨询委员会需要加强技术专长，以继续提供适当的战略指导。技术执行委员会主席参加咨询委员会会议以及技术执行委员会与气候技术中心和网络之间合作的其他现有安排都增进了这一技术专长。缺乏同捐助者讨论相关安排的专门平台，成为对咨询委员会效率的限制因素。

66. 气候技术中心和网络活动和财政资源的透明度和问责制逐步加强。然而，咨询委员会成员要求在咨询委员会会议之间更频繁地报告这一点。作为咨询委员会成员的捐助者也要求本着透明和“物有所值”的方针，提供关于其资金得到适当使用的进一步证据。在审查期间报告了气候技术中心和网络与捐助者的合同关系透明度不足。

67. 环境规划署与工发组织之间的伙伴关系被认为在履行气候技术中心和网络的任务时是有效的。这两个组织具有互补的专门知识，并清楚确定了各自的作用，它们调动了各自的资源、网络和流程，以促进气候技术中心和网络的运作，并确保将其纳入《气候公约》和缔约方会议体系中。

68. 与其工作范围相比，最初分配给气候技术中心的人力资源相当有限。环境规划署和工发组织为了实现其目标，必须依靠机构集团伙伴的支持，并动员网络成员。气候技术中心的领导小组已经能够为国家指定实体和受益者提供正确的专业知识和适当的支持，尽管在某种程度上缺乏关于适应问题的专门知识，以及有时由于人员的意外离职导致职位空缺造成了困难。

69. 实施和交付气候技术中心和网络服务的路线图已经由气候技术中心和网络在 2013-2017 年的初步工作方案中确定下来，并在 2013 年由咨询委员会批准。该方案每年根据气候技术中心和网络的可利用资金和发展中国家表明需要进行修订。尽管有机构集团的大力参与，但是气候技术中心和网络服务的实施比预期的

时间要长，这主要是因为缺乏资源(更多细节，见附件九中 B 节下关于气候技术中心和网络的及时实施问题的小节)。

70. 气候技术中心和网络的区域化组织与其专业领域的机构集团伙伴一直是支持建立气候技术中心和网络的有力资产。该机构集团有能力支持气候技术中心和网络的沟通，确定和提交技术援助请求和组织区域活动。情况表明，机构集团伙伴在向气候技术中心提供咨询意见，用以评估收到的请求和制定反应计划方面是很重要的，尽管有时反应计划的制定有重大拖延。大多数技术援助项目是通过“快速反应干预”过程指向机构集团伙伴，节省了通常用于投标过程的时间，考虑到在执行的第一年可用的财政资源有限，这是非常有效率的。受益者承认，机构集团伙伴资源在调动能力和技能提供技术援助方面是适宜的。

71. 虽然气候技术中心和网络努力在其网络中汇拢了足够数量的多方面伙伴，但它没有设法创建一个真正的共同体。大多数成员在网络内不活跃，没有为知识管理系统作出贡献，也没有提供技术援助，<sup>33</sup>对气候技术中心和网络活动的参与程度低。一些网络成员对气候技术中心和网络提供的商业机会和网络活动不满意。在审查期间，如果对网络的参与程度得不到提高，则一些受访者会怀疑网络的可持续性和价值。尽管截至 2016 年 12 月，网络成员的贡献仅占技术援助项目的 20%，但 2017 年以来进入实施阶段的 29 项技术援助请求的 50%是由网络成员实施的。气候技术中心和网络核心小组预测的目标是网络成员在 2017 年实施 60%的技术援助请求。

72. 发展中国家的国家指定实体在确定和协调技术援助请求方面发挥重要作用。然而，由于缺乏资源和地方治理问题，发展中国家的国家指定实体并不一定能够充分发挥其作用，因此便导致了拖延和效率低下(例如在提交需要与气候技术中心和网络联手加以调整的技术援助请求，回应气候技术中心和网络方面)。此外，已证明能够成功地赋予国家指定实体权能的能力建设活动(特别是孵化器方案)，由于国家指定实体的大范围更替，也需要加以维持。虽然气候技术中心和网络制定了关于发达国家的国家指定实体的作用 and 责任的指南，但据报告，这一指南并不明确。

73. 已经确定技术援助进程需要花费比预期更长的时间，这主要是由于气候技术中心和网络的初始目标定得过高。虽然这一进程要短于其他国际组织的进程，但一些国家指定实体和区域的受益者报告说该一进程时间过长，少数报告说不满意。导致这一进程拖延的主要因素是组织气候技术中心和网络的复杂性，对话者和决策者过多(例如，国家指定实体、机构集团伙伴，气候技术中心工作人员)，缺乏资源(气候技术中心和网络核心小组、机构集团伙伴和国家指定实体)，以及其他一些外部原因(例如地方一级的政治和治理变化)。

74. 虽然确定并实施了沟通战略，但当地利益攸关方对气候技术中心和网络及其服务的认识有限。区域论坛和网络活动没有与广泛的受众相关联，国家指定实体与体制化生态系统之外的利益攸关者之间的沟通也不足。

<sup>33</sup> 气候技术中心和网络预计，由机构集团伙伴实施的技术援助项目和网络成员实施的此类项目的分布将逐渐变得均衡(咨询委员会在其第 9 次会议上承认)。

75. 咨询委员会批准的气候技术中心和网络程序允许气候技术中心和网络投入实施，并精简服务。在实施的头两年确立了明确的程序、管理流程和沟通工具，有效支持了气候技术中心和网络的业务。

76. 在实施的第一阶段，气候技术中心和网络将其大部分预算分配给开发知识管理系统和赋予国家指定实体权能。2016 年以来，气候技术中心和网络将财政资源集中在交付技术援助项目和加强网络和利益攸关者参与活动上。虽然其他费用减少，但由于可利用的资金有限，分配给各项业务的预算份额因固定成本的缘故而高于预期(与分配给服务的份额相对而言)。

77. 只要有可能，气候技术中心和网络即致力于优化其活动，以降低成本，特别是通过与其他行为者合作，并利用现有知识和来自其伙伴的现有材料来强化自身。

78. 尽管资源有限，但气候技术中心和网络一般来说是具有成本效益的，能够提供实质性的产出。虽然人们有时认为，资金少得难以实现预期结果，但受益者对气候技术中心和网络交付的项目感到满意，普遍认为气候技术中心和网络使现有资金发挥了最大效益。

#### 4. 影响和可持续性

79. 在制定能源政策和法律以及与气候技术开发和转让有关的路线图时，已经看到气候技术中心和网络的一些具体影响。气候技术中心和网络在稍后时间显示了其启动从更大量资金中获益的项目的能力。然而，气候技术中心和网络没有实现其成果目标(见表 6)。

表 6  
成果指标方面的目标和成就

成果指标 <sup>a</sup>	实施第五年的目标 (2017 年)	截至 2016 年的成就
来自气候技术中心和网络援助和响应后计划的气候技术投资	6 亿美元	承诺 5000 美元 114 万美元正在直接谈判或提交投资者或捐助者考虑
直接或间接归因于气候技术中心和网络活动的干预资金		估计投资潜力达 3.50 亿美元
源于气候技术中心和网络援助的国家和地区技术计划数量	50–75	7
在气候技术中心和网络援助下设计、实施和升级的新的国家驱动的技术项目和/或战略(政策和法律)的数量	100	9
因讲习班而组成的公私伙伴关系数量	13	3 <sup>b</sup>
因网络活动而形成的结对安排数量	18	4 <sup>c</sup>
直接或间接促成南南、南北或三边协作的气候技术中心和网络活动	未确定目标	5

资料来源：安永会计师事务所，基于气候技术中心和网络的数据。

缩略语：CTCN=气候技术中心和网络。

<sup>a</sup> 气候技术中心和网络咨询委员会文件 AB/2015/5/15。

<sup>b</sup> 气候技术中心和网络报告在 2015 年建立了一个公私伙伴关系，即私募基金咨询网参与了技术援助项目(见气候技术中心和网络咨询委员会文件 AB/2015/6/6a)，2016 年建立了一个公私伙伴关系，并经由东非利益攸关者论坛形成了分支(见气候技术中心和网络咨询委员会文件 AB/2016/8/6b)。

<sup>c</sup> 气候技术中心和网络报告，通过与区域开发银行的讨论，达成了两项结对安排(见气候技术中心和网络咨询委员会文件 AB/2015/6/6a)，2016 年通过与私募基金咨询网的合作，达成了两项结对安排(见气候技术中心和网络咨询委员会文件 AB/2016/8/6b)。

80. 由于气候技术中心和网络活动的性质及其历史相对较短，人们难以评估项目或活动完成后若干年可能实现的结果。此外，气候技术中心和网络本身的性质(例如自愿供资模式、国家驱动的技术援助请求)以及气候技术中心和网络的充分实施晚于预期的事实表明，五年目标可能过于雄心勃勃。

81. 已经观察到一些定性例子，显示了气候技术中心和网络的行动对缓解和适应气候变化的长期全球影响，但由于气候技术中心和网络的新颖性和所部署项目的性质(作为走向更重要演进的初始步骤)，这些影响是有限的。监测评估系统目前还不适于用来把握气候技术中心和网络服务(发展能力，增进知识，加强系统，降低碳排放量，改善气候变化脆弱性指数，促进可持续发展目标)的宏观层面影响。然而，这些信息对于向捐助者展现物有所值，向发展中国家表明使用气候技术中心和网络服务的价值却是至关重要的。

82. 尽管缺少有效的监测和评估系统，利益攸关方指出，气候技术中心和网络还可能有助于在地方发展、将性别观点纳入主流和环境保护方面取得非预期的积极成果。气候技术中心和网络正在制定一项综合战略，以加强其对性别观点主流化的影响。

## B. 结论

83. 从顾问的角度来看，有效实施气候技术中心和网络的主要成就如下：

(a) 受益者对气候技术中心和网络提供的服务表示满意。受访者和调查回复者都承认了气候技术中心和网络产生的价值，这主要是由于其所提供的技术援助的范围以及其开展业务的时间框架。气候技术中心和网络促进与金融机构和技术伙伴的协同作用，避免了冗余，发挥了其技术援助的影响；

(b) 总体而言，环境规划署、工发组织和机构集团伙伴有效执行了历届缔约方会议的决定，并相应建立了气候技术中心和网络，使之能够对缔约方会议的授权任务作出有效反应，并作为公认机构不断发展，在全球气候支持生态系统中展开行动。气候技术中心和网络不断根据其财政资源情况调整各项服务的轻重缓急，并修订其工作方案，以执行历届缔约方会议的决定；

(c) 气候技术中心和网络的实施需要时间，但是一个颇有效率的组织已经建立起来。机构集团形成了核心专长与区域专长的良好组合，促进了对联合国程序的了解，进而确保了缔约方会议决定的适用，便利了气候技术中心和网络服务的部署；

(d) 咨询委员会为气候技术中心和网络的各项业务和服务提供了有益的战略指导，以推动落实缔约方会议决定，确保气候技术中心和网络的有效实施；

(e) 能力建设活动赋予国家指定实体权能，以便其确定和提交相关请求，气候技术中心和网络针对这些要求，提供因地制宜的技术援助，极大满足了国家的需要。

84. 从顾问的角度来看，有效实施气候技术中心和网络的主要困难如下：

(a) 资金模式和随之而来的资金限制可以妨碍了气候技术中心和网络提供预期水平的服务。加强财政资源的可预测性和安全性，将确保气候技术中心和网络能够继续成功地回应缔约方会议的授权任务和发展中国家的需要和期望；

(b) 目前没有专门的平台，保证报告气候技术中心和网络的透明度和问责制问题，并与捐助者进行讨论；

(c) 考虑到气候技术中心和网络工作的性质和发展中国家日益强烈的期望，咨询委员会需要加强技术专长，继续提供适当的战略指导；

(d) 气候技术中心和网络核心小组和机构集团伙伴的人力资源有限，拖延了技术援助服务的交付，限制了气候技术中心和网络实现其目标产出的能力。此外，气候技术中心和网络没有充分利用其网络的资源和专门知识，这一资源库本可以帮助交付技术援助。一些网络成员的低参与度导致了成员的不满。不过，2017年上半年的数字和全年预测表明，网络成员将实施越来越多的技术援助项目；

(e) 技术援助进程依赖发展中国家的国家指定实体，而它们通常没有资源或能力来有效协调与受益者的互动，并与当地利益攸关方充分沟通。仅根据国家请求提供技术援助限制了气候技术中心和网络的活动(请求数量低于预期)以及可复制性的可能；

(f) 已经看到，一些业务的效率低下，导致了拖延提供技术援助项目，而活动和网络研讨会的组织，也面对有待改进之处。此外，存在最大限度地提高技术援助进程的效率的机会；

(g) 技术中心和网络已证明其有效提供令人满意的产出的能力，但成果仍然低于预期，仅报告了一些关于预期宏观层面影响的定性实例。气候技术中心和网络需要进一步展示其服务成果，以强调它在支持发展中国家扩大和加快气候行动和实现《巴黎协定》目标方面的重大作用。这将最终向捐助者表明它做到了物有所值，有理由去筹措额外的资金。

## C. 建议

85. 顾问就提高气候技术中心和网络的绩效提出如下建议：



## 1. 治理和组织

- (a) **建议 1: 鼓励各国提高有关利益攸关方对其国家指定实体的认识, 并通过国家机构和与其他国家《气候公约》联络点的合作, 支持其国家指定实体**

86. 由于国家指定实体报告说, 缺乏国家一级的支持和认可, 本建议将有助于确保气候技术中心和网络的工作广为人知, 得到有关国家机构的支持。为实现这一点, 可以创办《气候公约》联络点年度论坛, 以将《气候公约》相关体制安排和国家指定实体的代表汇聚在一起, 努力加强它们的气候变化相关活动的互补性和影响。此外, 发展中国家可以鼓励其国家指定实体与其他国家的实体协商, 以确定、选择和完善技术援助请求, 确保符合国情的请求得到有力支持, 并与国家优先事项和当下的气候与发展努力保持高度一致。

- (b) **建议 2: 加强气候技术中心和网络的治理, 继续在战略和技术指导方面呼应气候技术中心和网络的需要**

87. 参加审查的利益攸关方报告说, 咨询委员会的作用不够清晰。虽然咨询委员会的任务主要是核准业务计划和预算, 但其作用已经超越了这一点, 现在也提供战略指导。缔约方会议可以修正咨询委员会的任务, 明确规定向气候技术中心和网络提供战略指导。此外, 可鼓励缔约方提名咨询委员会成员, 如果他们具备与适应和缓解行动技术的开发和转让有关的技术专长。

- (c) **建议 3: 鼓励气候技术中心和网络澄清发达国家的国家指定实体的作用**

88. 参加审查的利益攸关方指出, 发达国家的国家指定实体的作用和责任不明确。本建议将确保气候技术中心和网络能够受益于发达国家的国家指定实体的技术专长, 并可促进协作和筹资。此类行动应旨在加强来自发达国家的国家指定实体参与气候技术中心和网络业务, 为此, 可建立一个由发达国家的国家指定实体组成的工作组, 以进一步规范它们对气候技术中心和网络的参与和贡献。

## 2. 筹资

- (a) **建议 4: 请作为气候技术中心和网络的东道方的环境规划署和工发组织, 查明额外财政资源的潜在来源**

89. 目前气候技术中心和网络的供资模式主要依靠各国的自愿捐款, 气候技术中心和网络的可利用资金有限被认为是妨碍其提供预期水平服务的主要因素之一。环境规划署和工发组织落实本建议的一种方法是, 勾勒并定期更新适应气候技术中心和网络活动的可能的额外资金来源图(包括慈善资金、私募资金和众筹)。根据对确定的资金来源的设计(数量、格式、程序), 气候技术中心和网络可随之安排筹资工作的优先顺序。此外, 鼓励气候技术中心和网络在气候技术中心和网络小组中设立一个职位, 专门负责筹资和与捐助者进行对话, 从而保证其他工作人员能够专注于自己的角色。

- (b) **建议 5：鼓励气候技术中心和网络、全球环境基金和绿色气候基金继续探讨如何进一步促进为气候技术中心和网络活动提供持续资金，并根据各自的任务，加强各组织之间的业务联系**

90. 气候技术中心和网络的可利用资金有限，被认为是妨碍其提供预期水平服务的主要因素之一。全球环境基金和绿色气候基金表示愿意对气候技术中心和网络给予支持，但却是以临时的特定方式进行，而气候技术中心和网络需要加强财政资源的可预测性。全球环境基金和绿色气候基金提供资金应旨在尽量减少延误，以避免妨碍气候技术中心和网络的业务效率。此外，全球环境基金还开发并资助了一个区域气候技术中心网络，该中心提供类似的服务，并在有限程度上与气候技术中心和网络合作。加强气候技术中心和网络与全球环境基金区域气候技术中心之间的联系，将有助于区域一级的知识共享和加强潜在的协同增效作用。各国应推动其国家指定实体与其全球环境基金国家联络点的接触，以确定可从气候技术中心和网络和全球环境基金的服务中受益的项目概念。可以通过将国家指定实体与国家指定当局之间的关系制度化，加强气候技术中心和网络技术援助与绿色环境基金资助方案之间的联系。这将有助于这些行动者在沟通、国家一级的协调一致、互补性、当地和国际利益攸关方之间的关系以及人力资源方面，最大限度地发挥协同增效作用。

### 3. 技术援助

**建议 6：鼓励气候技术中心和网络、其咨询委员会和国家指定实体努力提高气候技术中心和网络提供技术援助的效率**

91. 已经看到，提供技术援助工作的一些效率低下的情况，导致了种种拖延、气候技术中心和网络的额外工作以及一些受益者的不满。提高效率的方法包括更好地控制气候技术中心和网络反应计划的制定截止日期。此外，鼓励气候变化中心和网络继续并越来越多地向网络成员开放技术援助投标，以进一步利用后者的专门知识和资源。它还可以探讨是否有机会在网络中建立专门知识库，这些专门知识库将围绕特定主题或一个区域来组织，在其专门知识领域，将可优先进行技术援助投标。气候变化中心和网络还可以确定技术援助最佳做法和成功的技术援助项目，以通过能力建设和知识共享促进其复制。最后，促进国家指定实体之间的多区域技术援助可以在资源配置方面实现更高的效率，同时，不仅仅是根据所收到的请求，而是利用系统评估机会，力争向更多国家提供技术援助。

### 4. 知识管理、同行学习和能力建设

**建议 7：鼓励气候变化中心和网络定期继续培训国家指定实体，并通过其区域论坛和孵化器方案促进提出请求**

92. 利益攸关方认为，能力建设活动对赋予发展中国家的国家指定实体权能是必要的，这些实体在确定和提交请求方面可发挥关键作用。本建议将确保在国家指定实体的专门知识库内持续保存这些知识，同时确保有关请求与气候变化中心和网络技术援助服务和国家优先事项保持一致。提高国家指定实体的能力和效率的方法包括创设能力建设模块，对选定的成功技术援助项目加以借鉴，以便在其他国家复制。此外，建议气候变化中心和网络更好地预计各项活动和网络研讨会的规划和组织，并提前作出通报，以促进更大程度的参与。

## 5. 外联、网络和利益攸关方的参与

### (a) 建议 8: 鼓励气候变化中心和网络继续提高人们对其在发展中国家提供的服务的认识

93. 当地利益攸关者对气候变化中心和网络及其服务的认识似乎有限。本建议将确保发展中国家充分利用气候变化中心和网络的服务。实现这一目标的方法之一是, 支持发展中国家更多的利益攸关方(特别是私营部门)参加气候变化中心和网络的技术援助、能力建设和网络活动, 因为它们了解国家扶持性环境的差距, 有可能支持在当地推广气候技术。

### (b) 建议 9: 鼓励气候变化中心和网络加强网络成员对其活动的参与

94. 据认为, 气候技术中心总体上没有充分利用其网络的资源和专门知识来提供核心服务。这一资源库可以大大有助于提供技术援助。一些网络成员的低参与程度导致成员不满。为解决这个问题, 可以更频繁地利用网络, 为气候变化中心和网络的核心服务, 包括技术援助和知识管理系统作出贡献, 并举办更多的网络成员活动, 如在缔约方会议第二十二届会议期间举办的一类活动。

## 6. 监测、评估和报告

### 建议 10: 鼓励气候变化中心和网络提高其筹资安排的透明度, 并加强对其所产生影响的报告和评估

95. 为筹集额外资金, 气候变化中心和网络需要向其目前的捐助者证明已实现物有所值。做到这一点的方法之一是提高捐助协定的透明度, 为此应在气候变化中心和网络网站上登载这些协定。进一步传播其影响也很重要。建议气候变化中心和网络确保通过关于战略性关键绩效指标进展情况的季度汇总表, 更经常地向咨询委员会报告其绩效。此外, 气候变化中心和网络还可组织年度捐助者论坛, 提供关于气候变化中心和网络活动的报告, 同时讨论并酌情修改捐助协定。此外, 鼓励气候变化中心和网络完成监测和评估框架, 以掌握成果和影响, 便于以简单的方式进行分析, 并提供有关技术援助影响的定量和客观信息。气候变化中心和网络可以在每一技术援助项目完成几年后进行事后评估, 以展示影响并评估其可持续性和可复制性。

## 7. 咨询委员会

### 建议 13: 请咨询委员会落实本次审查提出的建议

**Annex I\*****List of acronyms used in the annexes**

[English only]

AB	Advisory Board
ADB	Asian Development Bank
AfDB	African Development Bank
AIT	Asian Institute of Technology – Thailand
BF	Bariloche Foundation – Argentina
BINGO	Business and Industry Non-Governmental Organization
CATIE	Tropical Agricultural Research and Higher Education Center – Costa Rica
CC	Climate Change
COP	Conference of the Parties
CSIR	Council for Scientific and Industrial – South Africa
CTC	Climate Technology Center
CTCN	Climate Technology Center and Network
DHI	DHI Group – Denmark
DTU	Technical University of Denmark – Denmark
EBRD	European Bank for Reconstruction and Development
ECN	Energy Research Centre of the Netherlands – The Netherlands
ENGO	Environmental Non-Governmental Organization
ENDA-TM	Environment and Development Action in the Third World – Senegal
GCF	Green Climate Fund
GEF	Global Environmental Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit – Germany
ICRAF	World Agroforestry Centre – Kenya
IDB	Inter-American Development Bank
IEA	International Energy Agency
IRENA	International Renewable Energy Agency
KMS	Knowledge Management System
MoU	Memorandum of Understanding
NAMA	Nationally Appropriate Mitigation Actions
NAPA	National adaptation programmes of action
NDA	National Designated Authority
NDE	National Designated Entity
NGO	Non-Governmental Organizations
NREL	National Renewable Energy Laboratory – United States of America
RD&D	Research, Development and Demonstration
RINGO	Research and Independent Non-Governmental Organizations
SDG	Sustainable Development Goal
SME	Small and Medium Enterprise
SWOT	Strength, Weaknesses, Opportunities and Threats
TA	Technical Assistance
TAP	Technology Action Plan
TEC	Technology Executive Committee
TERI	The Energy and Resources Institute – India
TNA	Technology Needs Assessment
TOR	Terms of Reference
UN	United Nations
UNEP	United Nations Environment Programme
UNEP-DHI	UNEP-DHI Centre for Water and Environment
UNEP-DTU	UNEP DTU Partnership (formerly UNEP Risø Centre (URC))
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
WB	World Bank
WIPO	World Intellectual Property Organization

\* Owing to time constraints, the annexes to this document have not been formally edited.

