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## DAC Working Party on Development Finance Statistics

# Tracking of technology transfer and capacity building for climate change adaptation and mitigation in the CRS

Plenary meeting of the Working Party on Development Finance Statistics (WP-STAT), 30 May – 1 June 2023, OECD premises in Boulogne-Billancourt, France

The Paris Agreement established the obligation for members to provide information on the support provided to developing countries on capacity building and technology development and transfer.

The WP-STAT had an initial discussion on these topics in June 2022, as a part of the ongoing efforts to improve the transparency of climate-related development finance and increase compatibility between the data submitted to the OECD and to the UNFCCC [DCD/DAC/STAT(2022)39].

This note takes stock of the comments received and proposes a methodology to track and label development finance in support of capacity building and technology transfer for climate change adaptation and mitigation in the CRS.

The methodology – presented in BOX 1 and BOX 2 is presented for DISCUSSION. A list of questions for members is provided in paragraph 34.

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## Boxes

# Tracking of capacity building and technology transfer for climate change adaptation and mitigation in the CRS

## What is the issue?

1. The Paris Agreement states that Parties shall strengthen co-operative action on technology development and transfer (art. 10-2), should co-operate to enhance the capacity of developing countries Parties (art. 11- 3) and shall provide information on financial, technology transfer and capacity-building support provided to developing country Parties (art 13-9)[1].

2. The Paris Agreement established a new Enhanced Transparency Framework (ETF) for Parties to report on the support provided and mobilised for – among other things – capacity building and technological development and transfer[2]. In the approved reporting form – called Common Tabular Format – the activities reported could be flagged for capacity building and/or technology transfer, the two fields not being mutually exclusive.

3. WP-STAT members discussed in 2022[3] how to improve the transparency of climate-related development finance[4], as indicated in the OECD DAC Declaration on a new approach to align development co-operation with the goals of the Paris Agreement on Climate Change. In this context, members held preliminary discussions on how to report capacity building and technology transfer in the CRS, which does not explicitly mention or separately identify these data items.

[1] See: UNFCCC (2015) The Paris Agreement - https://unfccc.int/sites/default/files/english_paris_agreement.pdf

[2] See UNFCCC (2021) Guidance operationalizing the modalities, procedures and guidelines for the enhanced transparency framework referred to in Article 13 of the Paris Agreement. Annex III: https://unfccc.int/sites/default/files/resource/cma3_auv_5_transparency_0.pdf and UNFCCC 2018, Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement [UNFCCC/PA/CMA/2018/3/Add.2], paragraph 130. .https://unfccc.int/sites/default/files/resource/CMA2018_03a02E.pdf

[3] See: DCD/DAC/STAT(2022)39

[4] See: DAC/CHAIR(2021)1/FINAL par. 13

4. The availability of a methodology for reporting capacity building and technology transfer for climate change adaptation and mitigation in the CRS would improve the data transparency, as requested by the DAC declaration. In fact, while most DAC members base their UNFCCC reporting on the Rio markers data submitted to the OECD[5], these two data items could be reported based on members' own "underlying assumptions, definitions and methodologies". Therefore, the development of a common understanding on the reporting for these two data items improves data harmonisation among members and increases the compatibility between the data submitted to the UNFCCC and to the OECD.

## What is the status of the discussions?

5. At the WP-STAT meeting of June 2022[6], the Secretariat asked members if the CRS field "free-standing technical co-operation (FTC)" could be used as a proxy for capacity building activities, and if the fields "investment" and "investment-related technical co-operation (IRTC)" could be used as a starting point for the technology transfer. Members welcomed the approach, in particular on capacity building, but noted that more in-depth discussion on the topic would be necessary.

**6.** This note takes stock of the comments from members and proposes a methodology to tracking these two data items in the CRS. **Members are invited to comment on the proposals in BOX 1 and in BOX 2 and share their views on the questions raised in paragraph 34.**

## Capacity building

7. This section finds that **the current definitions of technical co-operation and capacity building overlap, but do not match perfectly**. In fact, the FTC definition used in OECD statistics includes capacity building components, alongside other components. At the same time, while no official definition of capacity building has been adopted at the UNFCCC level, the concept is commonly described as including some elements that are not clearly mentioned in the FTC definition of the OECD.

