

Eleventh meeting of the Technology Executive Committee

AHH building, Bonn, Germany
7-11 September 2015

Background note

Call for inputs on the provision of guidance on how the results of the TNAs, in particular the TAPs, can be developed into projects that can be ultimately implemented

Draft synthesis of submissions

I. Introduction

A. Background

1. The Conference of Parties at its twentieth session (COP 20) recognized the need for the technology needs assessment process to be improved in order to facilitate the implementation of the project ideas emanating from it. This can be done through the provision of technical assistance and finance to each technology needs assessment (TNA), which should also aim to integrate economic, environmental and social aspects into the development of the TNA.
2. COP 20 requested the Technology Executive Committee (TEC) to provide guidance on how the results of the TNAs, in particular the technology action plans (TAPs), can be developed into projects that can be ultimately implemented, and to provide an interim report on its preliminary findings to the subsidiary bodies at their forty-third sessions.
3. The TEC at its 10th meeting considered how to respond to the COP 20 mandate on the provision of guidance on how the results of the TNAs, in particular the TAPs, can be developed into projects that can be ultimately implemented. The TEC requested its task force on TNAs to initiate the work on this matter.
4. To support the work on the COP-20 mandate, the TEC agreed to launch a call for inputs on the provision of guidance on how the results of the TNAs, in particular the TAPs, can be developed into projects that can be ultimately implemented.
5. The information in the submissions was compiled and synthesized to serve as an useful input into the work to respond to the above COP mandate, and also to inform the TEC at its at eleventh meeting.

B. Scope of the paper

6. This background paper provides an overview of the synthesis of information received by stakeholders, including UNFCCC accredited observer institutions, on the call for inputs on the provision of guidance on how the results of the TNAs, in particular the TAPs, can be developed into projects that can be ultimately implemented.



C. Possible action by the Technology Executive Committee

7. The TEC will be invited to take note of the findings of the call for inputs on the provision of guidance on how the results of the TNAs, in particular the TAPs, can be developed into projects that can be ultimately implemented.

II. Call for inputs

8. The TEC agreed to launch a call for inputs on the provision of guidance on how the results of the TNAs, in particular the TAPs, can be developed into projects that can be ultimately implemented. In this regard, the TEC invited stakeholders, including UNFCCC accredited observer organizations, to provide their submission to the UNFCCC secretariat on a set of questions provided by the TEC.

9. The TEC invited stakeholders, including UNFCCC accredited observer organizations, to provide their submission to the UNFCCC secretariat on the following set of questions provided by the TEC:

- (a) Identify what you perceive to be the strengths and deficiencies of the TNA process?
- (b) Outline what recommendations or solutions would you make to improve the TNA process. Are there process improvements required for accelerating implementation of the TNA results?
- (c) Are the steps of the TNA process (as developed in the updated UNDP handbook for conducting TNAs for climate change) sufficient and well-targeted to cover all the aspects of the identification and prioritization of technology needs? Are there other steps you would suggest adding to the TNA process?
- (d) What do you consider the best way of organizing and synchronizing the stakeholders involved in the TNA process? How a formal coordination amongst the stakeholders could be developed, in order to promote a common goal and to organize the information provided?
- (e) Could you identify appropriate means for TNAs to be conducted whereby project ideas turn into concrete ideas which can be ultimately implemented? How could the support related to the identification of technology needs and the implementation of the results of TNAs be further enhanced?
- (f) Do you consider existing guidance sufficient and appropriate to draft technology action plans and project ideas? How can the guidance be improved?
- (g) What information would be needed for investors and funding entities to make well informed investment decisions about TAPs and project ideas emanating from TNAs?
- (h) How effectively are the TNA and TAP results used in other processes such as National Communications, NAPAs, NAPs?
- (i) How successful has the TNA been in the country in terms of increasing awareness on climate change issues, and also in obtaining support? How specifically can the TNA and TAP be supported to facilitate their implementation?

10. The call for inputs was open from 8 May to 26 June 2015. Following organizations responded to the Call for inputs: Asian Institute of Technology, Climate Action Network, Climate Change, Agriculture and Food Security, International Centre for Tropical Agriculture, International Institute for Tropical Agriculture, Women in Global Science and Technology, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, ETH Zurich and Harvard University, Global CCS Institute, Inter-American Development Bank, Notre Dame Global Adaptation Index, United Nations Industrial Development Organization, and World Intellectual Property Organization. The inputs were displayed on the TT:CLEAR web page.