## Annex II

### List of COP decisions related to the CTCN

[English only]

<i>Decision</i>	<i>Paragraph(s)/ Article(s)</i>	<i>Summary of the relevant paragraphs related to the CTCN</i>
1/CP.16	123	Establishes the CTCN
2/CP.17	139-141 and Annex VII	Decides that the CTCN should be funded from varied sources. Sets the terms of reference of the CTCN
14/CP.18	1-9 and Annexes I-II	Select UNEP as the host and Memorandum of understanding with UNEP. Adopts the constitution of the Advisory Board.
25/CP.19	All	Adopts the modalities and procedures of the CTCN and its Advisory Board. Requests CTCN to work in conjunction with TEC.
16/CP.20	1 and 4-8	Urges parties to nominate NDEs and invites them to submit requests.
17/CP.20	1-4 and 14-18	Encourages the CTCN to further elaborate its procedures for handling requests, requests the CTCN to report on consultation with the GEF
Paris Agreement	Article 10	Establishes a technology framework to provide overarching guidance to the Technology mechanism.
1/CP.21	66, 69	Requests the TEC and the CTCN in supporting the implementation of the Agreement, to undertake further work relating to, inter alia: <p>(a) Technology research, development and demonstration;</p> <p>(b) The development and enhancement of endogenous capacities and technologies;</p> <p>Decides to undertake a periodic assessment of the effectiveness and adequacy of the support provided to the Technology Mechanism in supporting the implementation of the Agreement on matters relating to technology development and transfer”</p>
12/CP.21	All	Invites the CTCN to use the guidance provided by the TEC on the preparation of technology action plans when responding to requests.
13/CP.21	All	Welcomes the dialogue between GCF, GEF, TEC and CTCN. Underlines the need for increased cooperation between the CTCN, the TEC and the operating Entities of the Financial Mechanism. Requests them to consult on and further elaborate on the linkages between the Technology Mechanism and the Financial Mechanism.
14/CP.22	1-4 and 7-10	Welcomes the decision of the GCF to hold annual meetings with the TEC and the CTCN. Welcomes the increased engagement of the GCF and CTCN in particular regarding utilizing the Readiness and Preparatory Support Programme and the Project Preparation Facility. Invites these bodies to provide information on their linkages in their annual reports.
15/CP.22	1-6 and 7-17	Encourages the CTCN and TEC to continue their collaboration. Also encourages the TEC and the Advisory Board of the CTCN to continue updating the procedures for preparing the joint chapter of their joint annual report. <p>Encourages cooperation with the GEF. Underlines the importance of collaboration between NDEs, NDAs of the GCF and focal points of the GEF.</p>

## Annex III

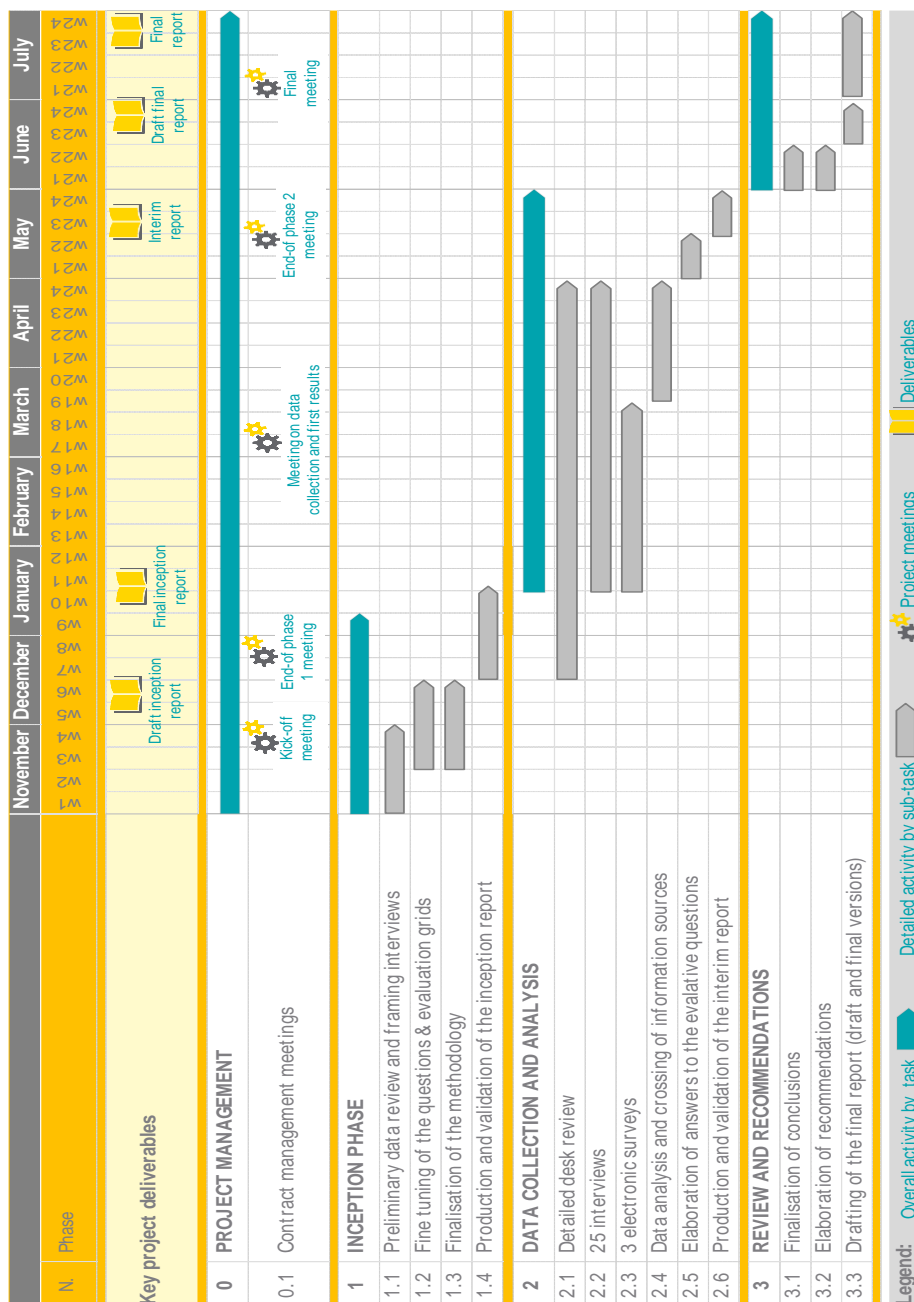
### Planning of the independent review

[English only]

1. Figure 7 presents the overall planning of the CTCN review that started at the beginning of November 2016.

- (a) Phase 1 ended by mid-January 2017, after the validation of the inception report;
- (b) Phase 2 ended by the end of May 2017, after the interim report was sent and after the organization of the end-of-phase 2 meeting;
- (c) Phase 3 was completed by the end of July 2017, after validation of the final report.

Figure 7  
Evaluation planning (Source: EY)



## Annex IV

### Evaluation grids

[English only]

#### 1. Relevance

**Question:** Are the strategy and the resources of the CTCN relevant and appropriate regarding priorities given by the Conference of the Parties and the local needs for support?

**Subquestions:**

(a) To what extent is the work plan of the CTCN aligned with COP decisions or has to be revised?

(b) To what extent were the interventions undertaken under the CTCN relevant to the country's context and needs for support (at the time of the evaluation and at the time the project was being developed), and within the boundaries of the CTCN mandate?

(c) To what extent was the program design appropriate to meet its objectives in terms of:

- (i) Selection and sequencing of activities/components/beneficiaries;
- (ii) Processes and procedures;
- (iii) Funding;
- (iv) Time frame;
- (v) Human resources, and,
- (vi) Communication, Monitoring, Assessment & Evaluation.

(d) To what extent was the consortium structure adapted to the needs for establishing the CTCN, and then for implementing it? Could the current structure be enhanced?

(e) To what extent are the services offered by the CTCN complementary with policy guidance given by the TEC, with the UNFCCC Financial Mechanism (GEF and GCF), and with other related climate support programs (provided by bilateral cooperation agencies, development banks, universities and research centers, NGOs or private sector technology providers)? Have potential synergies (whether on-going or completed) been optimized? How can synergies be improved in the future?

(f) To what extent did the CTCN respond adequately to changes in the macroeconomic, technological and political context that occurred over the course of its implementation? How can it be adapted in the future to changes which have taken place since its launch?

**Indicators and Data sources:**

- Intervention logic of the CTCN strategy (resources, services, objectives) through the analysis of funding documents (decisions of the COP, operating plans...);
- Identification of the main changes in the work plan of the CTCN and the main decisions of the COP regarding the CTCN;
- Flow charts mapping procedures and processes (for technical assistance, network...);
- Mapping of linked international climate change policies and comparative matrix for objectives and activities (analysis of other funding documents);
- Identification of non-annex 1 countries' needs for support regarding CC mitigation and adaptation (through preliminary literature review and focus on 5 countries), and comparison with the CTCN services;
- Global analysis of macroeconomic technological and political context changes (through preliminary literature review and focus on 5 countries);
- Perception of partners (advisory board, consortium members, etc.) on the program's relevance in addressing these issues (through interviews and survey);
- Perception of NDEs and beneficiaries on the program's relevance in addressing their needs (through interviews and survey).



## 2. Effectiveness

**Question:** Have the objectives of the CTCN been achieved in terms of technical assistance / knowledge management, peer learning & capacity building / outreach, networking and stakeholder engagement?

**Subquestions:**

- (a) To what extent was the CTCN established according to targeted deadlines?
- (b) To what extent did the CTC communication and organization (including the incubator programme) support a coordinated identification and submission of relevant requests for technical assistance (technical assistance) from developing countries?
- (c) To what extent did processes and procedures support a responsive assessment and answer to requests for technical assistance? Have the answers been frequent enough (125-190 quick responses & 70-95 response projects over 4 years), diversified (geographical coverage, mitigation/adaptation, type of support...) and produced on time?
- (d) To what extent were the responses (both quick answers and projects) consistent with the demand for technical assistance? Were the NDEs and beneficiaries satisfied with the technical assistance provided?
- (e) To what extent was the knowledge management system (KMS) developed in accordance with the work programme (in terms of functionalities, format, timeframe...)?
- (f) To what extent are sufficient and relevant tools and information materials (3,500 in 2016) available in the KMS?
- (g) To what extent is the KMS regularly used by targeted beneficiaries (8,000 unique KMS users and 50.000 page visits by 2016) and perceived as useful?
- (h) To what extent were regular and relevant training sessions organized on time (all NDEs trained and 750 CTCN clients trained by 2016) and were perceived as useful by the participants?
- (i) Were there enough capacity building workshops (16-22 by 2016) and remote technical advice and helpdesk (90-120 by 2016) organized by the CTCN? To what extent were they relevant, on time, and perceived as useful by the participants?
- (j) Were there enough and relevant international events or forum (8-12 by 2016), public/private workshops (12-18 by 2016) and regional networking meetings (18-27 by 2016) organized by the CTCN. To what extent were they relevant, on time, and perceived as useful by the participants?
- (k) What are the major factors influencing the achievement/non-achievement of targeted output to date (difficulties and success factors)? What can be enhanced to make the organization of events and trainings, the provision of technical assistance and the dissemination of information have greater impact?
- (l) What are the main differences compared to the initial Programme of Work? Are these changes and unplanned activities are consistent, in keeping with the CTCN mandate (given by the COP)? Is there any lack to completely fulfil the CTCN mandate?
- (m) To what extent is the CTCN's output measurement system appropriate and well-managed? Are quantitative and qualitative data available? Are selected indicators adequate?

**Indicators and Data sources:**

- Analysis of monitoring and evaluation related documents (case study from UNEP, annual reports and other reporting documents);
- Review of output indicators values and reliability;
- Quantitative analysis of services provided by the CTCN: technical assistance requests / answers / projects, trainings, events, KMS visits... (via data base analysis);
- Thorough analysis of available documents related to a sample of sub-projects (e.g. participants and calendar of events, content of technical assistance, participants and program of trainings...);
- Perception of partners (advisory board, consortium members, etc.) on the program's deployment and achievement in terms of outputs (through interviews and survey);

- Perception of NDEs and beneficiaries regarding the deployment and the usefulness of different services (technical assistance, KMS, training...) (through interviews, surveys and feedbacks);
- SWOT analysis of the CTCN services (technical assistance, network...).

### 3. Efficiency

**Question:** Have the objectives of the CTCN been achieved efficiently by the establishment of the CTCN and the deployment of its services?

**Subquestions:**

(a) To what extent does the CTCN governance (advisory board, consortium organisation...) ensure its responsiveness (application of COP decisions, communication with UNFCCC and TEC...) and coordination with relevant international organisations (IEA, IRENA, GCF, WB...)?

(b) To what extent were enough financial resources mobilised (\$M38.3 raised by 2016)? Did the fund raising impact the CTCN's operations or services?

(c) To what extent were financial resources allocated appropriately and efficiently across the activities (as planned within the budget scenarios)?

(d) To what extent was the CTC appropriately staffed (adapted to the needs), and could field the right expertise?

(e) To what extent was the organization of the CTC (consortium of organizations, different sites, etc.) efficient (clear distribution of roles, coordination of activities...)?

(f) To what extent was the network (consortium and knowledge partners) mobilized and to what extent did it provide additional and valuable sources of expertise, knowledge and support?

(g) Is the role of the NDE clear for country representative? Is it efficient in terms of projects coordination?

(h) To what extent did the CTCN management structure, processes and procedures, communication and M&E support an optimization of its operation?

(i) To what extent has the CTCN been cost-effective in achieving outputs, relative to comparable initiatives of UN and/or other stakeholders in the sector? Considering the costs and outputs, to what extent has the CTCN provided value for money?

(j) To what extent has the CTCN designed and implemented processes that have allowed it to deliver its services in a timely and cost-effective manner?

(k) Could the results have been achieved with fewer resources without reducing the quality and quantity?

(l) Have synergies between actions/historical investments been identified? Synergies with peers (GEF, GCF, Development Banks, etc.)?

(m) To what extent have the operational risks been well managed?

(n) What could have been done to improve efficiency?

**Indicators and Data sources:**

- Achievement of outputs given by the answers to the questions related to effectiveness;
- Quantitative analysis of direct resources and costs: fund raising, expenses, CTC staffs and associated... (through data base analysis);
- Ratios between benefits achieved (technology transfers, partnership, trainings, knowledge) and funds disbursed for different activities;
- Analysis of indirect resources and costs: partners' contributions, NDEs resources, time consumption for request applicant... (through interviews, surveys and the analyze of a sample of projects);
- Simplified benchmark with comparable initiatives (through interviews with partners and a preliminary literature review);

- Perception of partners (advisory board, consortium members, etc.) on the program's efficiency (through interviews and survey);
- Perception of NDEs and beneficiaries regarding the deployment (technical assistance, KMS, training...) (through interviews, surveys and feedbacks).

#### 4. Impacts and sustainability

**Question:** Did the CTCN reach its expected outcomes and provide long term positive effects?

**Subquestions:**

(a) To what extent did the CTCN contribute to the development of national and sectoral technology plans (TNA & TAP) (50-75 by the 5<sup>th</sup> year of implementation) as well as policies and laws related to CC issues, to the implementation of new country-drive technology projects (100 by the 5<sup>th</sup> year of implementation) and UNFCCC processes (NAMA, NAPA...), or to any other informed choice or project regarding relevant technologies? Under which circumstance is it expected to continue, to increase or to be replicable (at different levels or for different topics)?

(b) To what extent did the CTCN contribute to the mobilization of relevant partners (200 by 2016)? Under which circumstance this mobilization is expected to continue, to increase or to be replicable (at different levels or for different topics)?

(c) To what extent did the network (directly or indirectly) contribute to the creation of Public-Private Partnerships (6 by 2016), to the signature of twinning arrangements (10 by 2016), to collaborations (South-South, North-South or 'Triangular'), to Post-response Plan intervention funding related to climate technology (\$B0.6 by the 5<sup>th</sup> year of implementation), or to any other technology cooperation, development and transfer? Under which circumstance is it expected to continue, to increase or to be replicable (at different levels or for different topics)?

(d) To what extent did the network contribute to the reduction of energy and carbon intensity in developing countries, and more generally to CC mitigation? Is this expected to be a long lasting effect?

(e) To what extent did the network contribute to an improvement of the Climate vulnerability index in developing countries, and more generally to CC adaptation and resilience? Is this expected to be a long lasting effect?

(f) What are the major factors influencing the achievement/non-achievement of outcomes to date, the replicability of the programme at other levels or in other sectors, and the likelihood of post-completion effects and lasting positive impacts?

(g) What unintended outcomes (positive and negative) and changes (direct and indirect) have occurred as a result of the CTCN?

(h) Is the CTCN necessary (in its current format) to expect sustainable effects? Could any other existing program / tool replace the CTCN effectively?

**Indicators and Data sources:**

- Analysis of monitoring and evaluation related documents (case study from UNEP, annual reports and other reporting documents);
- Analysis of network partners mobilization (list of participants, contributions...) and relations;
- Review of outcome indicators values and reliability;
- Thorough analysis of available documents related to a limited sample of sub-projects (e.g. evaluations and other assessments, press review...);
- Global literature review regarding climate change policies, collaboration and investments (impacts, changes...);
- Global analysis of climate change context changes in terms of mitigation and adaptation (through preliminary literature review and focus on 5 countries);
- Perception of partners (advisory board, consortium members, etc.) on the program's effects and impacts (through interviews and survey);
- Perception of NDEs and beneficiaries regarding the benefits of the CTCN and the effects of their projects and policies (through interviews, surveys and feedbacks).