8. The section **proposes a methodology to identify capacity building activities in the CRS and proposes to label them with the SDG target 13.3 in the SDG focus field to allow an easy identification of such activities.**

### *Definition of technical co-operation in the Creditor Reporting System of the OECD*

***9.*** **The OECD-DAC statistics distinguish two types of technical co-operation, namely free-standing technical co-operation (FTC) and investment-related technical co-operation (IRTC). The definitions are given below[7].**

> ***Free-standing technical co-operation*** *comprises activities financed by a donor country whose primary purpose is to augment the level of knowledge, skills, technical know-how or productive aptitudes of the population of developing countries, i.e. increasing their stock of human intellectual capital, or their capacity for more effective use of their existing factor endowment. This relates essentially to activities that either enhance or supply human resources. It includes financing of students and trainees who are nationals of developing countries; experts, teachers, and volunteers; equipment and materials for training; research; development-oriented social and cultural programmes, etc. Associated supplies are also classified as technical co-operation.*

[5] See: DCD/DAC/STAT(2022)24/REV1

[6] See DCD/DAC/STAT(2022)25 par. 32-37 and DCD/DAC/STAT/M(2022)2/FINAL par. 67

[7] See Converged Statistical Reporting Directives for the Creditor Reporting System (CRS) and the Annual DAC Questionnaire, [DCD/DAC/STAT(2023)9/FINAL], paragraph 191.

> ***Investment-related technical co-operation*** *is defined as the financing of services by a donor country with the primary purpose of contributing to the design and/or implementation of a project or programme aiming to increase the physical capital stock of the recipient country. These services include consulting services, technical support, the provision of know-how linked to the execution of an investment project, and the contribution of the donor's own personnel to the actual implementation of the project (managers, technicians, skilled labour, etc.). In DAC statistics, these expenditures are included indistinguishably with investment project aid (related cost of donor experts are reported separately on an optional basis). Technical co-operation provided by commercial enterprises at their own expense is not recorded in the flow of resources. Such technical co-operation when included in a commercial project is itself reportable only if the project is reportable and is in that case included indistinguishably as part of the value of the project.*

10. **The FTC field has some linkages with the development co-operation modality field, in particular:**

- **Some development co-operation modalities are included by default (and therefore assigned FTC flag 1).** These are D01 (donor country personnel), D02 (other technical assistance), E01 (Scholarships/training in donor country), E02 (imputed student costs).
- **Some modalities can be reported with the value of 1 or 0.** These are B03 (contributions to specific purpose programmes and funds managed by implementing partners) and C01 (project-type interventions).
- **All other development co-operation modalities are not eligible for the FTC flag (and therefore only the value 0 or NULL are permitted**[8]).

*11.* The WP-STAT discussed back in 2005 possible disaggregation of FTC in various components[9] and considered "capacity development" as one of the possible subcategories of FTC (other categories included training, consultancies (including volunteers), students, research, culture, and administrative costs (including feasibility studies).

## ***Capacity building definitions***

*12.* The OECD issued in 2008 a report analysing four decades of capacity development support[10]. The report, which was approved by the DAC, defined capacity development in the following terms (underlying added):

> *In this paper,* ***"capacity"*** *is understood as the ability of people, organisations and society as a whole to manage their affairs successfully.*
>
> ***"Capacity development"*** *is understood as the process whereby people, organisations and society as a whole unleash, strengthen, create, adapt and maintain capacity over time. The phrase capacity development is used advisedly in preference to the traditional capacity building. The "building" metaphor suggests a process starting with a plain surface and involving the step-by-step erection of a new structure, based on a preconceived design. Experience suggests that capacity is not successfully enhanced in this way.*
>
> ***"Promotion of capacity development"*** *refers to what outside partners—domestic or foreign—can do to support, facilitate or catalyse capacity development and related change processes. This is by no means equivalent to the provision of Technical Assistance. Not all that comes under the heading of Technical Cooperation (TC) or Technical Assistance (TA) in donor statistics contributes to capacity development. Conversely, there are elements in financial assistance programmes which upon closer scrutiny do qualify as*

[8] See: CRS Reporting Checklist DCD/DAC/STAT(2023)14

[9] See DCD/DAC/STAT(2006)2, para. 14.