III. Synthesis of information provided by organizations on the provision of guidance on how the results of the TNAs, in particular the TAPs, can be developed into projects that can be ultimately implemented.

A. Identify what you perceive to be the strengths and deficiencies of the TNA process?

Strengths:

11. Organizations highlighted in their submissions that the strength of the TNA process is that it is country driven, that it may follow the national needs and priorities, it identifies short medium and long term perspectives and hence it can also realistically **contribute to national planning process**, ensuring locally appropriate results. TNA process was considered: covering the climate relevant mitigation and adaptation sectors, being a useful awareness-raising tool for climate issues, and able to deliver solutions at the national and regional levels.

12. Several organizations highlighted as strengths of the TNA process involvement of national teams and multiple stakeholders, inter-ministerial coordinating entities, transparent, comprehensive, and **replicable methodology** including sensitivity analysis and multi-criteria decision-making analysis for identification and prioritization of sectors and technologies, and capacity building effects including peer learning, and networking on local and regional levels.

13. One organization identified as the strength of the TNA process mutually beneficial **partnerships between countries and technology providers** to discuss country specific circumstances.

14. The TNA process was seen by some organizations instrumental **in identification of a number of key policies, including their adaptation to local specific challenges and needs**. For example a stable and predictable legal and investment environment, eliminating barriers to trade, training and education, have been found by TNA process, to be key enablers to transfer of environmentally sound technologies and related know-how.

Deficiencies:

15. One possibly significant deficiency of the TNA process considered in submissions was that the **TNA process may be optionally disconnected from major national planning documents** such as for example sectorial development plans, as they may already exist and the potential of TNAs to influence them may be limited, or the TNA, in case it is driven by one-sector stakeholders only, may have a small influence when the national planning documents are developed.

16. It was noted in some submissions, that expectations of some stakeholders from the TNA process may not be fulfilled, which may be a negative mark for future consideration of the TNA process by those stakeholders.

17. One organization considered **the TNA process mostly top-down driven**, leaving out the participation of local technology users, which may result in **lack of ownership of the process and its results**.

18. In several submissions a notion was expressed that there is a **long way from identification a list of technologies to their implementation** and that an understanding of **TNA as an open ended process, a tool for implementation**, should be enhanced, which would continuously increase perspectives of project ideas being graduated to bankable projects.

19. Showcasing the dynamics of successfully implemented TNAs was considered by some organizations lacking in the TNA process, which could be, as they noted, a good practice dissemination element. They said that many TAPs and project ideas generally do not live up to their potential and much of their potential have been lost in the process so far. They also said that **when formulating next steps, including roles, responsibilities and timelines, funding has to be accessible for such next steps to be realized**. A matchmaking component of TAPs to attract funding was considered missing.

20. One organization considered **guidance on what financiers would like to see as project proposals** lacking. It recommended looking at the UN Secretary General's Sustainable Energy for All initiative, which includes Rapid Assessments and Gaps Analyses (RAGAs), Investment Prospectuses, and

Action Agendas which are supposed to have several similarities to TNA process and development of TAPs. Other examples submitted for consideration included the Green Growth Plans (GGPs) developed by the Global Green Growth Institute (GGGI), and Renewables Readiness Assessments (RRAs) undertaken by the International Renewable Energy Agency (IRENA).

21. **Prescriptivism and lack of flexibility** of the TNA methodology were discussed in some submissions as possible deficiencies of the TNA process. It also discussed an **open source version of excel tool** to be developed to be used in portable devices in a form of application to make the methodology widely accessible at any time.

22. One organization noted that the **countries are not required to use also their own financial resources**, on the top of the project funding, which may affect the local ownership and commitment to deliver adequate and implementable results.

B. Outline what recommendations or solutions would you make to improve the TNA process? Are there process improvements required for accelerating implementation of the TNA results?

23. TNA process was seen by some organizations robust enough to facilitate and reinforce planning and action at the local level, side by side with the national level planning. They said that **TAPs should include broader and more holistic exercises**. They informed in this regard, that several possibly relevant and helpful toolkits, such as on developing energy markets, have been designed.