## Annex V

### List of documents used during the preparation of the report

[English only]

**Decisions of the COP** (all available at <http://unfccc.int/ttclear/negotiations/decisions.html>)

- 1/CP.16.
- 2/CP.17.
- 14/CP.18.
- 25/CP.19.
- 16/CP.20.
- 17/CP.20.
- 1/CP.21.
- 12/CP.21.
- 13/CP.21.
- 14/CP.22.
- 15/CP.22.
- Paris Agreement. Available at: <http://unfccc.int/ttclear/negotiations/decisions.html>

**Summary of AB decisions:**

- CTCN. 2014. *Minutes from second Advisory Board meeting - AB/2014/3/2*. Available at <https://www.ctc-n.org/sites/www.ctc-n.org/files/DRAFT%20-%20Minutes%20of%20the%20Second%20CTCN%20Advisory%20Board%20Meeting.docx>
- CTCN. 2014. *Minutes of the third Advisory Board meeting - CTCN/3<sup>rd</sup>AB/2014* [https://www.ctc-n.org/sites/www.ctc-n.org/files/Minutes\\_3rd%20AB%20Meeting\\_March%202014.docx](https://www.ctc-n.org/sites/www.ctc-n.org/files/Minutes_3rd%20AB%20Meeting_March%202014.docx)
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- CTCN. 2015. *Minutes of the fifth Advisory Board meeting - AB/2015/6/2b1*. Available at <https://www.ctc-n.org/sites/www.ctc-n.org/files/AB20156%202b1%20Minutes%20of%20AB5%20final%20with%20header%20%28A1.3%29.pdf>
- CTCN. 2015. *Key discussions points of the fifth Advisory Board meeting* Available at [https://www.ctc-n.org/sites/www.ctc-n.org/files/AB%205\\_Key%20discussion%20points%20v1.5%20final\\_0.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/AB%205_Key%20discussion%20points%20v1.5%20final_0.pdf)
- CTCN. 2016. *Minutes of the sixth Advisory Board meeting - AB/2016/7/2.2*. Available at [https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20167\\_2.2\\_ab\\_6\\_minutes\\_final.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20167_2.2_ab_6_minutes_final.pdf)
- CTCN. 2016. *Summary of Actions as a Result of Advisory Board Meeting 6 - AB/2016/7/5.1*
- CTCN. 2016. *Minutes of the seventh Advisory Board meeting - AB/2016/8/2.2*. Available at [https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20168\\_2.2\\_ab7\\_meeting\\_minutes\\_v2.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20168_2.2_ab7_meeting_minutes_v2.pdf)
- CTCN. 2017. *Minutes of the eighth Advisory Board meeting - AB/2017/9/2.2*. Available at [https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20179\\_2.2\\_ab8\\_meeting\\_minutes\\_v1.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20179_2.2_ab8_meeting_minutes_v1.pdf)
- CTCN. *Advisory Board composition*, <https://www.ctc-n.org/about-ctcn/advisory-board>

**Operating plans:**

- UNEP – UNIDO. 2013. *Joint UNEP-UNIDO Programme to host and manage the Climate Technology Centre and Network (CTCN)*. Available at <https://open.unido.org/api/documents/3036399/download/Project%20Document%20120444>.
- CTCN. 2013 (date of further revision unknown). *Draft Programme of Work Climate Technology Centre and Network*
- CTCN. 2014. *Annual Operating Plan Climate Technology Centre and Network (second year of operations) - AB/2014/4/6*
- CTCN. 2015. *Annual Operating Plan Climate Technology Centre and Network (third year of operations) - AB/2015/6/6b*

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#### **Annual reports:**

- CTCN. 2016. 2016 Progress Report. Available at <https://www.ctc-n.org/sites/www.ctc-n.org/files/ctcn-ar16-bookcover-lowres.pdf>.
- CTCN. 2015. Progress Report January 2014 – August 2015. Available at [https://www.ctc-n.org/sites/www.ctc-n.org/files/ctnc\\_progressreport\\_01dec\\_complete\\_screen\\_final\\_a4.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/ctnc_progressreport_01dec_complete_screen_final_a4.pdf).
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#### **Monitoring & Evaluating:**

- CTCN. 2014. *Monitoring & Evaluation (M&E) Summary Note - AB/2014/4/8*
- CTCN. 2015. *Monitoring & Evaluating Transformational Outcomes and Impacts of CTCN Activities - AB/2015/5/15*
- CTCN. 2015. *Process and Procedures for Monitoring, Assessment & Evaluation of CTCN Technical Assistance - AB/2015/6/7b*
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- CTCN. 2016. *Process and Procedures for Monitoring, Assessment & Evaluation of CTCN's collaboration and knowledge-based services and their activities (AB 7th meeting) - AB/2016/7/9.2*
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- CTCN. 2016. *Relevant COP Decisions on Monitoring and Evaluation Processes - AB/2016/7/9.1*
- CTCN. 2017. *9a) Monitoring and Evaluation (M&E) – CTCN M&E Framework – document presented at the 9<sup>th</sup> Advisory Board*. Available at: [https://www.ctc-n.org/sites/www.ctc-n.org/files/ab9\\_9.1\\_monitoring\\_and\\_evaluation.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/ab9_9.1_monitoring_and_evaluation.pdf)
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#### **Technical assistance:**

- CTCN. 2013. (date of further revision unknown). *Prioritization criteria for responding to requests from developing country Parties* [http://unfccc.int/ttclear/misc\\_/StaticFiles/gnwoerk\\_static/TEM\\_CTC\\_infobox\\_2/83a64e4046954ee6bc7c685385a3c6cc/240bcf259a814482a6b0b3d0f73932a4.pdf](http://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/TEM_CTC_infobox_2/83a64e4046954ee6bc7c685385a3c6cc/240bcf259a814482a6b0b3d0f73932a4.pdf).
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- CTCN. 2015. *CTCN Technical Assistance Process and Criteria for Responding to Country Requests- AB/2015/6/7a*
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- CTCN. 2016. *Technical Assistance in a Snapshot – As of 1st March 2017* - AB/2017/9/7.1. Available at [https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20179\\_7.1\\_ctcn\\_ta\\_snapshot\\_v3.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20179_7.1_ctcn_ta_snapshot_v3.pdf)
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- CTCN. *Requests data*, <https://www.ctc-n.org/technical-assistance/data>
- UNFCCC. *Technology Needs Assessment Overview*, <http://unfccc.int/ttclear/tna>

**KMS:**

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- CTCN. 2016. *CTCN Proposed KMS Forward Plan* - AB/2016/8/7.5
- CTCN. 2017. *CTCN Knowledge Management System in a Snapshot – As of 1 March 2017* - AB/2017/9/7.4

**Network and consortium members:**

- CTCN. 2013. *Guiding Principles and Criteria for Establishment of the Climate Technology Network*. Available at [http://unfccc.int/ttclear/misc\\_/StaticFiles/gnwoerk\\_static/TEM\\_CTC\\_infobox\\_2/83a64e4046954ee6bc7c685385a3c6cc/fb910bb9b3394dff99a2be617f244ec4.pdf](http://unfccc.int/ttclear/misc_/StaticFiles/gnwoerk_static/TEM_CTC_infobox_2/83a64e4046954ee6bc7c685385a3c6cc/fb910bb9b3394dff99a2be617f244ec4.pdf).
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- CTCN. 2015. *CTCN Guidance Manual for the Network (Version 1.0 draft 2 April 2015)*
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- CTCN. 2016. *Climate Technology Network in a snapshot – As of 15 July 2016* - AB/2016/8/7.3
- CTCN. 2017. *Climate Technology Network in a snapshot – As of 1 March 2017* - AB/2017/9/7.3
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- CTCN. *Network visualization*, <https://www.ctc-n.org/network/network-visualizations>

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## Annex VI

## List of interlocutors interviewed during the preparation of the report

[English only]

<i>Type of actor</i>	<i>Organisation</i>	<i>Name</i>
UNFCCC	UNFCCC	Wanna Tanunchaiwatana and Bert Van der Plas
CTCN	UNEP	Jukka Uosukainen
	UNEP	Mark Radka and Manfredi Caltagirone
	UNEP	Naomie Kosaka
	UNIDO	Patrick Nussbaumer and Takeshi Nagasawa
Donors	GEF	Masako Ogawa
	GCF	Juan P. Hoffmaister
CTCN sub-project partners	DNV GL	Edwin Aalders
	DNV GL	Eelco Kruizinga
	AIT	Gopi Krishna
	GIZ	Nika Greger
	ENDA	Libasse Ba
	CATIE	Bastiaan Louman
	World Agroforestry Center	Henry Neufeldt
Advisory Board members (and ex-members)	European Commission	Karsten Krause
	Argentina	Gabriel Blanco
	Grenada	Spencer Linus Thomas
	USA	Griffin Thompson
	Norway	Mette Møglestue
	BINGO	Tanya Morrison
	RINGO	Shikha Bhasin
Network partners	Carbon counts (UK)	Paul Zakkour
	SNV Netherlands Development Organization (NL)	Eric Buysman
	CTI PFAN (Japan)	Manuel Espinoza
	ECOWAS Centre for Renewable Energy and Energy Efficiency (Cape Verde)	Peter Storey, Bobby Namiti and Taiki Kuroda
	WIPO	Mahama Kappiah and Monica Maduekwe
	ADB	Anja Von des Ropp
		Xuedu Lu
NDE	Thailand	Surachai Sathitkunararat
	Mauritius	Sin Lan Ng Yun Wing
	Guinea	Mamady Kobélé Keita
	Péru	Claudia Figallo de Ghersi
CTCN sub-project beneficiaries	Chile - Ministerio del Medio Ambiente	Daniel Felipe Alvarez Latorre
	Bhutan - Road Safety and Transport Authority	Lham Dorji
	Jordan - Ministry of Environnement of Jordan	Abdelkarim Shalabi
	Bosnia and Herzegovina - City of Banja Luka	Nevena Predojevic
	Uganda - Ministry of Energy and Mineral Development	Vincent Kato

## Annex VII

## Additional information on the surveys

[English only]

Profile of respondents

1. Three different surveys were conducted between February and March 2017. One was sent to NDEs, one to Network Members (excluding consortium partners) as well as active partners of the CTCN who have participated to CTCN events (excluding NDEs), and one to beneficiaries of technical assistance. The different email lists used for the survey were provided by the CTCN. The response rates to the three surveys are presented in table 7.

Table 7

**Response rates to the surveys**

Survey targets	Number of emails sent	Number of replies		Number of survey completed (answered the last question)	
		(Answered question 1)	Rate		Rate
NDE	155	71	46%	53	34%
Partners	672	121	18% <sup>a</sup>	88	13% <sup>b</sup>
Beneficiaries	98	39	40%	30	31%

<sup>a</sup> This survey was sent to several representatives of the same organizations. 261 individual organizations were contacted, and 108 responded, giving a response rate of 30%.

<sup>b</sup> 83 individual organizations have completed the survey, giving a rate of 18%.

2. The NDE survey was sent to NDEs from both Annex 1 and Non Annex 1 countries. Only 8% of the responses came from Annex 1 country. As a result, the geographic distribution of respondents is close to the distribution of the technical assistance provided by the CTCN with slightly more responses from Europe and two responses from North America.

3. The geographical distribution of the respondents to the beneficiary survey is aligned with the distribution of technical assistance and other services provided by the CTCN with a majority of respondents from Africa followed by an important number of respondents from Asia as well as Central and South America. The database used does not allow to properly track the geographical distribution of the respondents to the survey addressed to Network Members and active partners of the CTCN. The detailed distribution is provided in table 8.

Table 8

**Geographical distribution of the respondents to the surveys.**

	NDE		Beneficiaries	
	Number of respondents	Percentage	Number of respondents	Percentage
Africa	28	39%	22	56%
Asia	13	18%	9	23%
Central America	7	10%	2	5%
Europe	14	20%	4	10%
North America	2	3%	0	0%
Oceania	2	3%	1	3%
South America	5	7%	1	3%

## Annex VIII

### Summary of services provided by the CTCN

[English only]

#### Technical assistance

1. As per its mandate, the CTCN provides technical assistance to countries based on the requests submitted by their NDEs. The technical assistance is provided either by one of the consortium partner or by a network member. The technical assistance procedures<sup>1</sup> organize the technical assistance process as follows:

(a) Review: deciding on the eligibility and prioritization of the request submitted by the NDE;<sup>2</sup>

(b) Design: forming the team and designing the response plan that will be either executed by the consortium partner or tendered to network members;

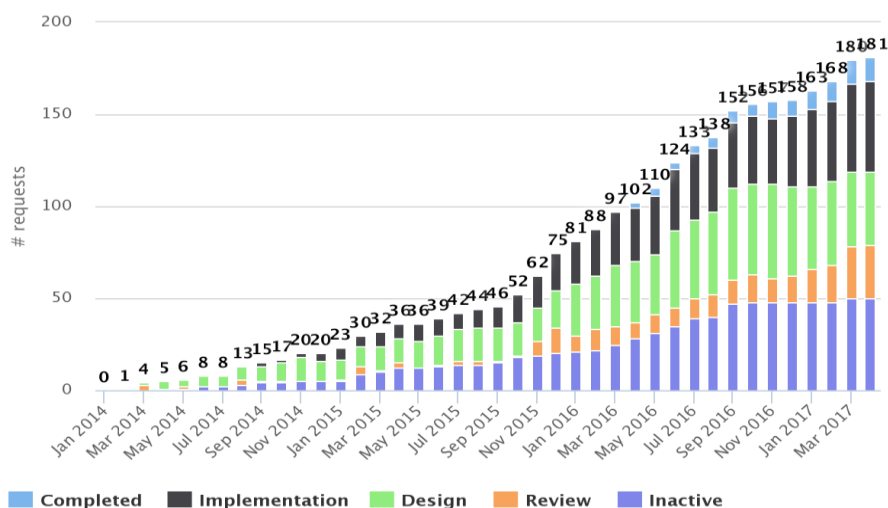
(c) Implementation: Selecting and contracting the implementation team, implementing the response plan;

(d) Learning and Monitoring / completion: Learning from and sharing the results after completion of the Technical Assistance project, monitoring the impact.

2. Since its inception in late 2013, the CTCN has received an increasing number of technical assistance requests: 20 in 2014, 55 in 2015, 83 in 2016, and 23 between January and April 2017.

3. As of April 2017, the CTCN has received 181 requests. Out of those, 13 have been completed (all after May 2016), 49 are in the implementation phase, 40 are in the design phase, 29 are being reviewed, and 50 are currently inactive (see figure 8).<sup>3</sup>

Figure 8  
Status of requests of Technical Assistance<sup>4</sup>



<sup>1</sup> Source: CTCN. 2015. *Technical Assistance Process and Procedures - AB/2015/5/04*.

<sup>2</sup> Prioritization criteria were initially defined by the CTCN in a document approved by the advisory board at its second meeting (September 2013). It specifies guiding principles (alignment with national plans, enhancement of endogenous capacities, project management capacities), balancing principles (coverage of geographical areas, adaptation and mitigation issues, and different steps of the technology cycle), and prioritization criteria (promotion of collaborations and multi-country approaches, leverage additional financing, demonstrate multiple benefits, etc.). The document is available at: <https://www.ctc-n.org/sites/www.ctc-n.org/files/240bcf259a814482a6b0b3d0f73932a4.pdf>.

<sup>3</sup> The majority of the inactive requests are eligible to CTCN assistance but not prioritized according to the request prioritization criteria approved by the Advisory Board (67% of inactive requests), the remaining ones are requests that have not been deemed eligible (8% of inactive requests) and requests that have been withdrawn by the NDE (29% of inactive requests).

<sup>4</sup> Source: CTCN. 2016. *Technical Assistance in a Snapshot – As of 1st March 2017 - AB/2017/9/7.1*. Available at [https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20179\\_7.1\\_ctcn\\_ta\\_snapshot\\_v3.pdf](https://www.ctc-n.org/sites/www.ctc-n.org/files/ab20179_7.1_ctcn_ta_snapshot_v3.pdf).

4. The technical assistance requests addressed to the CTCN are distributed as follows:<sup>5</sup>
- (a) 44% of the requests from Africa 29% from Asia, 22% from Latin America and the Caribbean, 3% from Oceania, and 2% from Eastern Europe;<sup>6</sup>
  - (b) Low-income and lower-middle-income economies,<sup>7</sup> represent more than 80% of the requests;
  - (c) 44% of the requests concern mitigation, 30% concern adaptation, and 26% both;<sup>8</sup>
  - (d) The majority of requests relate to the strengthening of local human capacities via either the production of training materials, the delivery of specific training events or the design of training programs.<sup>9</sup>
5. Up until December 2016, Consortium Partners have been involved in 80% of all the projects completed or currently in the implementation phase, while Network Members have been involved in 20% of such projects.<sup>10</sup> Out of the 29 technical assistance requests that have entered in implementation phase since the beginning of 2017, half are being implemented by network members.

#### Fostering collaboration and access to information

6. The CTCN's second core service is on fostering collaboration and access to information. Through its different communication tools and its Knowledge Management System (KMS), the CTCN aims at providing information to internal and external stakeholders about its own actions and about climate technologies and climate technology development and transfer.
7. The CTCN designed a communications strategy in 2014,<sup>11</sup> which documents its objectives and strategic orientations concerning both internal<sup>12</sup> and external<sup>13</sup> communications.
8. In line with this strategy, the CTCN communicated on its activities and results via:<sup>14</sup>
- (a) The publication of recurrent reports on its operations and results, such as the Joint annual reports to the UNFCCC with the TEC, an annual progress report since 2015, brochures on its activities and on the network (in French, English and Spanish), and short impact briefs for the most advanced technical assistance projects;
  - (b) The transmission of information about its activities to stakeholders through: a newsletter distributed to nearly 5,000 individual subscribers, and articles (28 in 2015 and 26 in 2016) published on the CTCN website and distributed through social media (Twitter and Facebook);
  - (c) The publication of studies to share information and best practices about its technical assistance on selected topics;

<sup>5</sup> Source: <https://www.ctc-n.org/technical-assistance/request-visualizations> accessed on April 15 2017.

<sup>6</sup> To balance these figures, 35% of non-Annex 1 countries are located in Africa, 29% in Asia, 22% in Latin America and the Caribbean, 8% in Oceania, and 7% in Europa.

<sup>7</sup> Based on the World Bank classification.

<sup>8</sup> Source: <https://www.ctc-n.org/technical-assistance/request-visualizations> accessed on April 15 2017.

<sup>9</sup> Source: CTCN. 2016. *Technical Assistance in a Snapshot – As of 1st March 2017 - AB/2017/9/7.1*.

<sup>10</sup> Source: <https://www.ctc-n.org/network/network-visualizations> accessed on 20 April 2017.

<sup>11</sup> Source: CTCN. 2014. Internal document of the CTCN, *Communications and Partnerships Strategy*.

<sup>12</sup> The four objectives for internal communication are: (1) Keeping the Advisory Board and organizational leadership informed and engaged in CTCN's progress; (2) Promoting effective and clear lines of communication among CTCN and partner organization staff; (3) Encouraging the active engagement of communications focal points and partners in promoting the CTCN with consistent and tailored messaging; (4) Soliciting content inputs and communications feedback from communications focal points and partners.

<sup>13</sup> The four objectives for external communications are: (1) Generating awareness and use of CTCN's services; (2) Increasing membership of relevant organizations in the Network; (3) Encouraging external audiences to engage in a two way communication about CTCN in order to improve execution of CTCN services; (4) Demonstrating value for money to current and potential funders.

<sup>14</sup> Source: CTCN. 2016. Internal document of the CTCN, *Communications Overview*.

(d) Participation to international events, in order to promote the CTCN.

9. The action of the CTCN has been mentioned by a variety of regional or national journals as well as in the international press through more than 200 articles. In addition, the CTCN uses Twitter and Facebook accounts, totaling more than 1,000 followers on the former and close to 1,700 likes on the latter.<sup>15</sup>

10. The main component of the KMS is the Climate Technology Centre's website, which was launched in Q4 of 2014. The KMS is also composed of elements including tools for day-to-day operations of the CTCN (i.e. virtual office, sharing of documents, task management, information management, matchmaking module to help select the most relevant consortium members to reply to technical assistance requests, etc.).<sup>16</sup> The CTCN benefited from the support of DNV GL (strategic partner) to develop the KMS.

11. The website is designed to (i) generate awareness on the CTCN's services and partners;<sup>17</sup> (ii) provide access to technology information via the technology library, which constitutes the core of knowledge diffusion;<sup>18</sup> and (iii) provide up-to-date information on CTCN activities.<sup>19</sup>

12. The performance of the website, monitored using Google Analytics,<sup>20</sup> is presented below:

(a) As of December 2016, there were 10,768 information resources available on the website. These resources come from a variety of sources including Network Members;

(b) In 2016, the CTCN website received 145,138 visits by 104,851 users. 44% of the visitors in December 2016 were returning visitors. While most visits originate from Annex 1 countries, Non-Annex 1 countries tend to visit more pages per session.

#### Strengthening of networks, partnerships and capacity-building

13. The third core service of the CTCN is on strengthening networks, partnerships and capacity-building. Through the organization of forums and webinars, and its incubator and secondment programmes, the CTCN pursues two goals. The first objective is to train NDEs in order to ensure a sustained flow of high quality requests from countries as well as to train a wider audience on climate technologies. The second objective is to link together a diverse global community of stakeholders in order to recruit potential network partners, foster discussion and collaboration within this community and facilitate technology transfer partnerships between different actors. This service is aimed at both private and public actors, including technology users, technology providers and investors.

#### *Regional Fora*

14. Between 2013 and 2016, the CTCN held 21 fora and workshops.<sup>21</sup> These events are organized at a regional or sub-regional level. Three rounds of seven events were organized by the CTCN: a first training workshop round in 2013-2014, a first round of regional fora in 2015 and a second round of regional fora in 2016 (see figure 9). Another round of fora is planned for 2017.

<sup>15</sup> Source: CTCN. 2016. Internal document of the CTCN, *Communications Overview*.

<sup>16</sup> Source: CTCN. 2016. Internal document of the CTCN, *Communications Overview*.

<sup>17</sup> With the presentation of technical assistance requests, Network Members, and NDEs; publication of Advisory Board meeting documents; listing of international events and capacity building events, etc.

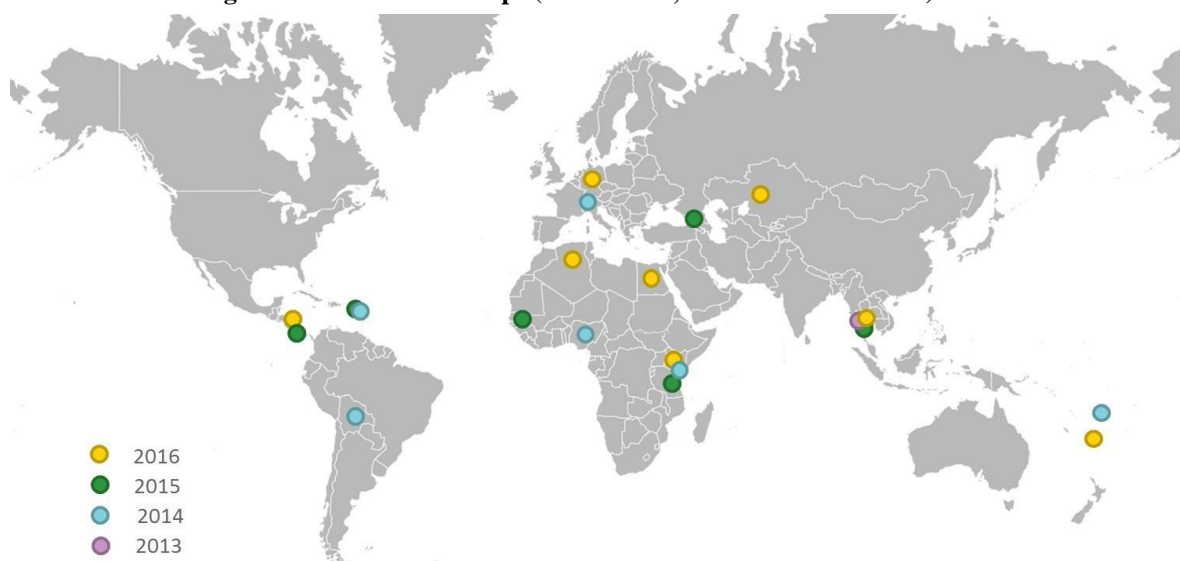
<sup>18</sup> The technology library is a compendium of existing information on climate technology organized by sector or themes / approaches.