[10] See: OECD (2008), "The Challenge of Capacity Development: Working Towards Good Practice", OECD Journal on Development, vol. 8/3, https://doi.org/10.1787/journal_dev-v8-art40-en.

> *support to capacity development. Examples of roles that donors can play include: facilitating access to knowledge; brokering multi-stakeholder agreements that remove blockages to capacity development; participating in relevant policy dialogue or advocacy; providing incremental resources that help in overcoming bottlenecks in change processes; and creating spaces for learning by doing.*

13. **The Paris Agreement defines some objectives of capacity building in the UNFCCC context.** According to the text of the agreement (art 11-1 and 11-2) capacity building should:

- enhance the capacity and ability of developing country Parties […] to take effective climate action including, inter alia, to implement adaptation and mitigation actions (art. 11-1)
- facilitate technology development, dissemination and deployment,
- facilitate access to climate finance
- facilitate relevant aspects of education, training and public awareness
- transparent, timely and accurate, communication of information.
- be country driven, based on and responsive to national needs, and foster country ownership
- be guided by lessons learned, including those from capacity-building activities under the Convention
- be an effective, iterative process that is participatory, cross-cutting and gender-responsive.

14. **An OECD-DCD 2022 working paper treated specifically capacity building in the climate change context**[11]. The note highlighted that, while there is no universally agreed definition on capacity building, the OECD definition is comparable with several others formulated by experts and international organisations, although other understandings also exist[12]. The note further clarifies that the OECD definition considers capacity development to be a three-level process that contributes to:

- **The competencies of the individual,** such as the knowledge, skills and ability to set and achieve objectives (e.g., "soft" competencies such as building relationships, trust and legitimacy, as well as "hard" competencies such as technical, logistical and managerial skills).
- **The organisational structures, functions and systems** that enable the capacities of individuals to come together to effectively fulfil the mandate of an organisation or to achieve set objectives.
- **The enabling environment:** that is, the policy, legal, regulatory, economic and social support systems in which individuals and organisations operate (e.g. national policies, rule of law, accountability, transparency and information flows).

15. The 2022 working paper[13] also made estimations of climate-related capacity development on the basis of CRS data. The methodology took into consideration some development co-operation modalities

[11] See: Casado-Asensio, J., D. Blaquier and J. Sedemund (2022), "Strengthening Capacity for Climate Action in Developing Countries: Overview and Recommendations", *OECD Development Co-operation Working Papers*, No. 105, OECD Publishing, Paris. https://doi.org/10.1787/0481c16a-en, Section 2.1

[12] For a review of different definitions of capacity development see for example - Mataya, D., K. Vincent and A. Dougill (2020), "How can we effectively build capacity to adapt to climate change? Insights from Malawi", Climate and Development, Vol. 12/9, pp. 781-790, https://www.tandfonline.com/doi/full/10.1080/17565529.2019.1694480.

[13] As above, section 3.3

(D01, D02 and E01, but not imputed student costs E02) supplemented by certain purpose codes[14], in the following areas:

- Education and training (education and training purpose codes ending with *81)
- Institutional capacity (several sector policy purpose codes ending in *10, supplemented by others)[15]
- Research and technology development (research codes ending in *82)
- Public awareness (specific purpose codes on climate information gathering and sharing).

16. **Capacity building is also a focus area of the Sustainable Development Goals (SDGs) and their targets,** in particular SDG 13.3 (on climate-related capacity building) and 17.9 (capacity building in all sectors), but also in other SDG targets (table 2).

### Table 1 - SDG targets related to capacity building and climate change action (bolding added to highlight the more relevant)

| SDG target | Description |
|---|---|
| 2.4 | By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality |
| 2.a | Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries |
| 6.a | By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies |
| 8.10 | Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all |
| 11.3 | By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries |
| 12.a | Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production |
| **13.1** | **Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries** |
| **13.3** | **Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning** |
| **13.b** | **Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities** |

[14] The full list of CRS purposes codes is available at https://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/dacandcrscodelists.htm

[15] These are: Water sector policy and administrative management (14010), Transport policy and administrative management (21010), Transport policy, planning and administration (21011), Transport regulation (21013), Energy policy and administrative management (23110), Energy sector policy, planning and administration (23111), Energy regulation (23112), Forestry policy and administrative management (31210), Fishing policy and administrative management (31310), Environmental policy and administrative management (41010), Urban development and management (43030), Urban land policy and management (43031), Urban development (43032), Rural development (43040), Rural land policy and management (43041), Rural development (43042), Public transport services (21012); Energy conservation and demand-side efficiency (23183); Plant and post-harvest protection and pest control (31192); Agricultural services (31191); Agricultural financial services (31193); Biosphere protection (41020); Biodiversity (41030); Site preservation (41040); Disaster risk reduction (43060); Relief co-ordination and support services (72050); Disaster prevention and preparedness (740); and Multi-hazard response preparedness (74020).

| | |
|---|---|
| 15.4 | By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development |
| 17.8 | Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology |
| **17.9** | **Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals, including through North-South, South-South and triangular cooperation** |
| 17.19 | By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries |
| | |

Source: SDG Indicator list - https://unstats.un.org/sdgs/indicators/indicators-list/

**17. The SDG target 17.9 (see above) is specifically about capacity building to developing countries. It has one SDG indicator (17.9.1)** *Dollar value of financial and technical assistance (including through North-South, South-South and triangular cooperation) committed to developing countries*[16]. The OECD is the custodian agency and complies data from the CRS including all donors, ODA and OOF, gross disbursements for the following purpose codes: 11110, 12110, 13010, 14010, 15110, 15210, 16020, 16030, 21010, 22010, 23110, 24010, 25010, 31110, 31210, 31310, 32110, 32210, 32310, 33110, 33210 and 41010.

## ***Proposed methodology to identify and report climate-related capacity building activities in the CRS***

**18. DAC members, and other development finance providers submitting data to the CRS, can label their activities with the SDG 13.3 to identify capacity building activities for climate change adaptation or mitigation.**

**19. The CRS includes sufficient data for members to identify climate-related capacity building activities among the activities submitted.** A methodology is proposed in Box 1.

### Box 1. Proposed methodology to identify and label climate-related capacity building activities in the CRS

**To identify and label climate-related capacity building activities** and voluntarily report them to the UNFCCC in their ETF submissions, members could use the following steps:

**1- Baseline**

- Include all activities flagged as FTC field AND Rio marker for adaptation or mitigation significant or principal.

**2 - Additional data (unless already included in step 1)**

- Include all activities marked with SDG 13.3 OR 13.b
- Include all activities marked with SDG 17.9 AND Rio markers on climate change adaptation or mitigation

[16] See: SDG Indicator metadata – 17.9.1 https://unstats.un.org/sdgs/metadata/files/Metadata-17-09-01.pdf

- Include all activities marked with a Rio marker on climate change adaptation or mitigation AND the following purpose codes:
    - Education and training codes ending in *81
    - Scientific research codes ending in *82
    - Specific codes in support of policy institutional support in sectors highly relevant for climate action:
        - Water sector policy and administrative management (14010)
        - Transport policy and administrative management (21010), Transport policy, planning and administration (21011), Transport regulation (21013)
        - Energy policy and administrative management (23110), Energy sector policy, planning and administration (23111), Energy regulation (23112)
        - Agricultural policy and administrative management (31110), Forestry policy and administrative management (31210), Fishing policy and administrative management (31310)
        - Industrial policy and administrative management (32110), Mineral/mining policy and administrative management (32210), Construction policy and administrative management (32310)
        - Environmental policy and administrative management (41010)
    - Specific climate-related codes
        - Water resources conservation (including data collection) (14015)
        - Meteorological services (15143)

**3 – Manual Refinement**

- Make sure imputed student costs (D02) are excluded (as they are not eligible for Rio markers)
- Manually check and eventually remove non-relevant activities / add any other Rio marked relevant activity not previously included.