<sup>19</sup> With the agenda of next meetings, workshops, or webinars, news and publications, etc.

<sup>20</sup> Source: CTCN. 2016. Internal document of the CTCN, *Communications Overview*.

<sup>21</sup> Source: CTCN (internal). 2016. *List of participants to CTCN events*.

Figure 9  
**CTCN regional fora and workshops (Source: EY, based on CTCN data)**



15. These events are focused on regional or sub-regional issues, and aim at strengthening the capacities of NDEs to fulfill their role and at developing their knowledge of locally relevant technology solutions. During the first round of workshops (2013-2014), emphasis was put on presenting and promoting the activities of the CTCN to elicit new requests by NDEs. The last two rounds (2015 and 2016), put emphasis on identifying and securing funding for the follow-up activities to CTCN technical assistance offer. During the last round of fora, the CTCN increased its sectoral approach: based on analysis of the countries' Nationally Determined Contributions (NDCs), the CTCN invited experts from the network to present technology options most relevant to the participants.

16. The events last between two or three days and gather 30 to 40 participants each. To date, there were around 650 participations to these fora including:<sup>22</sup> NDE representatives from more than 134 Parties – mostly non-Annex 1 Parties; UNEP and UNIDO representatives; Consortium Partners; UNFCCC secretariat, other UN bodies;<sup>23</sup> International Financial Institutions;<sup>24</sup> some network partners;<sup>25</sup> and local stakeholders.

#### *Stakeholder Fora and private sector engagement*

17. In addition to regional workshops and fora, the CTCN also organized three stakeholder fora. The first one, took place in Nairobi in April 2016. Other stakeholder fora were held in Panama in September 2016 and Singapore in February 2017. The goal of stakeholder fora is to create links between private actors and CTCN stakeholders (NDEs, Consortium Partners and network partners). The purpose is to generate requests for technical assistance to the CTCN. The fora also seek to foster the emergence of economically attractive climate technology projects and more generally create a context allowing for the creation of new partnerships and innovative solutions.

18. DNV GL (strategic partner of the CTCN) and PFAN (network member) have assisted the CTCN in organizing such events, and more broadly, in engaging the private sector.

<sup>22</sup> Source: CTCN (internal). 2016. *List of participants to CTCN events*.

<sup>23</sup> The GCF, the World Intellectual Property Organization (WIPO) or the FAO have regularly been involved.

<sup>24</sup> Such as the African Development Bank (AfDB), the West African Development Bank (BOAD), the Asian Development Bank (ADB), the Inter-American Development Bank (IADB), and the Development Bank of Latin America (CAF).

<sup>25</sup> With 70 participations of network partners to these events out of 650 total participations (SREP and PFAN have participated actively).

### *Webinars*

19. The CTCN's webinars aim at sharing knowledge on specific technology sectors related to adaptation and mitigation strategies. They are open to the public and last around two hours. The webinars are mainly offered in English with a few in French and in Spanish.

20. As of March 2017, the CTCN and its consortium conducted 38 webinars and promoted 37 webinars offered by Network Members to a total of more than 2,200 participants.<sup>26</sup> Consortium partners have played an important role in the production of content for the CTCN's webinars. For example, the UNEP-DTU partnership organized more than 10 webinars while other partners such as ICRAF, AIT and ENDA also organized several webinars. 16 webinars have been organized by Network Members.

### *Incubator programme*

21. The CTCN presented its incubator programme dedicated to Least Developed Countries (LDCs) at the 4<sup>th</sup> Advisory Board meeting.<sup>27</sup> The aim of this programme is to co-develop technical assistance requests with these countries and to build capacity of NDE representatives so that they are more able to develop additional requests as well as to use the other services of the CTCN.<sup>28</sup>

22. As of March 2017, 19 countries had participated in this programme<sup>29</sup> leading to the submission of 14 technical assistance requests, 7 of which have been prioritized by the CTCN.<sup>30</sup> Consortium partners such as ENDA, CSIR and AIT have been in charge of implementing the incubator programme in their regional area.

### *Secondment program*

23. The CTCN presented its secondment programme at the 4<sup>th</sup> meeting of the Advisory Board. The aim of this programme is to allow young professionals from partner institutions of the CTCN to participate in the work of the Centre for 4 to 6 month. Secondees contribute to the work of the CTCN, thereby building up their knowledge of technology transfer and of the CTCN's process, while the CTCN can build on the knowledge of those participants coming from different regions to identify local technology needs and to better grasp local economic, social and political contexts.

24. The first two secondees started working at the CTCN in August 2015, the last group to participate started in autumn 2016. A fourth group is expected to join the CTCN in May 2017. The first secondees accepted in the programme were coming from one Consortium Partner (ENDA), two NDEs (Kenya and Mongolia), and two Network Members.

<sup>26</sup> Source: CTCN. 2017. *CTCN Capacity Building in a Snapshot - AB/2017/9/7.2*. The number of single participants has not been monitored; the value reported correspond to the sum of participants to the different webinars.

<sup>27</sup> Article 4.9 of the Framework Convention states that "Capacity building is crucial to developing countries, especially those that are particularly vulnerable to the adverse effects of climate change. The special circumstances of Least Developed Countries and Small Island Developing States need to be taken into account".

<sup>28</sup> The programme is organized around 8 capacity building modules that NDE representatives can take independently. More specifically, this programme is designed to help NDE representatives to (<https://www.ctc-n.org/capacity-building/request-incubator>): - Better understand the policy context and technology priority sectors, and map existing efforts and main stakeholders related to climate technologies at national level, - Communicate the needs and opportunities related to climate technologies to a wide range of stakeholders, and inform them of the services offered by the CTCN, - Submit a request for technical assistance to the CTCN, developed in consultations with relevant actors that could complement existing initiatives and efforts, - Strengthen their capacities to identify funding mechanisms for deploying climate technologies in their countries, from both private and public sources, - Acquire skills to measure country's progress and demonstrate concrete achievements for climate technologies.

<sup>29</sup> Bangladesh, Benin, Central African Republic, Equatorial Guinea, Guinea Conakry, Gambia, Malawi, Mali, Mauritania, Myanmar, Nepal, Democratic Republic of Congo, Rwanda, Senegal, South Sudan, Tanzania, Togo, Uganda and Zambia.

<sup>30</sup> Source: CTCN. 2017. *CTCN Capacity Building in a Snapshot - AB/2017/9/7.2*.



## Annex IX

### Detailed review of the performance of the CTCN

[English only]

#### A. Relevance of CTCN activities

##### Added-value of the CTCN

1. CTCN's activities are considered by local stakeholders (NDEs and beneficiaries) to provide some specific added-value.

(a) To the question “*Why did you request technical assistance from the CTCN?*” of the electronic survey, 60% of the respondents indicated that the CTCN's focus on climate change technologies was well aligned with their own objectives, and about 30% of them had been looking for such technical assistance for a long time without finding an adequate programme;<sup>1</sup>

(b) All NDEs and beneficiaries who have been interviewed have acknowledged the sheer value-added of the CTCN on the international stage, to support them in the process of accessing international funds for mitigation and adaptation programs and to build the right enabling environment. The time frame in which the CTCN operates (delivering projects under 12 month duration) is deemed particularly relevant to ensure that the projects delivered are in line with countries' current needs and priorities, and can support countries in their application to international funding programs and larger financial mechanisms. This has been acknowledged by interviewees as one of the main strengths and advantages of the CTCN compared to other international funds and organizations supporting technology development and transfer. Capacity building activities are also perceived very positively by country representatives.

2. When asking NDEs and beneficiaries if they could identify other organizations that provide similar services, most of them either answered that they could not identify any organization like the CTCN,<sup>2</sup> or listed organizations related to the CTCN, such as UN bodies (UNOPS, UNEP, UNIDO, GCF, GEF) and Consortium Partners or Network Members (GIZ, ECREE, Clean Energy Solution Center, Low Emission Development Strategies Global Partnership). Some also listed multilateral and bilateral development banks (Worldbank, KfW, and JICA), international organizations (IRENA) and regional initiatives (Belgian Federal NDC Support Initiative).

##### Response to the needs of developing countries

3. The mandate given to the CTCN stipulates that its services should be provided at the request of a developing country Party. The process and procedures subsequently organize the technical assistance request process starting from the initiative of developing countries. All NDEs and beneficiaries of technical assistance that responded to the surveys recognized that technical assistance provided by the CTCN corresponds to an important need of their country in terms of technology transfer.

4. To be eligible, requests need to demonstrate alignment with national plans and NDCs, as defined in the guiding principles of the Prioritization Criteria for Technical Assistance and formalized in the technical assistance request form.<sup>3</sup> NDEs and Beneficiaries have reported that the submission of a request was almost systematically preceded by several iterations with the CTCN to better frame the request and ensure that it was the most appropriate with regards to country needs and CTCN capacities. Only 2.6% of all requests submitted as of May 2017 were classified as non-eligible by the CTCN.<sup>4</sup> Such result implies that almost all requests for technical assistance were assessed by the CTCN

<sup>1</sup> Out of the 25 who responded to this question.

<sup>2</sup> That was the case for 16 NDEs out of 33 respondents, and 6 beneficiaries out of 15 respondents.

<sup>3</sup> Source: CTCN. 2013. *Prioritization criteria for responding to requests from developing country Parties* – AB/2013/2.

<sup>4</sup> Source: <https://www.ctc-n.org/technical-assistance/request-visualizations>.

to be relevant in accordance with the criteria established by the Advisory Board, both regarding country needs and the CTCN mandate.

5. The mandate of the CTCN implies to prioritize the delivery of its services towards Least Developed Countries (LDCs) and other highly vulnerable and low capacity countries. To align with this objective:

(a) The CTCN established technical assistance selection criteria that clearly formulates a preference for requests submitted by LDCs and other highly vulnerable and low capacity countries. Regional balance and geographical coverage are also included in the prioritization criteria for the selection of technical assistances. These criteria provide the necessary assessment lens to ensure that LDCs across the globe are a primary focus of CTCN activities;<sup>5</sup>

(b) The CTCN organized regional fora in different regions: 7 in Africa, 5 in Latin America and the Caribbean, 5 in Asia, 2 in Oceania, and 2 in Europe. The CTCN also provided information and capacity building in different languages (English, French, and Spanish), and offered the possibility to NDEs and beneficiaries of submitting their requests for technical assistance in the UN official language of their choice. These modalities aimed at helping NDEs to benefit from CTCN activities;

(c) The CTCN set up the incubator programme, in order to better respond to the needs of LDCs with reinforced capacity building and training (endorsed by the AB during its 3<sup>rd</sup> meeting).<sup>6</sup> NDEs who benefitted from this program have reported a high level of satisfaction. Trainings provided within the incubator programme have resulted in the formulation and submission of several technical assistance requests. Beneficiaries indicated that this program empowered them to do so and to better raise awareness about the CTCN services with other potential beneficiaries.

6. In most cases, the CTCN's activities are deployed jointly with a consortium partner with knowledge of the local and regional context, to ensure they are suited to the regional environment. Several interviewees however reported a lack of engagement with local stakeholders (local SMEs, civil society organizations, etc.) for the organization of workshops and regional fora, as well through the tendering process for technical assistance, which does not foster the use and development of local capacities.

7. With the entry into force of the Paris Agreement, it seems necessary that the CTCN be able to meet new needs and expectations from countries that may rise in line with NDC implementation. In the request form, the CTCN requires technical assistance requests to explicitly demonstrate alignment with and contribution to implementing the country NDC. In addition, the 2017 operating plan refers to NDCs, which will be on the spotlight for 2017 technical assistance activities and capacity building services.

#### Consistency with the COP mandate

8. The initial Programme of work 2013-2017, as well as successive annual operating plans aimed at operationalizing the three main functions formulated in the CTCN terms of reference:<sup>7</sup> technical assistance; fostering collaboration and access to information; and strengthening of networks, partnerships and capacity-building.

9. It was reported by interviewees that the Advisory Board provided the appropriate guidance to the CTCN Secretariat to ensure the implementation of COP decisions. The CTC Secretariat has overall acted in line with Advisory Board recommendations.

<sup>5</sup> CTCN. 2013. *Prioritization criteria for responding to requests from developing country Parties – AB/2013/2*. "Balancing principles - With the aim of achieving a balanced and equitable portfolio, the CTC Director shall ensure that priority is given to requests that bring about: 1. Inter and intra-regional equity, with a preference for vulnerable and low capacity countries."

<sup>6</sup> CTCN. 2014. *Minutes of the third meeting of the Advisory Board – AB/2014/3/Outcomes*. "The CTCN should take into consideration the varying needs and abilities of NDEs and, in particular, the needs of LDCs".

<sup>7</sup> Decision 2/CP.17, and Annex VII.

10. Beyond the initial mandate given to the CTCN, several COP decisions have determined the modalities for implementation of the CTCN. The surveys and interviews conducted for the purpose of this review indicate that the CTCN Secretariat was responsive to COP guidance, as it included successive COP decisions to its implementation agenda and operations, and submitted subsequent amendments to its operating plans to the deliberation of the Advisory Board.

(a) *Cooperation with the TEC*: In several decisions, the COP encouraged the CTCN to enhance its collaboration with the TEC.<sup>8</sup> Collaboration between the TEC and the CTCN was implemented as follows: the TEC Chair and Vice-Chair participate in Advisory Board meetings of the CTCN, the CTCN AB Chair and Director participate in TEC meetings and TEC Task Forces. In addition, the TEC and the CTCN have delivered joint key messages through their joint annual reports to the COP;

(b) *Cooperation with the Financial Mechanism*: The CTCN and the TEC were also requested by the COP to foster cooperation with the operating entities of the Financial Mechanism:<sup>9</sup>

(i) The CTCN Secretariat consequently enhanced its dialogue with the GEF and the GCF, aiming at maximizing the linkages between the large-scale finance capacities of the GEF and the GCF and the potential of the CTCN to build developing country capacities to access such funding. Concrete steps have been taken by the CTCN toward the integration of capacity building to access Financial Mechanism funds as a core element of CTCN projects;

(ii) The 2017 operating plan of the CTCN confirmed the engagement of the CTCN towards such objective, with specific actions planned;<sup>10</sup>

(c) *Fostering RD&D and endogenous capacities*: By decision 1/CP.21, the TEC and the CTCN were requested to undertake further work on technology research, development and demonstration (RD&D) and on the development of endogenous capacities and technologies:

(i) The CTCN did enhance its focus on RD&D, as exemplified by the discussions that occurred during the successive AB meeting,<sup>11</sup> the creation of a Task Force on RD&D (created at AB6 in order to define how RD&D should best be incorporated into its technical assistance services, and terminated at AB8 after completion of its work), and the recent organization of CTCN Scoping Workshop: Supporting "First-of-a-kind" Climate Technology in Copenhagen (22-23 May 2017). The CTCN is currently determining what could be its value-added, knowing that RD&D refers to diverse activities which are very costly, and that the CTCN has limited resources. Some of the technical assistance projects provided by the CTCN can be considered as RD&D projects, as the ones related to technology adaption (identified on the figure 10);

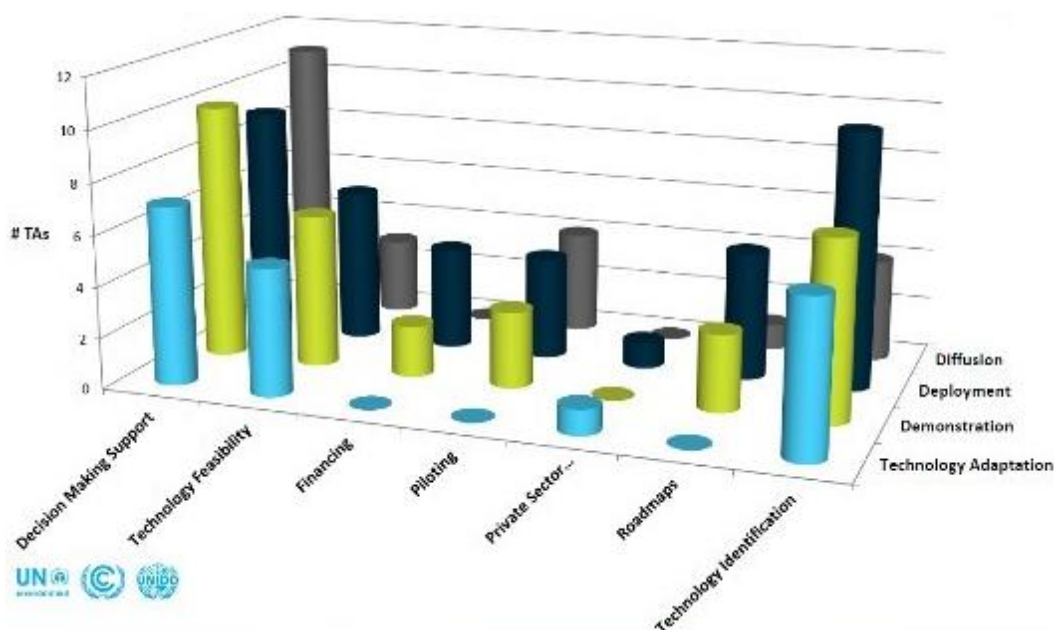
<sup>8</sup> Decisions 25/CP.19, 13/CP.21, 15/CP.22.

<sup>9</sup> Decision 17/CP.20, 13/CP.21, 14/CP.22, 15/CP.22.

<sup>10</sup> In its 2017 operating plan, the CTCN indicated in its overall approach for the fourth year of operations that: "*In line with the COP decision on linkages between the Finance and Technology Mechanisms, the CTCN is exploring ways to increase collaboration with the Green Climate Fund.*" which was specified by the following action related to the provision of technical assistance: "*Collaborate with GCF Secretariat, National Designated Authorities, and Focal Points in supporting developing countries to move visions to concept to full-fledged project proposals.*" and another one related to networking and stakeholder engagement: "*Create synergies and foster operational relationships with major multilateral donors in the field of climate change technologies, including multilateral and bilateral development banks, the Green Climate Fund, the Global Environment Facility and the Adaptation Fund to identify projects and requests with the highest potential of success, facilitate matchmaking opportunities between country stakeholders and multilateral donors, and encourage the funding of follow-up actions based on requests submitted to the CTCN.*"

<sup>11</sup> See for example: CTCN.2016. *COP Decisions on Research, Development and Demonstration as they relate to the CTCN* – AB/2016/7/8.1 CTCN.2016. *RD&D Task Force – Minutes of teleconference, 13 July 2016* – AB/2016/8/4.3 CTCN. 2017. *Matters relating to the Convention's Technology Mechanism, RD&D activities* - AB/2017/9/6.

Figure 10  
**Technical Assistance across the technology innovation cycle<sup>12</sup>**



(ii) The technical assistance provided by the CTCN always include capacity building which contribute to the development of endogenous activities. The 2017 operating plan focuses on the development of endogenous technologies for some of the CTCN activities, such as the regional and stakeholder for a;

(iii) The 2017 operating plan of the CTCN confirmed the engagement of the CTCN towards such objectives, with specific actions planned.<sup>13</sup>

11. *Fostering the implementation of NDCs*: The CTCN also started to work more closely in relation to country NDCs in order to further support the implementation of the Paris Agreement.

#### Evolution of the Programme of work

12. The CTCN amended its initial Programme of Work to ensure that it remained relevant with its mandate and demands from developing countries. Throughout implementation, the CTCN diverted from its initial Programme of Work as follows:

(a) The distinction between quick responses and response projects initially defined in the Programme of Work was not really implemented and the CTCN Secretariat reports only a total number of technical assistance implemented, without specifying the split between quick and project responses;<sup>14</sup>

(b) Capacity building workshops and regional network meetings have been merged with the NDE training workshops and Regional Fora. However, these events

<sup>12</sup> Source: CTCN. 2017. Technical assistance requests and process – AB/2017/9/7.a.

<sup>13</sup> In its 2017 operating plan, the CTCN indicated in its overall approach for the fourth year of operations that: “In 2017, the CTCN will put a strong emphasis on facilitating NDC implementation through its technical assistance and capacity-building services” “The CTCN will follow the recommendations of [ ] the Task Force on RD&D to explore the role of the CTCN in promoting Research Development & Deployment of climate technologies” which was specified by the following actions related to networking and stakeholder engagement: “Stimulate R&D collaboration, partnerships or twinning arrangements between the CTCN and universities/research institutions, among research institutions, and between governments and research institutions, as appropriate” “Mapping of capacity-building and technology needs at the institutional level for NDC implementation and identification of focus areas for mitigation and adaptation.” “A technology roadmap for the implementation and scaling up of the identified technologies will be developed and support to NDEs to mobilise public and private investments for NDC implementation will be provided through the development of concrete funding proposals.”