**4 - Label the resulting activities with the SDG target 13.3.**

**20. The Secretariat proposes that members using Rio markers data as the starting point for their UNFCCC submission record SDG target 13.3 as a bookmark for the activities to be reported as capacity building for climate change adaptation and mitigation.** Given that SDG target 13.3 perfectly fits the definition of capacity development for climate, without the need of introducing new fields or keywords.

## Technology Transfer

21. This section **proposes a methodology to identify and report technology transfer activities in the CRS. It proposes labelling those activities with the SDG 17.7 on technology transfer AND the Rio markers on climate change adaptation or mitigation.**

## ***Technology transfer definition***

22. As for capacity building, a universally accepted definition of technology transfer does not exist. In the context of climate change however a definition developed in 2000 by the International Panel of Climate Change in the context of the IPCC working group III[17] is often mentioned, presented below:

> ***The Report defines the term "technology transfer"*** *as a broad set of processes covering the flows of know-how, experience and equipment for mitigating and adapting to climate change amongst different stakeholders such as governments, private sector entities, financial institutions, non-governmental organizations (NGOs) and research/education institutions.*
>
> *[…]*
>
> *The broad and inclusive term "transfer" encompasses diffusion of technologies and technology cooperation across and within countries. It covers technology transfer processes between developed countries, developing countries and countries with economies in transition, amongst developed countries, amongst developing countries and amongst countries with economies in transition. It comprises the process of learning to understand, utilize and replicate the technology, including the capacity to choose it and adapt it to local conditions and integrate it with indigenous technologies.*

23. The UNFCCC work on technology transfer has been extensive since its establishment in 1992[18]. Along the years, technology transfer has been the focus of several policy agreements, and both dedicated institutions and support programmes have been established, including:

- The **Technology Needs Assessment** (TNAs) process: TNAs were initiated by the GEF in the late 90s and introduced under the Convention at COP 7 in Marrakesh as "a set of country-driven activities that identify and determine the mitigation and adaptation technology priorities of Parties" and "particularly developing Parties"[19]. TNA processes are still ongoing and regular syntheses are published[20].
- The UNFCCC **Technology Mechanism**, comprising the Technology Executive Committee (TEC) and the Climate Technology Centre and Network, established at COP 16 in Cancun (2010)[21].
- The **Technology Framework** in the Paris Agreement (art. 10-4) *to provide overarching guidance to the work of the Technology Mechanism in promoting and facilitating enhanced action on technology development and transfer*[22].

[17] See: IPCC (2000), Methodological and Technological Issues in Technology Transfer, Intergovernmental Panel on Climate Change, https://www.ipcc.ch/site/assets/uploads/2018/03/srtt-en-1.pdf.

[18] A brief summary of the milestones on the negotiations on technology development and transfer at the UNFCCC is available here: https://unfccc.int/ttclear/negotiations

[19] See: Decision 4/CP.7, pp. 22-30, par. 3 https://unfccc.int/sites/default/files/13a01p22.pdf

[20] See: FCCC/SBI/2020/INF.1 - Fourth synthesis of technology needs identified by Parties not included in Annex I to the Convention https://unfccc.int/sites/default/files/resource/sbi2020_inf.01.pdf

[21] See: FCCC/CP/2010/7/Add.1 Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010 - Addendum - Part Two: Action taken by the Conference of the Parties at its sixteenth session. Par. 113-129 https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf#page=18

[22] See: FCCC/PA/CMA/2018/3/Add.2 - Decision 15/CMA.1 - Technology framework under Article 10, paragraph 4, of the Paris Agreement. https://unfccc.int/sites/default/files/resource/cma2018_3_add2_new_advance.pdf#page=4

24. **The UNFCCC provides a comprehensive list of activities to be considered in the Technology Framework, divided in five themes, which is a useful guidance to identify technology transfer activities for CRS reporters.** These are **(see Annex B for a detailed list of activities in each of them):**

a. Innovation
b. Implementation
c. Enabling environment and capacity-building
d. Collaboration and stakeholder engagement
e. Support

## ***Previous attempts to identify technology transfer in the CRS***

25. The CRS database does not include a specific field to unequivocally identify activities related to technology transfer. A variety of techniques have been used by to identify such activities, mostly using a combination of purpose codes and text mining techniques.