<sup>14</sup> Source: CTCN.2016. 2016 targets and achievements – AB/2016/8/6.b.

mainly focused on NDEs, with a rather limited participation of institutions from developing or developed countries. These events mainly served as capacity building workshops, rather than regional networking meetings;

(c) The incubator and the secondment programmes have been initiated to reinforce capacity building activities towards LDCs;

(d) The service of remote technical advice or helpdesk has been rather limited compared to what was planned. Although an agreement has been signed with the Clean Energy Solution Center to provide technical advisory (defined as a remote assistance below 40 hours), such service has not been used so far. Few demands have been expressed by NDEs and local stakeholders, and have been managed by the CTCN and the Consortium Partners on a voluntary basis;

(e) Webinars on specific topics have been organized or promoted by the CTCN.

#### Adaptation to the external context

13. The request submission process includes an assessment of past and on-going efforts to address the issue raised in the request. The review process therefore integrates the history of actions and initiatives that may have already been undertaken on the given topic and the Secretariat ensures that the action of the CTCN can be complementary with any previous actions, or that they are not overlapping with any on-going work.

14. The Paris Agreement and the Sustainable Development Goals are the two major macroeconomic and political events likely to affect and guide the work of the CTCN. The Paris Agreement in particular was identified by many stakeholders who participated to this review through the interviews and surveys.

#### Appropriateness of the funding model

15. As of March 2017, the financial resources of the CTCN amounted to USD 50.7 million and are expected to reach USD 54 million in 2017, provided that all the pledges made at COP 22 are honored. In addition, the CTCN could secure 2.2 million for 2017, from collaboration with developing country NDAs: their GCF country Readiness allocation could fund CTCN technical assistance aiming at preparing concept notes for the GCF Readiness Programme.<sup>15</sup> The CTCN has also engaged in discussions with Annex I NDEs that may be in a position to contribute in-kind support for implementation of CTCN technical assistance. It is estimated that a minimum of USD 0.6 million could be secured this way. This expected budget is lower than the USD 67.6 million targeted for the first four years of operation, and, based on fundraising records and interviewees' feedback, it seems challenging to secure the USD 100 million initially budgeted for the first five years of operations. If no additional sources of funding are secured, it is expected that the CTCN will not have the resources to continue its operations at their current pace by 2017-2018.<sup>16</sup>

16. The interviews and the e-surveys conducted for the purpose of this review underlined two main structural issues with regards to the funding of the CTCN:

(a) The voluntary-based funding model has led to a limited core funding available for the CTCN and its operations. It has been reported that the Director and staff of the CTCN have had to commit a significant part of their time to seeking and securing resources, instead of being dedicated to implementing the CTCN services and providing strategic guidance to countries. This funding model also implies a strong lack of predictability for the CTCN over the medium and even short-term, thereby limiting its capacity to plan ahead for the expected levels of activity. As the CTCN is becoming better known on the international and national stages, expectations are rising and the number of technical assistance requests is expected to continue increasing, with growing expectations from developing countries. According to the CTCN, there is no guarantee that the

<sup>15</sup> CTCN. 2017. CTCN Financials in a Snapshot- AB/2017/9/8.1.

<sup>16</sup> Source: CTCN. 2017. *Annual Operating Plan For the period: 1st January – 31st December 2017* -AB/2017/9/8.2.

voluntary-based funding model will provide sufficient resources to deliver on growing expectations and needs;<sup>17</sup>

(b) An important share (44%) of the CTCN resources are earmarked,<sup>18</sup> which had impacts on the alignment of funds available and priorities of the CTCN:

(i) 12% of the current financial resources are dedicated to a specific geographical area, or to specific activities (KMS, Technology library, etc.), and not available for other activities that might have a greater priority for the CTCN;

(ii) 32% of the total funds have been engaged by the CTCN under the approved Budget as per agreements with donors. In such case, the CTCN has to plan activities that will be financed by donors over a several year period and formalize it in an agreement. These agreements can theoretically be revised to ensure that they remain aligned with priorities and activities of the CTCN but the CTCN has not necessarily done so, which led to some funds being blocked or lost because the initial agreement no longer matched CTCN priorities.

17. Due to this lack of resources and partially to earmarked resources, the CTCN was not able to mobilize enough financial resources to respond to all demands. Annual expenditures of the CTCN were consistently lower than initially budgeted, except for the first year of implementation. The total amount spent over the first three years after the establishment of the CTCN (2014 to 2016) is 59% lower than planned for in the different operating plans.

18. To address the issue of lack of funding, an Advisory Board Funding Task Force was created at AB7 to assist the CTCN in raising funds by providing strategies to broaden the donor base and increase the level of contribution, and to find alternative opportunities for funding including through partnerships with philanthropic foundations and public-private climate technology initiatives. Since then, the Advisory Board members agreed to establish a Finance Taskforce at the 9<sup>th</sup> Advisory Board meeting. Its goals will be to develop, assess and recommend options for new sources of funding, with the aim of increasing predictability and sustainability of CTCN funding, and to ensure clarity and transparency of financial information to enhance the ability of the Advisory Board to approve the annual operating plan and endorse the budget.

#### Complementarity and synergies with policy advice given by the TEC

19. The CTCN was invited by the COP to use the TEC's guidance on the preparation of TAPs and implementation of the results of TNAs when responding to developing country requests. The participation of the TEC Chair and Vice-Chair to the Advisory Board - and the attendance of the CTCN-AB Chair and Director to the TEC as an observer - has guaranteed a good integration between the two bodies of the Technical Mechanism. Recommendations from the TEC are regularly presented during Advisory Board meetings.<sup>19</sup> The publication of the Joint Annual Reports allows to work along common lines, and the CTC staff reported that they regularly use TEC briefs within the CTCN operations and activities. They also contributed to the elaboration of a policy brief on South-South and Triangular cooperation on technologies for adaptation in the water and agriculture sectors issued by the TEC.

20. However, interviewees have indicated that the link between both arms of the Technology Mechanism could be further enhanced and that they could work together in a more integrated manner on country priorities and implementation of NDCs. In its 8<sup>th</sup> meeting, the AB suggested that the CTCN should be actively engaged in the TEC's RD&D Task Force, beyond its own taskforce.<sup>20</sup> In its 6<sup>th</sup> meeting, the AB recommended "to

<sup>17</sup> Source: UNFCCC. 2016. Joint annual report of the TEC and the CTCN for 2016.

<sup>18</sup> Source: CTCN. 2017. *8a) Financial updates on CTCN operations* - document presented at the 9<sup>th</sup> Advisory Board meeting.

<sup>19</sup> Including: CTCN.2017. TEC Updates from TEC13 and TEC14 Meetings – AB/2017/9/6a; CTCN.2016. Update on TEC Matters – AB/2016/8/5.b; CTCN.2015. TEC 11 outcomes – AB/2015/6/4.ab; CTCN.2015. TEC 10 outcomes – AB/2015/5/4.

<sup>20</sup> CTCN. 2017. *Minutes of the eighth Advisory Board meeting* - AB/2017/9/2.2.

*establish greater coherence between TEC and CTCN meetings to track progress and establish a common narrative”.*<sup>21</sup>

#### Complementarity and synergies with the UNFCCC Financial Mechanism

21. Several stakeholders see a sheer potential in the capacity of the CTCN to support national organizations in framing proposals to be submitted to the operating entities of the Financial Mechanism. Further, interviewees have often indicated that the CTCN is well positioned to lay the groundwork for developing countries to apply for funding through the GEF and the GCF. The CTCN is thus fundamentally different and complementary to the Financial mechanism in the sense that it provides technical assistance and that it targets projects of much smaller scale than the GCF and the GEF, which should avoid redundancy.

22. The bodies and entities of the two Mechanisms (TEC, CTCN, GCF and GEF) have been leading ongoing consultations on linkages between the two mechanisms through meetings and conference calls among the Chairs and Co-Chairs of the bodies. Although specific timeslots of the AB meetings are dedicated to discussions with GCF and GEF representatives, the GCF did not nominate any representative for the CTCN Advisory Board, as it was requested to do by the COP.<sup>22</sup> However, the GCF often participates in AB meetings through conference calls. The Standing Committee on Finance has nominated a member to the Advisory Board, ensuring that information is transferred to the observers of the SCF (GCF and GEF, as well as donors such as EBRD, KfW, CAF, World Bank, etc.).

23. The CTCN and the GCF are jointly exploring a partnership wherein CTCN services and expertise strengthen proposals seeking GCF readiness and Project Preparation Facility support. It was mentioned repeatedly by interviewees that the CTCN has a unique position and adequate mandate to deliver key milestones of the enabling environment necessary for countries to submit proposals to the GCF to accelerate the scaled deployment of climate adaptation and mitigation technologies in developing countries. By collaborating with developing country NDAs and using their country Readiness allocation, the CTCN and GCF estimate that up to US\$ 2.2 million can be accessed to deliver CTCN services in 2017. In line with this strategy, the CTCN has developed the following actions:

(a) The technical assistance request template integrates an optional section on linkages of the request to GCF Readiness and Preparatory Support. The CTCN is therefore implementing some of its technical assistance using GCF readiness funds accessed via the country’s NDA. In 2017, cooperation with the GCF was expected to support direct funding of 10-15 technical assistance requests through the GCF Readiness Funds. However, at this stage only two projects have already been accepted (for about 500k€), one proposal is under analysis by the GCF and another one will shortly be submitted. It is unsure that the initial target will be achieved. Besides, In June 2017, the CTCN and the GCF announced a new collaboration: the GCF will provide Readiness and Preparatory Support to the Governments of Ghana and Tonga for technical assistance delivered by the CTCN;

(b) In 2016-2017 the CTCN developed a pilot module to help countries develop concept notes for the GCF based on the relevant climate change priorities of the countries (as identified in the NDCs, TNAs, GCF country programme, etc.).<sup>23</sup> These concept notes are the first step to receive grants, loans, guarantees or equity from the fund. The GCF also demonstrated interest in funding this module in additional countries using the GCF Readiness Support funds;<sup>24</sup>

<sup>21</sup> CTCN.2016. Summary of Actions as a Result of Advisory Board Meeting 6 - AB/2016/7/5.1.

<sup>22</sup> Decision 25/CP.19, Annex II.

<sup>23</sup> An example is the outcome of the technical assistance project implemented in Jordan with the Ministry of Environment. Jordan required capacity building for technical employees in the Ministry of Environment as well as relevant NGOs and consultancies, to transform its Technology Needs Assessment into fundable proposals relevant to both domestic and international funding. The request included training and mentoring with a focus on project structuring, and was in particular relevant for projects with the Green Climate Fund. This project led to 25 certified engineer being able to translate any project idea to complete concept note according to Green Climate Fund (GCF) Form.

<sup>24</sup> Source: CTCN. 2017. *CTCN Capacity Building in a Snapshot - AB/2017/9/7.2.*



(c) In order to increase coordination with the GCF, and to foster collaboration between NDEs and NDAs, the CTCN started in 2016 to organize its fora in parallel with the GCF structured dialogue (in line with decision 10/CP 22);

(d) The CTCN is also considering the possibility to develop trainings related to the elaboration of GCF concept notes as a follow-up activity to the Incubator programme.<sup>25</sup>

24. The CTCN also maintained its dialogue with the GEF to explore complementarity of its services with the mandate of the GEF.<sup>26</sup> Up to USD 1.8 million were secured for CTCN activities by the GEF, but these resources are based on ad hoc projects rather than being sustained: the two entities developed a pilot project to highlight possible options for future CTCN-related outputs to be developed as GEF projects, using GEF country allocation. This is therefore based on the appreciation of eligible projects. In light of the funding gap of the CTCN, and risk of overlapping, the 9th Advisory Board meeting concluded that the funding Task Force should increase its focus on exploring further cooperation options with the GEF.

25. The GEF also supported a network of regional Climate Technology Centers which are hosted by multilateral development banks (MDBs) which mobilizes significant resources for providing services similar to the ones delivered by the CTCN. Depending on the area, these centers have different linkage with the CTCN:

(a) Relations have been well sustained with the Asia-Pacific Climate Technology Network and Finance Center which is co-hosted by the UNEP, and with the Climate Technology Transfer Mechanisms and Networks in Latin America and the Caribbean which have integrated the Consortium Partners and the NDEs in their processes. On specific TA projects, the CTCN has been working collaboratively with the EBRD, which hosts the European FINTECC Alliance;

(b) Little collaboration exists so far with the African Climate Technology Center, which developed its own network of local focal points.

26. The CTCN actively engages with MDBs through other activities: several technical assistance projects have been collaboratively implemented with MDBs (such as EBRD or IDB), when they had scalable investment potential. Representatives of such organizations have also participated in some events organized by the CTCN (AfDB, IDB, etc.).

#### Complementarity and synergies with other climate related support programs

27. The UNFCCC Secretariat participates in the Advisory Board meetings as well as other CTCN events and also engages with the CTCN on a regular basis to share information. This close relationship and the knowledge of the UN and COP processes demonstrated by the UNEP/UNIDO consortium ensured a smooth integration of UN guidelines into the CTCN work plan.

28. To date, collaborative work with NGOs and research organizations has not been a focus for the CTCN, outside of capacity building activities that have occasionally gathered a broader range of stakeholders than national institutions and agencies. Environmental NGOs and research NGOs are represented at the Advisory Board meeting with one Advisory Board member each, who are able to relay the progress and messages of the CTCN to the community they represent. Nonetheless, cooperation has been occurring on a rather *ad hoc* manner.

29. The private sector appears as a critical partner for the CTCN with regards to developing an enabling environment for climate technology development and transfer and in particular with regards to enabling the scaling up of climate technologies.

(a) Since its inception, the CTCN, together with DNV GL, has worked on private sector engagement. DNV GL undertook the task of engaging with businesses and bringing a business perspective to the CTCN's services, in particular during events;

(b) The CTCN has also been cooperating with the Private Financing Advisory Network (PFAN). PFAN works specifically with the private sector on the identification of

<sup>25</sup> Ibid.

<sup>26</sup> Source: UNFCCC.2016. 2016 report of the GEF to the COP. FCCC/CP/2016/6.

clean energy projects at an early stage and provides services to allow emerging technology solutions to reach financial closure. PFAN participated in several regional fora, in order to reach out to NDEs and expand the network, building stronger connections between the CTCN and the private sector. PFAN also helped sourcing and refining requests for projects about financing technology and securing investments. Through its collaboration with PFAN, the CTCN is creating precedent likely to trigger interest from the private sector in CTCN activities;

(c) The CTCN managed to attract a significant number of private organizations in its network (almost 40% of the network) but feedback from interviewees suggests that the business community has not been involved enough in the activities and operations of the CTCN.

30. The World Intellectual Property Organization (WIPO) is a key stakeholder that CTCN has been dialoguing with. WIPO developed the WIPO GREEN platform, an online marketplace meant to facilitate innovation and dissemination of green technologies. This tool focuses on building direct connections between providers and seekers of technology. The WIPO GREEN platform is rather a catalogue of technologies and does not provide the analytical and political assessment that the CTCN provides. In that sense, the KMS of the CTCN is broader than the WIPO GREEN platform as it contains policy related documents and impact studies. The CTCN and WIPO are nonetheless exploring ways to integrate data on hard technology from the WIPO GREEN platform to the KMS.

31. The Adaptation Committee (AC) was established to promote the implementation of enhanced action on adaptation. In 2017, the AC announced plans to establish a platform to provide adaptation technical support to developing countries. The 8<sup>th</sup> meeting of the Advisory Board of the CTCN acknowledged the risk of overlapping with the technical assistance it provides. Coordination and collaboration between the services available from the CTCN and the Adaptation Committee was consequently encouraged and ensured, including through the participation of an AC member in AB meetings and the participation of the CTC secretariat in meetings of the AC.

## **B. Effectiveness of CTCN services**

### Timely implementation of the CTCN

32. Deadlines associated with the different steps related to the operationalization of the CTCN and to its implementation were initially defined in the Programme of Work 2013-2017, approved by the AB. However, it was noted that the delivery of the CTCN's activities and targets would depend on the availability of financial resources and the nature of requests from developing countries. The CTCN revised the initial timelines, through the elaboration of annual operating plans, in accordance to the availability of resources.

33. Several interviewees agreed that the operationalization of the CTCN took longer than anticipated in the Programme of Work to reach full speed.

(a) Although the first meeting of the Advisory Board was held in time in response to COP requests (2013), the first year was dedicated to setting up the organization and its processes. The CTCN could only start actual implementation and delivery of its service in 2014, with the first technical assistance requests received in February 2014 (first implementations started in September 2014) and with the launch of a first round of training workshops launched in the same year;

(b) The lack of resources is viewed as the main factor that slowed down the operationalization of the CTCN. With no core resources allocated to it, the CTCN was dependent upon the securing of voluntary contribution to be able to start delivering its services;

(c) However, it was noted that the structure of the CTCN, with the resources allocated by UNEP and UNIDO, and the support of consortium partners in their regions and sectors of expertise facilitated the process and enabled to reach full speed at a faster pace, once the organization and processes had been formalized.

34. Feedback from Advisory Board members suggests that the operationalization of the CTCN (including the training of NDEs, the creation of procedures, etc.) and the setting up of the KMS concentrated most of the efforts in the first two years of operations of the CTCN. With these two critical components of implementation now being set up,<sup>27</sup> the CTCN has been working more intensively on supporting technical assistance request submissions and delivering technical assistance projects,<sup>28</sup> as well as on expanding its network.

35. The CTCN has been able to continuously monitor outputs regarding a selection of quantitative indicators, including the indicators associated with the targets defined in the Programme of Work.<sup>29</sup> This monitoring system allows the CTCN Secretariat to report its achievements compared to its initial targets.<sup>30</sup> Additional indicators are also monitored and used by the CTCN to track the delivery of its services (especially for technical assistance requests: by stage, by objective, by sector, by geographical area, by eligibility, etc.), through the snapshots presented to the AB or on the CTCN website.<sup>31</sup> For technical assistance and some capacity building activities, the CTCN also gathered qualitative feedback on the outputs delivered. The CTCN is planning to perform a quality and effectiveness review across technical assistance portfolio in 2017, while process and procedures for M&E of non-technical assistance activities (capacity building, networking, etc.) are currently being structured.<sup>32</sup>

#### Provision of technical assistance at the request of developing countries

36. Requests are either directly submitted by NDEs, or by other national beneficiaries that NDEs informed of the opportunity to channel their needs through the CTCN's services:

(a) It is worth noting that most requests have been formulated by NDEs themselves or by national agencies (around 100 out of 164 requests),<sup>33</sup> which suggests a limited awareness about CTCN services outside of the scope of national institutions;

(b) Beneficiaries others than NDEs have been primarily informed and convinced to submit a request by their NDEs:

(i) Most of the beneficiaries indicated that they first heard about the existence of the CTCN directly from their country's NDE (70% of respondents) or through an event organized by the CTCN (22% of respondents), but rarely directly from the CTCN website (9% of respondents);

(ii) About half the respondents to the beneficiary survey declared that they had been strongly influenced and supported by their country's NDE in drafting and submitting a technical assistance request to the CTCN;<sup>34</sup>

<sup>27</sup> The organization of a round of training workshops and two rounds of regional fora was critical in ensuring that the CTCN and its services be better known at the national and regional level. Through the empowerment of NDEs, these events consistently resulted in the submission of technical assistance requests.

<sup>28</sup> Technical assistance requests started coming in higher numbers after October 2015, with at least 10 new technical assistance requests being reviewed each month, and up to 30 currently.

<sup>29</sup> These indicators are: number of quick response interventions and number of projects implemented, number of international technology events/forums, number of regional public-private sector workshops, number of regional networking meetings, number of knowledge partners, number of remote technical advisory responses through helpdesk, number of capacity building workshops and training events, number of tools and information materials on the KMS, number of KMS resource page visits, number of KMS users, number of trained CTCN NDEs and clients. The number of public-private partnerships formed as result of workshops and the number of twinning arrangements as a result of networking events are analyzed in the impact and sustainability section.

<sup>30</sup> CTCN.2016. 2016 targets and achievements – AB/2016/8/6.b and CTCN.2015. 2015 targets and achievements – AB/2015/6/6.a.

<sup>31</sup> See <https://www.ctc-n.org/technical-assistance/request-visualizations>.

<sup>32</sup> CTCN. 2017. *9a) Monitoring and Evaluation (M&E) – CTCN M&E Framework – document presented at the 9<sup>th</sup> Advisory Board*.

<sup>33</sup> Source: CTCN (internal). 2016. *Contact list of Technical Assistance beneficiaries*.

<sup>34</sup> Noticed by 11 respondents out of 25 to the question “Why did you request technical assistance from the CTCN? ”.

(c) The selection and submission of requests necessarily goes through NDEs, which means that it depends on the resources, skills and willingness of NDEs to support and channel requests, with the potential risk that the NDE focal point does not have the time necessary to dedicate to CTCN services.

37. The CTCN's selection criteria were critical in guiding and optimizing the request approval process. 80% of the beneficiaries and 89% of the NDEs of the respondents indicated that the selection criteria were available and clear.<sup>35</sup> With the increasing number of incoming requests and limited funding, the guiding principles, balancing principles and prioritization criteria facilitate the objective and adequate prioritization of requests.

38. In many occurrences, the CTCN and consortium partners also directly helped identifying needs or projects that would be likely to match the eligibility and priority criteria of the CTCN. In these instances, consortium partners contributed to designing requests that were most suited for the mandate of the CTCN. As a result, only four requests have been rejected or deemed not eligible by the CTCN. The pipeline of eligible requests has been consistently growing, proof of the effectiveness of capacity building activities, events and communications to trigger the submission of relevant requests. In addition, the deployment of the Incubator Programme allowed to foster request submission by LDCs, which are meant to be prioritized to receive CTCN services.

39. About 30% (51 out of 185) of the requests submitted as of May 2017 are eligible but not prioritized. This is partly the result of the limited availability of funding to implement the requests. Alternatively, the country from which the request originates may have already submitted several requests, and its requests are no longer prioritized, to ensure an equitable support to all countries.

40. The current trend of request processing is much lower than what was expected initially. Out of the 185 requests received as of May 2017, 104 have been processed for quick response intervention or response project by the CTCN (38 projects were under design, 49 in implementation and 17 completed), while the Programme of Work for 2013-2017 targeted 125 to 190 quick response interventions and 70 to 95 response projects implemented by year 3. An additional 30 requests were being reviewed to determine eligibility and prioritization.

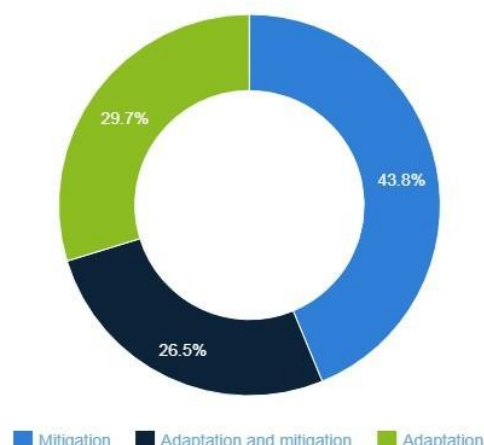
41. The geographical coverage of technical assistance requests submitted to date matches the mandate given to the CTCN of prioritizing technical assistance towards least developed countries and other vulnerable countries. Requests are well distributed with regards to the global distribution of non-Annex I countries and LDCs:

- (a) 44% of requests originate from Africa, which represents 35% of non-Annex I countries;
- (b) 29% from Asia, which represents 29% of non-Annex I countries;
- (c) 22% from Latin America and the Caribbean, which represent 21% of non-Annex I countries;
- (d) 3% from Oceania, which represents 9% of non-Annex I countries;
- (e) and 2% from Eastern Europe, which represents 5% on non-Annex I countries.

42. The thematic distribution of requests is also rather balanced, although slightly skewed towards mitigation objectives (see figure 11). This suggests that the prioritization criteria have guaranteed the fulfilment of the CTCN's mandate thus far, supported by AB's guidance.

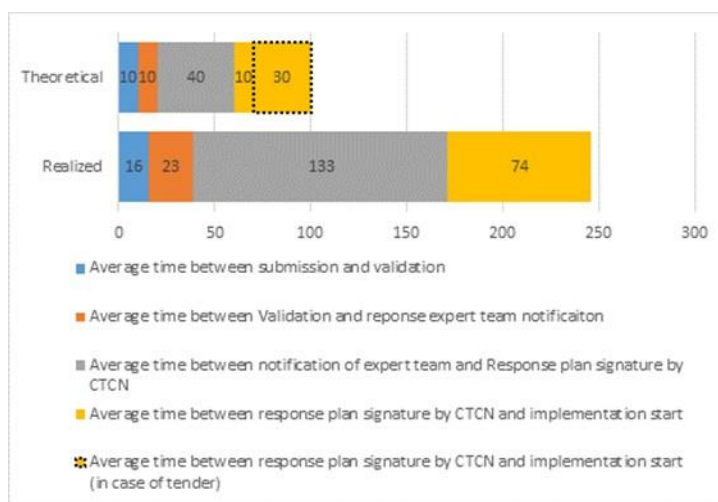
<sup>35</sup> 20 out of 25 beneficiaries, and 44 out of 52 NDEs, agreed or strongly agreed with the following assertion: "Following your request(s) for technical assistance to the CTCN would you say that selection criteria were available and clear?".

Figure 11  
**Distribution of requests by objective (Source: CTCN)**



43. Several NDEs and beneficiaries who were interviewed and participated in the surveys indicated that the delay between the submission and the start of implementation was too long. The average duration between the submission of a request and the start of implementation approaches 250 working days,<sup>36</sup> meaning that it has consistently exceeded the theoretical targets of the guidelines (see figure 12). The internal procedures of the CTCN presented at the AB5<sup>37</sup> give an indicative timeline of maximum 70 working days between the submission of a request and the beginning of implementation in the case of a response by the consortium, and 100 working days in the case of a response by a network member. In some cases this period reached almost two years, partially due to causes independent of the CTCN such as irresponsiveness from NDEs or limited staff resources and inadequate planning.

Figure 12  
**Theoretical and effective durations of the different steps of the technical assistance process (Source: EY, based on CTCN data)<sup>38</sup>**



(a) On average, the Secretariat took 16 working days after the submission to produce a statement of eligibility on the requests (against 10 days targeted), followed by another 23 working days to designate and notify an expert team (consortium member) and start the design of a response plan (more than twice the number of days initially targeted for

<sup>36</sup> Source: CTCN (internal). 2017. *Database of Technical Assistance requests*.

<sup>37</sup> Source: CTCN. 2015. *Technical Assistance Process and Procedures - AB/2015/5/04*.

<sup>38</sup> Based on: CTCN. 2015. *Technical Assistance Process and Procedures - AB/2015/5/04* and CTCN (internal). 2017. *Database of Technical Assistance requests* (for the 47 technical assistances which have reached implementation phase to date).

this phase). Such delay can be explained by the limited human resources of the CTCN, which have limited the pace at which the core team could review requests. The lack of capacity was another factor that affected the review process when the positions of adaptation or mitigation managers were vacant;

(b) The total duration of the response plan design and validation stage averages around 133 working days, with an important variability, compared to the 40 working days planned for in the guidelines.<sup>39</sup> Interviews with consortium partners and NDEs and analysis of AB discussions<sup>40</sup> both indicated that the length of this process was a result of multiple iterations between the CTCN team, Consortium Partners and beneficiaries to streamline the requests and align to what can actually be delivered, prior to framing the response plan. Political and governance issues that NDEs may have experienced and that are independent from the CTCN's process have also resulted in significant delays (changing priorities or interlocutors). Consortium partners have also reported that part of this delay is due to their own lack of resource to undertake CTCN activities. With no dedicated budget and human resources, Consortium Partners have sometimes had difficulties allocating the time necessary to the design of the response plan;

(c) The time between the signature of the response plan and the actual beginning of the technical assistance averages around 74 working days, and varies depending on the elaboration of a tender for network members or direct implementation by the consortium partner. This phase is seven times lengthier than the theoretical duration planned for in the guidelines. The selection of the technical assistance provider was identified by survey respondents as particularly long. Most partners have underlined that the tendering process (2 weeks) is too short to produce sensible proposals that would often require the involvement of more than one partner. Some requests were very technical, and it was therefore difficult to find an appropriate organization to develop the response plan, which delayed the design of the response plan.

44. Overall the delays experienced during the TA process can be explained by:

(a) The lack of resources of NDEs and local governance shortfalls which imply that NDEs in developing countries are not always able to fulfill their role in the most efficient way;

(b) The multiplicity of stakeholders involved in the process and decision making;

(c) The limited human resources of the CTC core team and of the Consortium Partners.

45. Although some interviewees have underlined that the process was lengthy, the majority acknowledged that given the resources of the CTCN, they were still significantly lesser than with other international development organizations. Besides, all interviewees and respondents were positive with regards to the involvement of the CTCN staff, who is seen as easy to reach and responsive. More than 70% of the respondents to the NDE and beneficiary surveys indicated that they received an answer to their request in short-enough time.<sup>41</sup> In addition, 83% of the respondents agreed that enough support was provided by the CTCN team during the process.

46. Overall, 76% of the NDEs and beneficiaries who responded to the survey expressed a good level of satisfaction with the technical assistance service (including 27% very satisfied).

<sup>39</sup> Source: CTCN. 2015. *Technical Assistance Process and Procedures - AB/2015/5/04*.

<sup>40</sup> Source: CTCN. 2015. *Prioritization Criteria for Technical Assistance – Experience and Lessons Learnt – AB/2015/5/7*: “A number of Requests that are deemed eligible have a wide scope of activities that need to be further refined and narrowed down during the Response Planning Stage. When substantive refinement and narrowing is required, this work has at times contributed to slow down the process of designing the Response Plan, and thus delaying the delivery of the technical assistance.”

<sup>41</sup> 72% of beneficiaries (18 beneficiaries out of 25 respondents) and 79% of NDEs (22 NDEs out of 28 respondents) strongly agreed with the following statement: Following your request(s) for technical assistance to the CTCN would you say that: I received an answer to my request in short-enough time? ”.

(a) The vast majority of NDEs who responded to the survey and have benefited from the implementation of a technical assistance project already, agreed that the technical assistance fully responded to their initial request (52% agreed, 41% strongly agreed). Similarly, 71% of the beneficiaries who responded agreed that the technical assistance received responded to their needs. 100% of the partners having participated in a technical assistance implementation agreed that the Response Plan and terms of reference tendered by the CTCN corresponded to the expectations of the final beneficiaries;

(b) More than 75% of the NDEs and beneficiaries declared that the technical assistance was implemented on-time, by comparison with the timeline defined in the response plan;

(c) Around 90% of the beneficiaries and NDEs that responded to the electronic surveys indicated that the technical assistance they received had been smoothly implemented, with a good communication and cooperation with and among providers. However, a few network partners expressed a lack of feedback after the selection of the technical assistance providers (especially for bidders not selected), and some beneficiaries noticed an insufficient communication on the status of their requests (especially when classified as inactive);

(d) Feedback received during the interviews confirmed the high level of satisfaction expressed in the surveys. However, a few NDEs and beneficiaries indicated that not enough financial resources were mobilized, and that not all the technical assistance initially requested had been provided. Due to broad demands and funding difficulties, the CTCN has explained that they had to refine the requests, and generally reduce the scope of work when defining the response plan.

#### Development of the Knowledge Management System

47. In the initial Programme of Work for 2013-2017, it is stated that the knowledge management system (KMS) should include an interactive IT tool to disseminate and capture information on technologies and best practice, as well as to support the management of requests. The KMS was operational by the end of 2014 and is currently mainly formed by the website and an intranet for the CTCN. The last functionality of the KMS, a direct and reserved access for Network Members, still needs to be developed.

48. The number of tools and information materials available in the KMS far exceeds the targeted levels. As of December 2016, there are 10,768 knowledge elements in the database (more than five times the targeted input). A striking increase in the number of resources occurred in 2016, with more 9,000 new resources being posted on the KMS. These include CTCN-created technical assistance information, publications and on-demand webinars as well as reports, publications and tools of partner organizations and countries. The KMS was initially mostly populated by Consortium Partners.<sup>42</sup> As the network is consistently expanding, Network Members are increasingly contributing to the KMS, providing webinars, lessons learned and technical fact sheets (as of May 2017, 5,814 information resources have been provided by Network Members).<sup>43</sup> A majority of network members did not contribute to the CTCN website (244 out of 288 as of May 2017), mostly because they were not solicited to do so. Out of those who contributed, roughly half contributed with already existing documents and half with documents specifically created for the website.

49. The number of users and page visits targeted have been significantly exceeded by the end of 2016. An increasing number of visitors are returning to the website, which

<sup>42</sup> Source: CTCN.2015. CTCN Knowledge Management System in a Snapshot, As of 11 August 2015 – AB/2015/6/5.4: “At the same time, the online presence of the CTCN is creating greater visibility to the wealth of existing information provided by Consortium Partners and a rapidly growing number of Network Members.”

<sup>43</sup> The Renewable Energy and Energy Efficiency Partnership, the Clean Energy Solutions Center, the Climate and Development Knowledge Network and the International Food Policy Research Institute provided 94% of these resources. Source: <https://www.ctc-n.org/network/network-members>. Source: <https://www.ctc-n.org/network/network-visualizations> and <https://www.ctc-n.org/network/network-members>.

suggests that the KMS is useful and is a relevant source of information for them.<sup>44</sup> 91% of the respondents to the NDE and beneficiary surveys indicated that they are satisfied with the KMS, peer learning and capacity building services of the CTCN. Among the respondents to the surveys, 72% of the NDEs declare that they use the CTCN's website while 61% of the beneficiaries and 48% of the Network Members and Consortium Partners say so. A majority of respondents declared that information is easy to find on the website (93%), that it is relevant to their needs (95%) and that it is sufficiently detailed (87%).

50. Despite overall positive feedback on the website, the majority of interviewees confirmed that they use the KMS very rarely, and some of them identified specific difficulties when consulting the CTCN website:

(a) The CTCN website is not enough user-friendly and structured: the over-abundance of menus and sub-menus can be confusing, especially when using the website on a mobile phone;

(b) Some information is missing or updated not regularly enough: the process regarding how Network Members can apply to tenders is not clearly presented, the details about upcoming events (timing and place) are updated very late, little information is presented on the projects implemented by the CTCN, information is sometimes incomplete when it comes to the documents presented at the Advisory Board or not updated regarding the webinars, etc.;

(c) The technology library is perceived as highly complex and hard to navigate. The diversity of themes and filters has been reported as confusing and making it difficult to find the relevant information.

51. All respondents taken together, the three main reasons for using the CTCN website are, by order of importance: looking for information on specific climate mitigation/adaptation projects conducted by the CTCN; on the CTCN and the services it provides; and on upcoming events. Fewer respondents have indicated that they use it to look for information on specific technologies and best practices, which indicates that the technology library itself is of lesser interest to the visitors of the CTCN website.

52. Concerns were raised at the 7<sup>th</sup> meeting of the Advisory Board over the technology library, in particular with regards to its incomplete content, potential obsolescence of information, sustainability, and overall value for money. To respond to these concerns, a KMS Forward Plan was submitted for validation and adopted at the 8<sup>th</sup> meeting of the Advisory Board.<sup>45</sup> It was decided to discontinue efforts to create a comprehensive library and to focus more specifically on technologies emphasized in technical assistance requests as well as on facilitating links to related information (webinars, technical assistance, Network members, and technology information).

#### Provision of capacity building

53. Capacity building workshops have taken place during regional fora, which are also used as regional networking events. The number of capacity building workshops organized thus far (21) matches the targets established in the Programme of Work. Additional workshops were held for the Incubator Programme to further support LDCs and local stakeholders to formulate relevant requests.

54. To further support capacity building, the CTCN provides online webinars, which are available to the public. They contribute to disseminating information on specific climate technology-related topics. As of May 2017, 81 recorded webinars are available on the CTCN website. The CTCN reports that over 2,200 clients were trained through webinars to date, which is well above the target established in the Programme of Work. For some webinars, the video as well as some supporting documentation remain available to the public on the CTCN's website after the date of the webinar.

55. Respondents to the surveys have indicated a high level of satisfaction with the KMS, peer learning and capacity building activities (91%):

<sup>44</sup> Source: CTCN. 2016. Internal document of the CTCN, *Communications Overview*.

<sup>45</sup> Source: CTCN. 2016. CTCN Proposed KMS Forward Plan.



(a) 73% of them agreed that enough relevant events and webinars were proposed. However, interviewees consistently indicated that these workshops should be more frequent and opened up to a broader range of stakeholders (Network Members, local SMEs, NGOs, etc.);

(b) The vast majority felt that the events and webinars were well organized (91%), but:

(i) A few NDEs and network members referred to some language issues, especially for webinars;

(ii) NDEs required to have a better visibility on the upcoming events, with date and places of meetings available late;

(c) The vast majority felt that the events and webinars tackled relevant issues (86%), and that the information received during events and webinars was of high quality (93%).<sup>46</sup> However:

(i) Some NDEs and partners that participated to these events regreted that the focus was more on the operations and services of the CTCN, rather than on innovation and technology transfer issues;

(ii) Several interviewees underlined the need for inter-regional workshops and fora that would allow sharing knowledge and lessons learnt across regions;

(iii) Webinars were deemed to be very general, and not targeting a specific audience or context. Provided the diversity and expertise within the network, the CTCN could provide more webinars on more specific topics;

(iv) NDEs also solicited the organization of more peer-to-peer meetings between NDEs to share return on experience on requests and projects and enhance replicability;

(d) According to the surveys submitted by the participants just after the webinars in 2016 and 2017, they moderately (57%) or entirely (37%) increased their knowledge on the topic;

(e) Interviewees reported that the workshops had been very useful in better understanding the role and services of the CTCN, as well as to be able to identify and develop better requests. In some cases, NDEs also felt empowered to replicate the capacity building to other relevant local stakeholders. However, some NDEs noticed a lack of follow-up from the CTCN after the meetings.

#### Organization and participation to networking events

56. Based on the achievements reported by the CTCN:<sup>47</sup>

(a) The CTCN participated to 17 international technology events as of December 2016. The figure for these international technology events is above the target of 12 events by year 3 of the Programme of Work:

(i) Most of the time, the CTCN has participated to these events to raise awareness on what is the CTCN in order to mobilize new beneficiaries and Network Members;

(ii) The CTCN also co-organized international technology meetings, such as the East African Stakeholder Engagement Forum For climate Friendly Technologies in Nairobi with PFAN, and the meetings held during COP 21 and COP22;

(b) 20 regional networking meetings have been held during the Regional Fora organized by the CTCN, which is within the targeted numbers for year 3 of the Programme

<sup>46</sup> This result is consolidated by the results of the surveys submitted by the participants just after the webinars in 2016 and 2017, with 22% assessing the content of webinars to be of excellent quality, 41% very good, and 31% good.

<sup>47</sup> Source: CTCN. 2016. 2016 targets and achievements – AB/2016/8/6.b and CTCN. 2015. 2015 targets and achievements – AB/2015/6/6.a.

of Work. However, the number of developing country stakeholders other than NDEs that participated to these events is rather limited, compared to the NDEs and partners (43 participations out of a total of 650 participations),<sup>48</sup>

(c) The CTCN participated in more than 20 public-private sector workshops, which included its own workshops, and those of partners.

57. Generally speaking, interviewees were satisfied with the networking events. It was however suggested in several instances that the CTCN should foster more active interactions between Network Members in order to build a dialogue on replicability and transferability, multi-country approaches. The Network Member meeting held at COP22 was pointed out as very useful and an example of a valuable event to be replicated more often.

## C. Efficiency of CTCN operations

### Governance

58. According to interviewees, the Advisory Board is rightly sized and its composition<sup>49</sup> well-balanced with regards to several criteria such as developed/developing country balance, representation of the NGO community and representatives of UNFCCC constituted bodies.<sup>50</sup> Provided the nature of the CTCN's work and growing expectations from developing countries, there is a need for enhanced technical expertise within the Advisory Board for it to continue providing the adequate strategic guidance.

59. Since its first meeting, the Advisory Board has taken various decisions including the approval and occasional adjustment of strategic documents,<sup>51</sup> and has presented recommendations and demands to the CTCN secretariat.<sup>52</sup>

60. Coordination with the TEC and other bilateral and multilateral collaborations are also facilitated by AB meetings, to which representatives of partner institutions participate through specific discussions.

61. Task Forces composed of volunteer members of the Advisory Board (AB) were also constituted to tackle several issues critical to the proceedings of the CTCN: on RD&D (created at AB6), Funding and Financial visibility (created at AB7), Finance (created at

<sup>48</sup> CTCN (internal). 2016. *List of participants to CTCN events*.

<sup>49</sup> The current members of the AB are: 16 government representatives; One member representing the Standing Committee on Finance; The Chair and the Vice-Chair of the Technology Executive Committee (TEC); 2 co-representatives of the Adaptation Committee One representative of RINGOs (Research and Independent Non-Governmental Organizations), one of BINGOs (Business And Industry Non-Governmental Organizations) and one of ENGOs (Environmental Non-Governmental Organizations) and The director of the CTCN representing the CTCN; . While invited to do so, the GCF has not nominated any representative to the CTCN's advisory board to date.

<sup>50</sup> Source: <https://www.ctc-n.org/about-ctcn/advisory-board>.

<sup>51</sup> Notably: the 2013-2017 programme of work (AB2); the definition of Modalities and Procedures, criteria for prioritizing requests from developing country Parties, and guiding principles and criteria for establishing the Network (AB2); the creation of the request incubator programme (AB3); the creation of the secondment programme (AB5); the revision of the M&E process (AB6); the adoption of the KMS forward plan (AB8); and the adoption of annual operating plans and budgets.

<sup>52</sup> With regards to (and not limited to): - Improving the reporting to the Advisory Board, by demanding to increase the transparency of the CTCN budget presented to the board (AB4 and AB6), to develop case studies illustrating technical assistance projects (AB7 and AB8), or to hear directly NDEs and implementers on their experience (AB7), - Deploying the technical assistance request system, by recommending to change the management of requests (including promoting multi-country requests and documenting the request implementer selection process, AB4), to encourage more requests directly based on priorities identified in TNAs (AB5) or to reach out to countries that had not nominated their NDE (AB5), - Better structuring of the network, through the recommendations of developing a network member manual (AB4) or increasing the involvement of Network Members in responding to requests (AB8), - Reinforcing relationships with multilateral donors, notably the GEF (AB3 and AB6), the GCF and Development Banks (AB6), - Revising the objectives and functionalities of the KMS (AB3 and AB6).