26. An OECD working paper published in 2019 attempted to measure ODA in support of science, technology and innovation (STI)[23]. The paper used a 3-layer approach:

- A series of science and technology-related purpose codes. These were mostly activities in the sector of communications (220) and the activities supporting research in other sectors (CRS codes ending in *82).
- Analysis of the channels of delivery. ODA channeled through certain institutions with a focus on supporting science and/or technology.
- Text mining in the title and description of projects for keywords and successive manual screening.

27. More recently, UNEP published a policy brief in collaboration with OECD on needs and development assistance support in technology transfer processes for climate change adaptation or mitigation[24]. The paper identified technology transfer activities through text mining, using an extensive list of terms related to technologies in various sectors, taking into consideration activities marked with the Rio markers on climate (or climate components for MDBs activities) and followed by further manual screening.

28. The paper presented at in June 2022 at the WP-STAT proposed using the **investment-related technical co-operation** as a starting point to identify technology transfer, noting that activities aimed at increasing the stock of capital are likely to entail a transfer of technologies. However, this approach would still need to be further refined through manual screening or the use of text mining techniques.

## ***Proposed methodology to identify and report climate-related technology transfer activities in the CRS***

29. The CRS offers the possibility to report technology transfer activities (climate-related or not) through the SDG field. One of the five thematic areas under the SDG 17 is dedicated to technology with three specific SDG targets (table 3). The most relevant is target 17.7 that explicitly mentions the

[23] See: Ericsson, F. and S. Mealy (2019), "Connecting official development assistance and science technology and innovation for inclusive development: Measurement challenges from a development assistance Committee perspective", *OECD Development Co-operation Working Papers*, No. 58, OECD Publishing, Paris, https://doi.org/10.1787/3726edff-en. Chapter 2.

[24] See: UNEP (2022) TECHNOLOGY TRANSFER FOR CLIMATE MITIGATION AND ADAPTATION. Analysing needs and development assistance support in technology transfer processes. https://unepccc.org/wp-content/uploads/2022/11/finalproof-tech-transfer-policy-brief-oecd.pdf

"development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries".

### Table 2 - SDG 17 targets on technology

| | Technology |
|---|---|
| **17.6** | Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism |
| **17.7** | **Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed** |
| **17.8** | Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology |

30. Target 17.7 is associated with the SDG indicator 17.7.1 – "Total amount of funding for developing countries to promote the development, transfer, dissemination and diffusion of environmentally sound technologies" for which UNEP is the custodian agency[25]. The indicator is built at two levels: 1) Total trade of tracked Environmentally Sound Technologies (ESTs), derived from the COMTRADE Database and 2) national data on investment in environmentally sound technologies.

31. **DAC members, and other development finance providers submitting data to the CRS can label their activities with the SDG 17.7, and one or both Rio markers for climate change adaptation and mitigation to identify technology transfer activities for climate change.** While a simple method to identify technology transfer activities on the basis of the information already available in the CRS does not exist, reporters will have to identify and label themselves the relevant activities. A methodology is proposed in Box 2 below.

### Box 2. Proposed methodology to identify and label climate-related technology transfer activities in the CRS

**To identify and label climate-related technology transfer activities** and voluntarily report them to the UNFCCC in their ETF submissions, members could use the following steps:

**1- Core research activities**

- Include all activities marked with a Rio marker for adaptation and mitigation AND
    - Scientific research codes ending in *82

**2 – Screen remaining Rio–marked activities to identify those pertaining to the five areas of technology transfer identified by the UNFCCC (see Annex B for detailed examples)**

- Innovation
- Implementation
- Enabling environment and capacity-building

[25] See: https://unstats.un.org/sdgs/metadata/files/Metadata-17-07-01.pdf

- Collaboration and stakeholder engagement
- Support

**3 - Label the resulting activities with the SDG target 17.7 (and the relevant Rio markers on climate change adaptation /mitigation)**

## Questions for members and next steps

32. **This note proposes two methodologies to identify and report in the CRS activities that promote capacity building and technology transfer for climate change adaptation and mitigation.** These methodologies are presented for discussion, in the optic of increasing the compatibility between the data submitted to the OECD and to the UNFCCC, as requested by the DAC Declaration. As there is no formal link between the two reporting exercises, these methodologies are to be voluntarily adopted by members, in particular those for which a linkage between the two data submissions exist.

**33. Members are invited to share their views on:**

- Capacity building:
  - the use of the SDG target 13.3 to label activities in support of climate change capacity building.
  - the methodology proposed in BOX 1 to identify climate- related capacity building activities on the basis of the information already present in the CRS.
- Technology transfer:
  - the use of the SDG target 17.7 associated with the Rio markers on climate change adaptation and/or mitigation to label activities in support of climate change technology transfer.
  - the methodology proposed in BOX 2 to identify climate related technology transfer activities, on the basis of the information already present in the CRS, complemented by manual identification of the activities using the examples identified by the UNFCCC for the technology framework (Annex B).

34. On the basis of the feedback received, the Secretariat will re-issue the paper to serve as a methodological reference for members that use Rio markers data as a basis for their UNFCCC submissions.

# Annex A. Extract from the taxonomy of development co-operation modalities

### Table 3 – Development Co-operation activities included in the technical co-operation definition by default

| Development co-operation modality | | definition |
|---|---|---|
| D01 | Donor country personnel | Experts, consultants, teachers, academics, researchers, interns, volunteers and contributions to public and private bodies for sending experts to developing countries.<br><br>Supplementation payments by the donor country to its experts employed by developing countries or international aid agencies should also be included, as well as the cost to the reporting government of civil servants seconded to developing countries. However, the costs of "counterparts" receiving on-the-job training while working with donor experts are excluded.<br><br>Volunteers are persons who work in a developing country under wholly or partly publicly financed or publicly controlled volunteer programmes, receiving a stipend in compensation for their services, i.e. subsistence allowances, daily support costs, and/or financial remuneration, either during the period of service, or on return home. |
| D02 | Other technical assistance | Provision, outside projects as described in category C01, of technical assistance in recipient countries (excluding technical assistance performed by donor experts reported under D01, and scholarships/training in donor country reported under E01).<br><br>This includes training and research; language training; south-south studies; research studies; collaborative research between donor and recipient universities and organisations; local scholarships; development-oriented social and cultural programmes. |

| | | |
|---|---|---|
| | | This category also covers ad hoc contributions such as conferences, seminars and workshops, exchange visits, publications, etc.<br>Scholarships for students and contributions for trainees to follow studies or training courses in developing countries are recorded here while scholarships/training in donor<br>35. country is reported under E01 (except that training performed in donor country through<br>36. visiting tours and short-term resident training courses, or attendance at ad hoc nonacademic courses and seminars is recorded under D02). General subsidies to the<br>37. developing country education sector are not recorded here, but as sector budget support<br>(A02) or project-type interventions (C01). |
| E01 | Scholarships/training in donor country | Financial aid awards for individual students and contributions to trainees. |
| E02 | Imputed student costs | Indirect ("imputed") costs of tuition in donor countries. |

# Annex B. Examples of activities included in the UNFCCC Technology Framework

The following activities are included as examples in the UNFCCC Decision 15/CMA.1 on the establishment of the Technology framework[26].

**Innovation**

a) Supporting countries in incentivizing innovation by improving the policy environments, strategies, legal and regulatory frameworks, and institutional arrangements for establishing and/or strengthening their national systems of innovation;

b) Providing information and facilitating the sharing of information on international technology RD&D partnerships and initiatives, good practices and lessons learned from countries' climate technology RD&D policies and activities;

c) Promoting the development, deployment and dissemination of existing innovative technologies and accelerating the scale-up and diffusion of emerging climate technologies;

d) Supporting countries in developing long-term technological transition pathways towards the widespread uptake of climate technologies in the context of climate resilience and low greenhouse gas emission development;

e) Promoting collaboration with international technology RD&D partnerships and initiatives to stimulate climate technology RD&D;

f) Supporting countries in initiating joint climate technology RD&D activities;

g) Identifying ways to increase the effective participation of developing country Parties in collaborative approaches to RD&D;

h) Promoting the engagement of the private sector in the development of new and innovative climate technologies, including through:

   i. Raising awareness of future market opportunities in climate technology innovation;

   ii. Identifying ways to incentivize their participation;

   iii. Promoting partnerships between the public and private sector in the development and transfer of climate technologies