AB9), and Operations (created at AB9).<sup>53</sup> These Task Forces conduct inter-sessional discussion and are invited to report to the Advisory Board. The establishment of taskforces that are able to meet on a more regular basis than the AB is seen as efficient to advance work on specific strategic matters.<sup>54</sup>

62. However, several stakeholders have reported a lack of clarity over the role of the AB, since it serves different purposes:

(a) Assess the implementation of decisions adopted by the COP once a year, and provide guidance on strategic matters;

(b) Discuss operational issues, using Task Forces when necessary on particularly looming issues, and provide advice to the CTC in its operations;

(c) Ensure reporting to donors, who are represented in the AB and require evidences to guarantee that public funds are spent adequately, in a transparent and “value for money” approach. However, this also adds a political layer to the guidance, hence the lack of clarity reported by interviewees.

63. AB members have expressed a need for more regular and quantitative information about the CTCN progress, in order to better follow implementation and delivery of the CTCN services, which would allow them to provide more comprehensive guidance. This suggests that the use of time during AB meetings was not optimal, as a result of too partial communication prior to the meetings. Similarly, concerns were raised by donors about the ability of the CTCN to demonstrate value for money, which suggests that CTCN communications should be more regular and based on concrete indicators, to ensure that donors do not lose faith in the CTCN’s capacity to deliver impacts. The AB required the CTCN to provide case studies on technical assistance implemented, in order to better communicate the results of the CTCN’s activities.<sup>55</sup> In addition, there is strong scrutiny for the CTCN to be more transparent over the criteria of its donors, which determine the allocation of funding between the different CTCN activities and projects.

#### CTC Core Team organization and resources

64. The CTCN is not managed as an independent institution but rather as a project of both UNEP and UNIDO, and relies on various processes of those two institutions. As an example, the financial reporting is done following UNEP’s process and the tenders are launched on UNIDO’s platform.

65. The partnership between UNEP and UNIDO is deemed to be efficient to deliver the CTCN mandate:

(a) These two organizations have specific expertise on adaptation and mitigation technologies, and were able to provide experts until the moment when staff were specifically hired for the purpose of the CTCN;

(b) The integration of the two organizations within the UN ecosystem and their advanced knowledge of procedures, processes and stakeholders within the UNFCCC and COP context are a key asset to ensure the CTCN’s responsiveness to the COP;

(c) The procedures and processes already in place in these organizations have facilitated the operationalization and management of the CTCN, by building upon already existing processes;

(d) The two organizations are deemed to work with good complementarity, with a clear distribution of roles;

<sup>53</sup> A suggestion was made during AB8 to allow Network Members and observers to contribute to those taskforces.

<sup>54</sup> Extract from CTCN. 2017. *Minutes of the eighth Advisory Board meeting - AB/2017/9/2.2.*: “the use of task forces was deemed to be very useful for enhancing Advisory Board intersession processes and recommendations to the CTCN. A suggestion was made to invite Network members and observers to contribute to the work of future task forces.”

<sup>55</sup> CTCN.2016. Report of the 7<sup>th</sup> meeting of the AB meeting. AB/2016/8/2.2. “In advance of its next meeting, the Advisory Board requested the CTCN to develop a series of case studies in order to better communicate the effectiveness and impacts of the CTCN’s work.”

(e) The extensive network of local UNEP and UNIDO offices and the three consultants dedicated to CTCN activities positioned in each region have allowed a good geographical coverage of the organization, and facilitated contacts and coordination with local stakeholders such as NDEs, Consortium Partners, etc.

66. Resources allocated to the CTCN in the first place were assessed to be limited. The organization's team is rather small compared to the scope of work it is expected to deliver. The is made of a small core team with five professional managers (respectively in charge of financial management, mitigation issues, adaptation issues, capacity building activities, and Knowledge Management System and communication) and two administrative staffs are based in the UN offices in Copenhagen. They are supported by consultants (regional and technical experts) and by human resources from UNEP and UNIDO (including one coordinator from each body).

67. In this respect, the support of the Consortium Partners and the mobilization of Network Members is critical for the CTCN to be able to deliver on its objectives. On some occasions, positions have been unoccupied following unplanned departures, which led to difficulties in terms of management.<sup>56</sup>

68. Overall, interviewees have acknowledged the engagement and responsiveness of the CTC core team. The expertise within the CTC core team was recognized by interviewees as valuable and able to support the implementation of the services, in particular with the submission of technical assistance requests. It was however noted by several interviewees that the team lacks relevant expertise on adaptation.

69. Several interviewees have pointed out the need to have a staff within the CTCN core team who would be dedicated to the dialogue with donors and governments, in order to secure funds on a longer term and also to align the expectations and criteria of donors with the priorities and outputs of the CTCN. This statement results from the observation that the CTC core team had to dedicate a significant amount of its time to seeking and securing funding, which it was not meant to do. This dialogue with governments and donors is necessary and must be an ongoing process and cannot be restricted to the responsibility of staff who should be dedicated to delivering the CTCN's core services to countries.

#### Integration of Consortium Partners

70. The 11 Consortium Partners are: Asian Institute of Technology; Bariloche Foundation; Council for Scientific and Industrial Research; The Energy and Resources Institute; Environment and Development Action in the Third World; Tropical Agricultural Research and Higher Education Center; World Agroforestry Centre; Deutsche Gesellschaft für Internationale Zusammenarbeit; Energy Research Centre of the Netherlands; National Renewable Energy Laboratory; UNEP-DTU and UNEP-DHI Partnerships. Additionally, DNV GL was appointed as strategic partner later on.

71. The regionalized organization of the CTCN, with consortium partners well identified and positioned in their region of expertise, has been a strong asset to support:

(a) Communication and awareness raising efforts in the regions, with the provision and dissemination of material and tools about the creation of the CTCN and its services;

(b) The organization of regional events (Regional Fora, Incubator Programme, etc.), by facilitating the logistics and the identification and mobilization of local stakeholders.

72. Consortium members have been involved in a variety of the CTCN's services depending on their specific technical and regional expertise:

(a) All Consortium Partners have contributed to drafting Response Plans (in response to Technical Assistance requests) in a rather balanced way;

(b) All but one have led the implementation of a technical assistance project;

<sup>56</sup> That was for example the case after the departure of the financial manager officer.

(c) All have organized at least one webinar (UNEP DHI partnership organized 10 sessions);

(d) With regards to the KMS, GIZ and CSIR have been particularly active with respectively 181 and 14 publications on the website while most of the other partners did not contribute to it;

(e) Consortium partners have participated to regional fora depending on their geographical location.<sup>57</sup>

73. The Consortium Partners were valuable partners to formulate all response plans for the incoming technical assistance requests, and to provide advice to the CTC for the assessment of incoming requests. Despite the structural advantage of having regional Consortium Partners to design response plans, it was often mentioned that the lack of resources within the consortium partner organizations has led to significant delays.

74. Nearly 80% (50) of the technical assistance projects in implementation or completed were directed to Consortium Partners through the “quick response intervention” process, which technically saved time normally allocated to the tendering process:

(a) Consortium partners have contributed to the operationalization of the technical assistance services very early on, when the CTC could not yet rely on its network to implement technical assistance projects. This trend should however steadily reduce as the network grows with more members in capacity to implement technical assistance projects, and as concerns arise about the need to work with local stakeholders to empower local skills and resources;

(b) More than 80% of the beneficiaries and NDEs that responded to the electronic surveys indicated that the providers of technical assistance (mainly Consortium Partners) mobilized the appropriate resources in terms of capacity and skills;

(c) Several NDEs have also expressed interest in being more involved in the choice of the implementing partner to ensure that their prior experience with partners is taken into account to further improve the implementation process.

#### Mobilization of Network Members

75. As of March 2017, 265<sup>58</sup> organizations from 64 different countries were part of the network (193 as of July 2016),<sup>59</sup> which is well above the initial target of 200 members by the end of 2016. Since its inception, the network has grown steadily, but an exponential engagement rate of new network members will be required to reach the goals of 500 partners by 2017 and 1000 by 2018. In light of the diversity and recent expansion of the network, it is assumed that the relevant expertise is now available within the network in most cases. The intranet of the CTCN now contains a matchmaking tool that analyzes technical assistance requests by country, thematic area, etc. and ranks partner organizations according to their relevant experience and expertise with regards to the request.

76. The most important criteria for membership is the ability to deliver the CTCN’s mandate by having adequate size as well as organizational and financial stability. So far, only two applications have been refused and 25 were under assessment as of 1 March 2017. At its 6<sup>th</sup> meeting, the Advisory Board decided to suspend until further notice the initial 2 years expiration period for CTCN members that are not active or do not fit the criteria anymore.

77. The distribution between different sectors of expertise is also rather balanced (see figure 13 and 14).

<sup>57</sup> Data compiled by the consultant based on the information for each Consortium Partner (<https://www.ctc-n.org/about-ctcn/consortium-partners> accessed on 20 April 2017).

<sup>58</sup> Source: CTCN. 2017. *Climate Technology Network in a snapshot – As of 1 March 2017 - AB/2017/9/7.3.*

<sup>59</sup> Source: CTCN. 2016. *Climate Technology Network in a snapshot – As of 15 July 2016 - AB/2016/8/7.3.*

Figure 13  
**Adaption sector expertise (Source: <https://www.ctc-n.org/technical-assistance/data>)**

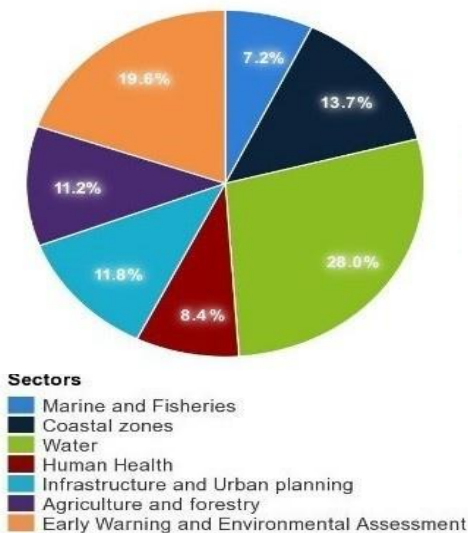
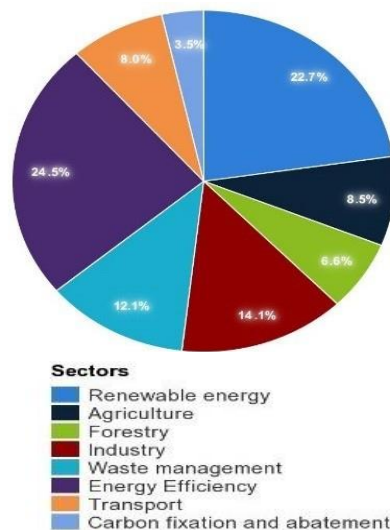


Figure 14  
**Mitigation sector expertise (Source: <https://www.ctc-n.org/technical-assistance/data>)**



78. A significant number of interviewees and all network members who were interviewed noted the low level of involvement of the network, despite the expertise available and the willingness of Network Members to contribute to the work of the CTCN:

(a) As of December 2016, only 20% of the technical assistance projects completed or under implementation had been carried out by Network Members (12 out of 61). Having designed response plans, Consortium Partners were often better placed to implement it and also incentivized to do so.<sup>60</sup> However, out of the 29 technical assistance requests that have entered in implementation phase since the beginning of 2017, half are being implemented by network members. CTCN projections for the whole year suggest that network members will implement 60% of technical assistance projects in 2017;

(b) Only 20% of the webinars have been organized by Network Members (16 out of 81 webinars organized or promoted);

(c) 18% of current Network Members have participated to the regional fora or events organized by the CTCN so far;

(d) More than 85% of the members have not contributed to the CTCN’s website. This indicates that the CTCN did not sufficiently leverage its network for the creation of knowledge. Interviewees reported not having been solicited to contribute to the KMS. In some instances, Network Members who have implemented a technical assistance projects did create knowledge and online material that was not appropriately relayed on the CTCN website.

79. The dissatisfaction of some of the Network Members puts the network’s growth at risks. While connection (networking with other actors involved in climate change mitigation and adaptation) and commercial opportunities (getting access to the tenders organized by the CTCN) are the two most cited reasons for which members have decided to join the network, they are also the two aspects with which members are most dissatisfied:

(a) Dissatisfaction with the commercial opportunities offered by the CTCN is rather significant (38% of the 88 network members that responded to the survey were

<sup>60</sup> Due to limited budget for designing response plans (USD 6,000 compensation which does not cover the actual resources that go into this contribution), Consortium Partners mentioned that a lot of their contribution ends up being in-kind contribution which they intended to capitalize by designing response plans that they are likely to implement themselves.

dissatisfied or very dissatisfied with this aspect). Firstly, Network Members reported a lack of relevant communication, and a lack of information about the requests in the pipeline. Some members also indicated that they lack feedback on their bids to tenders: they do not receive information on which entity was selected to perform the technical assistance and why their bid was deemed unsatisfactory. For instance, it was noted that the evaluative criteria were not clearly provided to the tenderers;

(b) Some dissatisfaction with the networking activities of the CTCN was observed (28% of the 88 participants are dissatisfied or very dissatisfied with this aspect). Respondents to the survey and partners interviewed indicated that the CTCN does not provide enough occasions for Network Members to interact with each other and with other climate change stakeholders. The event organized at COP22 was highly appreciated and it was mentioned that such events should be organized more regularly.

#### Involvement of NDEs

80. Several beneficiaries have indicated that they had not heard about the CTCN and the NDE prior to *ad hoc* discussions with the local UNEP office or prior to being contacted by the NDE itself. This suggests that efforts engaged in raising awareness about the CTCN services may not be sufficient, due to regional fora and networking events not reaching out to a broad enough audience, and to a lack of resources for NDEs.

81. NDEs are not necessarily hosted by the same national agencies/ministries as other UN focal points, which may be confusing for local stakeholders. Thus far, the CTCN organized workshops bringing together UNFCCC focal points of several initiatives from selected countries.<sup>61</sup> These workshops stimulate the discussion on national priorities and foster synergies between national focal points to ensure that the deployment of climate technologies is supported in a coordinated and efficient manner by all initiatives.

82. The role of NDEs is well understood by requesting parties once they are informed about the existence of the CTCN and of a NDE within their country. Almost 90% of the beneficiaries indicated to have a clear understanding of which organization is the NDE of its country, what its role is and how to contact it.

83. The lack of core funding for the CTCN implies that NDEs do not have a dedicated budget to undertake their role. The commitment of NDEs relies on the willingness of countries and governments to invest time and money in CTCN activities and NDEs have reported that they sometimes lack support and recognition from their national ecosystem and other UNFCCC focal points.

84. Through e-surveys and interviews, NDEs have consistently reported that they do not have enough capacity to fully deliver on their role as an NDE whether it be in terms of human resources (with less than one full time equivalent dedicated to CTCN activities), infrastructure or material. This for example limits their capacity to effectively and efficiently guide project proponents to submit an appropriate request, and to support the coordination of the whole process.<sup>62</sup>

85. NDEs who participated in the Incubator Programme indicated that they were able to better communicate about the CTCN and their role as a NDE after the training received as part of the Programme. As a result, they were clearly identified by potential request proponents and were able to submit several requests.

86. Due to political changes, there is an important turnover of NDE focal points, with a subsequent risk of losing capacity. Among the 62 NDEs which responded to the electronic survey 60% of them have been NDE focal points of their country for less than 2 years.

<sup>61</sup> For instance the workshop on how to mainstream technology in climate action plans held in Nairobi on 30-31 May (<https://www.ctc-n.org/news-media/galleries/workshop-how-mainstream-technology-climate-action-plans-nairobi-30-31-may>).

<sup>62</sup> Several Consortium Partners and Network Members have indicated that the requests often need an important work of streamlining to ensure that they are aligned with the CTCN's mandate and capacities. From the initial proposal to the actual start of implementation, many iterations with the NDE and proponents are necessary to refine the requests, response plans and response project.

### Communication

87. The CTCN formulated a communication strategy to address external and internal communication issues in a comprehensive manner. Several means of communication have been developed, among which brochures, joint annual reports, and most notably the Knowledge Management System and the website. These communication tools have supported the deployment and implementation of the CTCN.

88. The information and support given by the CTCN (core team and consortium members) were satisfactory and helped the beneficiaries submitting their requests; 92% of beneficiaries and 93% of NDEs indicated that enough information was available on the submission process.

89. External communication has proven to be efficient to expand the network, but existing members have underlined a lack of clear communication about CTCN projects and about their potential engagement, which has resulted in some cases in a loss of interest in the CTCN Network Membership. In addition, the lengthy delays required to refine requests and translate it into implementable response projects suggest that external communication with NDEs and potential beneficiaries may not be clear enough about the selection criteria and capacities of the CTCN. NDEs have however pointed out the availability and good communication with CTCN staff as a clear factor of success of their technical assistance projects.

### Development of processes and procedures

90. The CTCN formalized its processes and procedures with several documents that were presented and reviewed by the Advisory Board:

(a) The general operating structure of the CTCN was defined in the Programme of Work 2013-2017, which lays out the important modalities of implementation of the CTCN, to guarantee the delivery of its vision and mandate;

(b) Annual operating plans are published each year to develop the Programme of Work further, be responsive to the changing context and build upon the experience of previous years;

(c) Specific documents have been issued for several key components of the CTCN activities: technical assistance process and procedures, technical assistance prioritization criteria, a Communications Strategy, Network membership criteria, the role of Consortium partners, M&E process and procedures, etc.;

(d) Some of these processes have been clarified by updates taking into account lessons learnt from first activities. For example, selection criteria of technical assistance request were first presented and approved during the 2<sup>nd</sup> meeting of the AB (September 2013), and the overall process was clarified and approved during the 6<sup>th</sup> meeting of the AB (September 2015) following the recommendation of the AB during its 4<sup>th</sup> meeting.<sup>63</sup>

91. During the first years of the implementation of the CTCN, the process related to the selection of the technical assistance provider (consortium partner or network member) was considered as being not clear enough and lacking of transparency according to the surveys and interviews conducted with beneficiaries, NDEs and Network Members. Some Network Members also expressed difficulties concerning the call for proposals, with too short deadlines, unclear TORs or insufficient provisional budget compared to expected tasks. The CTCN took some time to develop procedures for submitting a technical assistance request, which have been reported as straightforward and simple enough by request proponents who have been interviewed.

92. The fact that the CTCN is still developing a framework for the monitoring and evaluation of technical assistance activities does represent a significant limit to the evaluation of outcomes.<sup>64</sup> Up until now, the CTCN relied on qualitative assessment of

<sup>63</sup> Source: CTCN.2015. *CTCN Technical Assistance Process and Criteria for Responding to Country Requests – AB/2015/6/7a*.

<sup>64</sup> As of May 2017, the M&E framework is being finalized. It should be validated this year by the Advisory Board and deployed promptly. The M&E framework will allow monitoring and evaluation of key performance indicators of the CTCN's progress and impact, for both technical assistance and non-technical assistance activities.



technical assistance projects that have been implemented and on the KMS to collect and report data.

93. As of March 2017, the implementation of those procedures was still in its initial phase. At the request of some Advisory Board members, the CTCN consulted with and received input from the Norwegian Agency for Development Cooperation (NORAD) and GIZ on this framework, notably to clarify the outcomes and impacts to be achieved in terms of non-technical assistance activities and the corresponding indicators.

94. The monitoring of technical assistance activities includes a dashboard to monitor activities (ex. number of technical assistance projects at the different stage of implementation) as well as a template to be jointly filled in by the technical assistance provider, the NDE and the beneficiary once the project completed to assess the delivery, the outcomes and the intended impacts (as of April 2017 14 technical assistance projects have been assessed).

#### Allocation of financial resource

95. During the first operating year of the CTCN, significant resources were allocated to the KMS, peer learning and capacity building activities (30% of the budget according to the initial Programme of Work). This was in part due to the set-up of the KMS infrastructure and to the launch of the first training workshops and the Incubator Programme. The KMS is often seen as a costly and the low level of usage of the technology library supports the argument that it should not represent an important share of the CTCN's budget. Such concerns were raised at the 7<sup>th</sup> meeting of the AB. The KMS Forward Plan,<sup>65</sup> adopted at the 8<sup>th</sup> meeting of the AB, provides guidance so as to better allocate the funds to the KMS. In particular, the structure and ambitions of the technology library were downgraded. In 2016, these activities represented only 2% of the actual expenditures.<sup>66</sup>

96. Since the CTCN is fully operational, technical assistance services have started to require more resources as the number of requests received increases. As initially defined in the Programme of Work, they now represent the largest share of the expenditures, even if lower than expected.<sup>67</sup> As a result of financial constraints and a lower than expected quantity of requests submitted, the number of technical assistance projects that have been implemented to date is significantly lower than what was outlined in the Programme of Work for 2013-2017. 32 technical assistance requests that have been deemed eligible<sup>68</sup> are not prioritized due to the lack of financial resources to implement the projects, the need to prioritize other requests from countries that have not received technical assistance yet, and to prioritize requests from LDCs, in order to reach the desired geographical and economic balance.

97. Several interviewees suggested that the CTCN has not invested enough in capacity building and networking events, to foster training, collaboration, knowledge sharing and partnerships. Outreach, networking and stakeholder engagement activities represented 8% of the expenditures in 2016,<sup>69</sup> and are critical to the fulfilment of the CTCN mandate.

98. In this context of financial constraints, CTCN operations represented a more important share of the overall expenditure than what was expected, due to fixed costs.<sup>70</sup>

#### Cost-effectiveness of the CTCN

<sup>65</sup> Source: CTCN. 2016. *CTCN Proposed KMS Forward Plan*.

<sup>66</sup> Source: CTCN. 2017. *8a) Financial updates on CTCN operations* - document presented at the 9th Advisory Board.

<sup>67</sup> 60% of the 2016 expenses compared to 77% of the budget planned in the Programme of Work 2013-2017 or 67% of the 2016 operating plan.

<sup>68</sup> Among the 52 inactive requests: - 32 requests are not prioritized because of a combination of factors: financial resources limitation, need for serving the large possible amount of countries, LDCs considerations and geographical balance; - 1 request is not prioritized because of national security issues (request from Syria); - 15 requests were withdrawn by the NDEs; - 4 requests were considered not eligible.

<sup>69</sup> Source: CTCN. 2017. *8a) Financial updates on CTCN operations* - document presented at the 9th Advisory Board.

<sup>70</sup> 25% of the 2016 expenses, compared to 12% of the 2016 planned budget.

99. Most interviewees indicated that the CTCN was rather cost-effective and able to deliver substantial outputs, despite the limited resources available. Except for technical assistance projects, the CTCN delivered outputs in line with the targets established in the Programme of Work, with less budget than initially planned. In addition, the potential for replication and leveraging of CTCN activities through synergies with MDBs and the GEF and GCF opens space for delivering even greater impacts. Interviewees underlined that the CTCN processes and procedures are less bureaucratic than expected, in particular compared to other UN and international development organizations.

100. Interviewees generally agreed that the budget allocated to technical assistance projects was often too small for the expected results, and nonetheless demonstrated a high level of satisfaction with the projects delivered by the CTCN. Beneficiaries all mentioned that the technical assistance projects delivered as much outputs it could with the available budget. Some implementing partners and NDEs underlined that the response projects sometimes did not budget for unplanned contingencies and logistics, suggesting that the budget was rather tight for the expected activities. Wherever possible, the CTCN shared costs and built on available knowledge and material from its partners.

101. Regional and multi-country projects were noticed as efficient initiatives to share the costs of technical assistance projects and ensure high transferability throughout developing countries.

#### D. Impact and Sustainability

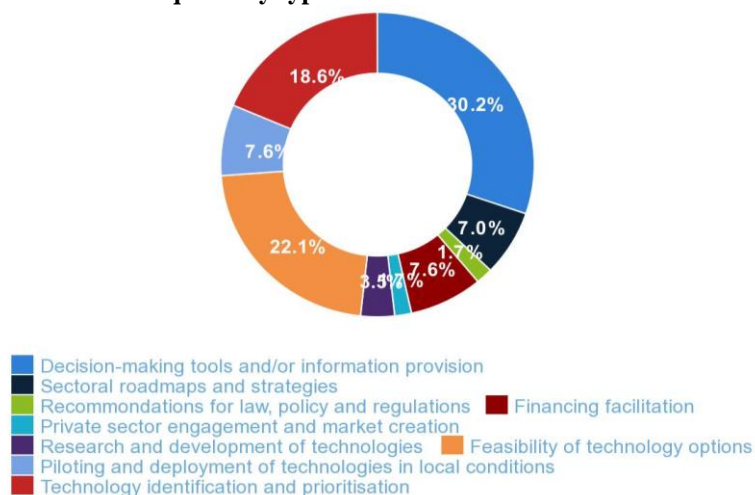
##### Monitoring and assessment of effects and impacts

102. The Programme of Work of the CTCN provides indicative outcome targets only for the fifth year of implementation in order to take into account the necessary delay between the implementation of any activity and its long term effect.

103. Figure 15 shows the distribution of requests by type of assistance, including requests that are still in the design or review phase. It appears that the majority of requests relate to decision-making tools and/or information provision (30.2%), feasibility of technology options (22.1%) and financing facilitation (18.6%). This gives an indication of the likely outcomes of the CTCN's action in the medium and long term.

Figure 15

**Distribution of requests by type of assistance<sup>71</sup>**



104. The CTCN developed an M&E process that foresees a double check with the implementer of the TA on the outcomes of the TA, at the beginning of the implementation and at the end of the implementation. At the end of each TA, the implementer fills in a TA closure report including results of the TA as well as the expected impacts after the TA. This information is collected in a systematic manner and aggregated at the CTCN Secretariat level (see table 9).

<sup>71</sup> Source: <https://www.ctc-n.org/technical-assistance/request-visualizations>.

Table 9

**Outcomes indicators: targets and achievements (Source: EY, based on CTCN data)**

<i>Outcomes indicators<sup>a</sup></i>	<i>Targets for the 5th year of implementation (2017)</i>	<i>Achievements by the end of 2016</i>
Amount of climate technology investments deriving from CTCN assistance / Post-Response Plan intervention funding, directly or indirectly attributable to CTCN activities	USD 0.6 billion	- USD 5,000 officially committed; - USD 1.14M under direct negotiation or submitted to investors/donors; - USD 350M of estimated amount of investment potential
Number of national and sectoral technology plans resulting from CTCN assistance	50-75 new plans	7
Number of new country driven technology projects and/or strategies (policies and laws) designed, implemented and scaled-up as a result of CTCN assistance	100 new country-driven technology projects	9
Number of Public-Private Partnerships formed as result of workshops	13 partnerships	3 <sup>b</sup>
Number of twinning arrangements as a result of networking events	18 arrangements	4 <sup>c</sup>
CTCN activity that directly or indirectly created a South-South / North-South / Triangular collaboration	NA	5

<sup>a</sup> Source: CTCN. 2015. Monitoring & Evaluating Transformational Outcomes and Impacts of CTCN Activities – AB/2015/5/15.

<sup>b</sup> The CTCN reported to have formed one public-private partnership in 2015 with PFAN having work on a technical assistance projects (source: CTCN.2015. 2015 Targets and achievement. AB/2015/6/6a) and one in 2016 with the chapters formulated as a result of the East African stakeholder forum (source: CTCN.2016. 2016 Targets and achievement. AB/2016/8/6b).

<sup>c</sup> The CTCN reported to have achieved two twinning arrangements in 2015 through discussions with Regional Development Banks (source: CTCN.2015. 2015 Targets and achievement. AB/2015/6/6a) and two in 2016, through the collaboration with PFAN and WIPO respectively (source: CTCN.2016. 2016 Targets and achievement. AB/2016/8/6b).

105. By the end of 2016, the CTCN is still far from its 5<sup>th</sup> year targets. This can be explained by several factors:

(a) Only a few months has passed since the completion of the first TAs to evaluate their impacts;<sup>72</sup>

(b) The elaboration of strategic plans, policies or laws, creation of partnerships, or mobilization of funds result from long-lasting processes. Assessing the direct contribution of small-sized projects to such changes can be difficult and it seems that the initial timeline for observing such outcomes may have been too ambitious.

106. The difficulty to assess these outcomes led to a lack of regular and quantitative communication on outcomes and impacts with AB members and donors, resulting in an information gap for the optimization of the CTCN's activities and in a lack of reporting to donors which intend to assess the impacts of their donations.

<sup>72</sup> Regarding technical assistance, only 17 technical assistance have been implemented as of May 2017; the earliest one dates back only to March 2016.

107. The action of the CTCN is perceived as a first step for larger scale projects which are either at the design phase or at the very beginning of implementation. Some NDEs and beneficiaries mentioned current results that are likely to have long term effects, this includes for example the design of policies such as energy policies and laws,<sup>73</sup> the definition of roadmaps and the acquisition of funding for large-scale projects.<sup>74</sup> The recent collaboration between the CTCN and the GCF whereby the CTCN assists countries in drafting concept notes to receive funding from the GCF could generate measurable outputs in the short and medium term regarding the funding obtained thanks to the CTCN's action.

108. The CTCN reported to have created four twinning arrangements,<sup>75</sup> including two with its network members PFAN<sup>76</sup> and WIPO.<sup>77</sup> This lower than the initial target of ten in 2016. In addition, this does not correspond to the definition given for Twinning Arrangements in the Programme of Work, which encompasses primarily arrangements between stakeholders other than the CTCN itself.<sup>78</sup> It notably results from a lack of regular networking events involving different types of CTCN stakeholders.

109. Only three Public-Private Partnerships have been created, instead of the six that the CTCN was aiming for in 2016.<sup>79</sup> The CTCN launched events specifically dedicated to fostering private-public collaboration only recently, with the first Stakeholder Forum taking place in April 2016 in Nairobi,<sup>80</sup> and a second forum held early 2017 with a slightly different format in Singapore.<sup>81</sup>

110. The CTCN's activities also led to South-South and triangular collaborations in a few occasions, including the provision of technical assistance by a non-Annex 1 country<sup>82</sup> as well as the collaboration of different countries in order to present common technical

<sup>73</sup> The CTCN contributed to the redefinition of Columbia's policies for energy efficiency and renewable energy in the industrial and transport sectors, as well as to the preparation of the Ugandan geothermal energy law which is awaiting approval by the national parliament.

<sup>74</sup> One technical assistance project conducted in Georgia led to the definition of a roadmap for introducing renewable energy in the district heating system as well as the identification of funding from the EBRD. Similarly, another technical assistance project conducted in Jordan led to the elaboration of a concept note to the GCF concerning a project of electric buses.

<sup>75</sup> Twinning arrangements are defined as followed in the programme of work 2013-2017: « *twinning arrangements between NDEs, or between NDEs and institutions from developing or developed countries, or between research institutes with specific experience on the topic. The twinning arrangements will provide lasting platforms for information exchange, through secondment of personnel or collaborative projects for example.* »

<sup>76</sup> The PFAN plays a role as interface with the local private sector and provides direct assistance to NDEs in different areas including the preparation of application to the Incubator Programme, the identification and evaluation of projects that could lead to a request, as well as the framing of those requests.

<sup>77</sup> The partnership with WIPO has led to increased linkages between the CTCN's technology library and the WIPO's Green Market Place database which is more focused on specific technologies and on providing connections between providers (companies, universities) and seekers (other companies, NGOs, working on the ground, utility providers, UN organizations) of technology.

<sup>78</sup> Source: CTCN. 2013 (date of further revision unknown). *Draft Programme of Work CTCN: « between NDEs, or between NDEs and institutions from developing or developed countries, or between research institutes with specific experience on the topic. The twinning arrangements will provide lasting platforms for information exchange, through secondment of personnel or collaborative projects for example.»*

<sup>79</sup> Source: CTCN. 2016. 6.b) *2016 Targets and Achievements – document presented at the 8<sup>th</sup> Advisory Board.*

<sup>80</sup> This event, co-organized with PFAN, aimed at bringing together business representatives, NDEs and the CTCN in order to better engage non-NDE stakeholders and in particular the private sector to leverage its action.

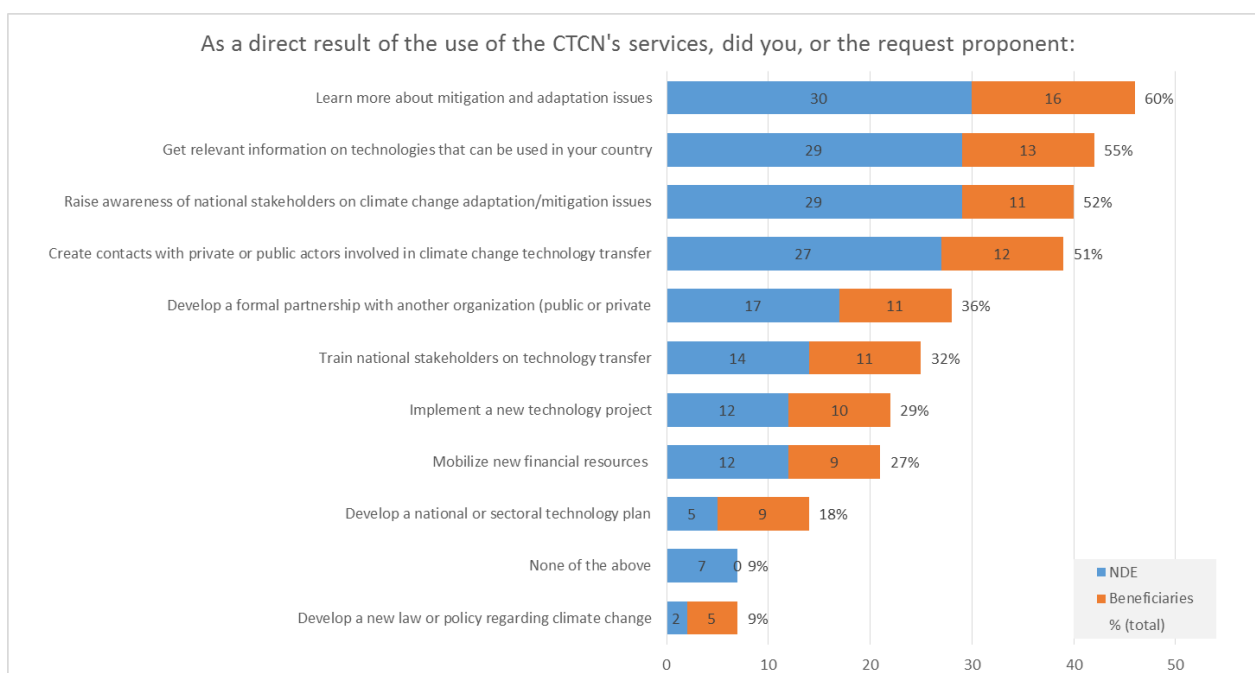
<sup>81</sup> This workshop aimed at enabling NDEs to formulate requests that will be applicable and useful to the local business sector, by bringing together NDEs, project developers and other relevant stakeholders.

<sup>82</sup> For example the national Road and transport Authority of Bhutan benefited from a technical assistance project which was implemented both by UNEP DTU Partnership and by the NDE of Thailand. This collaboration between the Bhutanese and Thai institutions continued even after the end of the technical assistance project. It took the form of an additional workshop where staff members of the Bhutan Road and Transport Authority were trained by their Thai counterparts.

assistance requests to the CTCN.<sup>83</sup> However, multi-regional projects may require higher budgets than projects scoping single countries, and may have been limited by the funding rules of the CTCN which currently cap the total budget to USD 250,000 per request and not per country participating to the request.

111. Figure 16 extracted from the survey addressed to NDEs and beneficiaries indicates their overall perception of the outcomes of the CTCN’s action.<sup>84</sup>

Figure 16  
**Outcomes of the CTCN services used (Source: EY)**



112. It is worth noting that direct effects such as the development of new skills or the creation of links with other stakeholders, are the main effects observed by NDEs and beneficiaries. Qualitative replies to the survey show that contacts have been created with different type of actors including fund provider like DFID, the EBRD, the AfDB, and the West African Development Bank, local public authorities, academic institutions and NGOs.

113. On the contrary, the development of new plans, policies, laws, partnerships or funding was rarely observed. Nonetheless, NDE and beneficiary interviewees underlined the critical contribution of the projects implemented with the CTCN to building the necessary enabling environment and to laying down the foundations to developing relevant climate technology related policies and frameworks.

<sup>83</sup> Multiregional projects have been implemented with: one group of Small Island Developing States (comprising Kiribati, Marshall Islands, Palau, and Solomon Islands); one group of countries from Southern Africa (comprising: Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe); one group of countries from Eastern Africa (composed of Ghana, Kenya, Mauritius and Namibia); Two groups of countries from Western Africa (one comprising Benin, Burkina Faso, Côte d’Ivoire, Gambia, Ghana, Guinea, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo and one composed of Guinea-Bissau, Mali and Niger).

<sup>84</sup> 73 participants responded to this question (51 NDEs and 22 Beneficiaries).

### Long-term impacts

114. The contribution of the CTCN to its core impacts,<sup>85</sup> to long-term impacts (reduction of energy and carbon intensity and improvement of the Climate vulnerability index in developing countries), or to the Sustainable Development Goals has not been assessed so far. Assessing the contribution of the CTCN to these macro-level goals<sup>86</sup> other than qualitatively is likely to be very challenging for the CTCN, considering the nature of the CTCN's projects, which are small-scale and most of the time represent the initial steps towards larger-scale projects.

115. The examples developed in the previous section as well as on the CTCN website provide some qualitative insights on how the CTCN is contributing to these macro-level goals. Impacts on climate change adaptation and mitigation are rather limited to date, due to the relative newness of the CTCN, with only 13 technical assistance projects completed at the time of this review. In the long run, it is however very likely that the actions of the CTCN will contribute to reducing energy and carbon intensity, and to the improvement of the Climate vulnerability index in developing countries.

### Unintended outcomes and changes

116. Based on the preliminary technical assistance impact assessments and feedback from TA beneficiaries, it can be expected that the delivery of CTCN services will contribute to local development, employment generation, and alleviating poverty; due to the development of climate technology markets and to the provision of new services for populations in developing countries. The CTCN produced an impact description of the first 12 technical assistance that were completed,<sup>87</sup> where the expected contribution of technical assistance projects to the Sustainable Development Goals (SDGs) is indicated. Among these 12 projects that were assessed, the following intended impacts were identified: provision of clean and affordable energy (7); no poverty (1); zero hunger (3); and decent work and economic growth (1).

117. In addition, the CTCN is seeking to foster gender equality, and has conducted thorough work to deliver impact on gender mainstreaming. A note on CTCN engagement on Technology and Gender mainstreaming was presented at the 7<sup>th</sup> AB meeting in April 2016, providing an overview of the activities that the CTCN has been conducting in the area of gender mainstreaming.<sup>88</sup> These include notably the integration of gender considerations to TA requests, and gender mainstreaming guidelines for the development of response plans, the provision of information resources, webinars and workshops related to gender, and a partnership with the UNFCCC Women and Gender Constituency on

<sup>85</sup> Capacity/Capability of developing country Parties to identify Environmentally Sound Technology (EST) needs increased through inter alia enhanced development and implementation of national technology plans for low emission and climate-resilient development; Capacity/Capability of developing country Parties to prepare and implement EST projects and/ or strategies to support action on low emission and climate-resilient development increased. Enhanced deployment and diffusion of ESTs and associated developed and developing country knowledge/expertise in developing country Parties; Enhanced endogenous low emission and climate-resilient development capabilities/capacities on ESTs in developing country Parties, including through cooperative research, development and demonstration programmes within and between developed and developing country Parties; Increased public and private sector investment in EST development, deployment, diffusion and transfer for developing country Parties; Improved climate change observation systems and related information management in developing country Parties; Strengthened National Systems of Innovation (NSI) and technology innovation centres in developing country Parties).

<sup>86</sup> As defined in the following document endorsed by the Advisory Board: CTCN.2015. Monitoring & Evaluating Transformational - Outcomes and Impacts of CTCN Activities - AB/2015/5/15.

<sup>87</sup> Source: CTCN.2017. Technical assistance impact descriptions - *A selection of completed technical assistance examples as of 30 March 2017*.

<sup>88</sup> Source: CTCN.2016. *Note on CTCN Technology and Gender Mainstreaming* - AB/2016/7/6.7.

highlighting climate solutions that are considered to be gender-just.<sup>89</sup> In 2016, the CTCN appointed a Gender Mainstreaming Focal Point to coordinate CTCN's gender mainstreaming activities in alignment with the UNFCCC, UN Environment and UNIDO gender guidance. The CTCN also started to work on a Gender Mainstreaming Strategy, to propose an integrated framework for action on gender mainstreaming.

118. Technical assistance projects could also have other co-benefits, notably over biodiversity, and air quality. Among the 12 projects that were assessed against SDGs, the following intended co-benefits were identified: clean water and sanitation (2), life below water (1) and on land (3).

#### Replicability and sustainability

119. Most interviewees have underlined the relevance of the CTCN and its mandate to support developing countries in the development of enabling environments for climate technology development and transfer. The timeframe under which the CTCN operates and the relatively small scale of projects it covers makes it a rather unique actor on the international stage. All interviewees were also confident over the fact that the CTCN will deliver positive and sustainable impacts. With the continuation of technical assistance delivery, knowledge sharing and enhancement of partnerships, the CTCN should become increasingly meaningful to support developing countries in addressing climate change.

120. There is no indication of other programmes or tools that would, today fulfill the mandate of the CTCN more effectively. In addition, the CTCN is ideally placed to leverage the work it delivers through further collaboration with the TEC, GEF and GCF. It is however necessary that this collaboration, in particular with the TEC and the GEF be further advanced. The progress done with the GCF so far should serve as an example and be further institutionalized with the GEF.

121. All interviewees were confident over the fact that the CTCN will deliver positive and sustainable impacts. With the continuation of technical assistance delivery, knowledge sharing and enhancement of partnerships, the CTCN has the potential to become increasingly meaningful to support developing countries.

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<sup>89</sup> The contributions to gender equity are the following: - The CTCN required proponent to describe how they are taking into account and monitoring gender considerations within their requests; - The CTCN is currently implementing a technical assistance project in response to the request of ECOWAS related to "mainstreaming gender for a climate resilient energy system in ECOWAS"; - The CTCN promoted the webinar hosted by EmpowerWomen.org on "RE-Thinking the Role of Climate Technology for Women's Empowerment" (partnership with UNIDO, UN Women, and ENERGIA); - The CTCN published 249 information resources related to gender on the KMS; - The CTCN trained NDEs on mainstreaming gender into climate planning during NDE training workshops; - The CTCN has appointed a Gender Mainstreaming Focal Point; - The CTCN has developed a partnership with UNEP and UN Women, and has contributed to the Global Programme for Women's Entrepreneurship for Sustainable Energy (WESE); - The CTCN has participated to gender related meetings organized by the UNFCCC (during the forty-second sessions of the subsidiary bodies or the Expert Group Meeting organized by UN Women, UN DESA, and UNFCCC secretariat).