[26] See note 22

**Implementation**

a) Facilitating the undertaking and updating of TNAs, as well as enhancing the implementation of their results, particularly technology action plans and project ideas, and capacity-building related to TNAs;

b) Promoting the link or alignment of TNAs with nationally determined contributions and national adaptation plans in order to increase coherence between the implementation of those national plans with national strategies to achieve climate-resilient and low-emission development;

c) Reviewing the TNA guidelines and updating them as necessary with a view to TNAs leading to plans and implementation that are aligned with the transformational changes envisioned in the Paris Agreement;

d) Identifying and developing recommendations on approaches, tools and means, as appropriate, for the assessment of the technologies that are ready to transfer;

e) Identifying and developing recommendations for the enhancement of enabling environments for and the addressing of barriers to the development and transfer of socially and environmentally sound technologies.

**Enabling environment and capacity-building**

a) Enhancing public awareness on climate technology development and transfer;

b) Facilitating countries in enhancing an investment-friendly environment including national strategies and action plans, a policy environment, legal and regulatory frameworks and other institutional arrangements

c) Facilitating countries in enhancing an enabling environment to promote endogenous and gender-responsive technologies for mitigation and adaptation actions;

d) Assisting countries in developing and implementing policies for enabling environments to incentivize the private and public sector to fully realize the development and transfer of climate technologies;

e) Assisting governments in playing a key role in fostering private sector involvement by designing and implementing policies, regulations and standards that create enabling environments and favourable market conditions for climate technologies;

f) Facilitating information-sharing and networking among relevant organizations and institutions to create synergies and to enable the exchange among relevant players of best practices, experience and knowledge on technology development and transfer;

g) Formulating and analysing information on capacity-building activities at different stages of the technology cycle;

h) Catalysing the development and enhancement of endogenous capacities for climate-related technologies and harnessing indigenous knowledge;

i) Enhancing collaboration with existing capacity-building organizations and institutions, including those under the Convention, to create synergies in a manner that enhances efficiency and avoids duplication of work;

j) Enhancing the capacity of national designated entities (NDEs) of all Parties, especially those in developing countries, to fulfil their roles;

k) Enhancing the capacities of Parties to plan, monitor and achieve technological transformation in accordance with the purpose and goals of the Paris Agreement

**Collaboration and stakeholder engagement**

a) Enhancing engagement and collaboration with relevant stakeholders, including local communities and authorities, national planners, the private sector and civil society organizations, in the planning and implementation of Technology Mechanism activities;

b) Enhancing engagement and collaboration with the private sector, on a voluntary basis, to leverage expertise, experience and knowledge regarding effective enabling environments that support the implementation of the Paris Agreement;

c) Enhancing engagement between NDEs and relevant stakeholders, including by providing guidance and information;

d) Enhancing collaboration and synergy with relevant international organizations, institutions and initiatives, including academia and the scientific community, to leverage their specific expertise, experience, knowledge and information, particularly on new and innovative technologies

**Support**

a) Enhancing the collaboration of the Technology Mechanism with the Financial Mechanism for enhanced support for technology development and transfer;

b) Identifying and promoting innovative finance and investment at different stages of the technology cycle;

c) Providing enhanced technical support to developing country Parties, in a country-driven manner, and facilitating their access to financing for innovation, including for RD&D, enabling environments and capacity-building, developing and implementing the results of TNAs, and engagement and collaboration with stakeholders, including organizational and institutional support;

d) Enhancing the mobilization of various types of support, including pro bono and in-kind support, from various sources for the implementation of actions and activities under each key theme of the technology framework;

e) Developing and/or enhancing a system for monitoring and tracking of actions and activities undertaken, and support received, by the Technology Mechanism to implement the technology framework, with a view to such information maybe also contributing to the enhanced transparency framework referred to in Article 13 and the global stocktake referred to in Article 14 of the Paris Agreement.