24. To enhance the implementation of the results of the TNAs, and since the main barriers identified in mitigation and adaptation were economic, it was recommended by some organizations that the TNA guidance should **recommend an invitation of financial community at an early stage of the TNA process**. Also to enhance implementation, one organization said that **stakeholders willing to follow-up on identified technologies with further technical and/or financial assistance should be identified and involved from the beginning** of the TNA process.

25. One organization highlighted the **need to engage the local private sector**. It said that a **review of TNAs by financial community experts should be undertaken, using the CTCN when moving forward the identified projects**. It also highlighted that the TEC should seek for a quality and consistency in TNAs to make them more instrumental in addressing climate change challenges.

26. **Standardizing TNA formats** was seen by one organization helpful in the review of reports, for effective **identification of opportunities and aggregating needs on regional basis**. It reported that many of the identified technologies could become more cost effective through economy of scale. In this regard the organization considered rewarding to identify the aggregated needs and projects, where engagement from the private sector would be beneficial.

27. One organization considered critical that **men's and women's roles, experiences, and contributions to technology use and adoption are recognized throughout the TNA process** for more effective needs assessment planning and policy making. It reported that gender gaps in access to resources, training, education, and participation in decision-making contribute to **differences in men's and women's vulnerabilities to climate change**, and correspondingly to variations in their technology needs, and need to be systematically taken to the account throughout the design, implementation and monitoring of benefits of technology use and adoption.

28. In most of the submissions it was in generally recognized that implementation pathways from TAPs and project ideas are missing. To implement technological and sectorial changes it was proposed **that a more specific guidance (to particular actors to undertake particular activities)** should be considered with aim **to enhance implementation of TAPs**.

29. **A thoroughly developed template for preparing project documents**, such as updated handbook on project finance was considered by several organizations a significant assistance for countries which could lead to better outcomes of the TNA process.

30. One organization recognized that a **greater emphasis on enabling policies** should be put into place, to **mobilize and encourage private technology investments** and innovation.

31. **A database of funders with their funding objectives and requirements was proposed to be established** for countries in order to understand to whom to turn to for financial assistance.

C. Are the steps of the TNA process (as developed in the updated UNDP handbook for conducting TNAs for climate change) sufficient and well-targeted to cover all the aspects of the identification and prioritization of technology needs? Are there other steps you would suggest adding to the TNA process?

32. One organization proposed a possible step in the updated TNA handbook to organize **early consultations between the TNA national team stakeholders, and local technology users and citizens** with aim to understand their recent challenges and technological needs, in order to find solutions to be responsive to these challenges, and also to facilitate familiarization of future technology users with the identified mitigation and adaptation technologies. Another organization proposed to **involve**, into the national TNA teams, **experts who work on the deployment of identified technologies to enable easier technology adoption.**

33. It was recommended by some organizations to include into the updated TNA handbook, templates and examples to illustrate approaches that are more likely to result in the translation of the identified needs into solutions. It was also recommended to **incorporate CTCN request form into the TNA templates to be filled in parallel with conducting the TNA reports.**

34. Some organizations proposed that the updated handbook should put a **stronger emphasis on identification of enabling environments**, which were considered necessary to mobilize and encourage private technology investments and innovation. They noted that intellectual property rights should be more unambiguously recognized as a key enabling factor for technology transfer and should be further reinforced through the TNA process.

35. As possible steps of the TNA process it was recommended to include **quality control mechanisms** which were considered necessary by some organizations during the scoping and activity planning stages of TNA and TAPs preparation, and **monitoring and evaluation tools** which were considered needed during and after the implementation phase.

36. One organization considered challenging to develop a planning and policy process suitable for all developing countries, including the least developed countries. It suggested to use TNAs as flexible as possible in countries, to **take into account national environments and specifics** regarding development and transfer of environmentally sound technologies.

D. What do you consider the best way of organizing and synchronizing the stakeholders involved in the TNA process? How a formal coordination amongst the stakeholders could be developed, in order to promote a common goal and to organize the information provided?

37. Two organizations highlighted that incentives of stakeholders are important in decision making process, as **various stakeholders were seen to have different driving factors, and only orchestration of those factors will allow the TNA process to produce an added value.**

38. **A need for private sector stakeholders to play a solid role in the TNA process** was strongly recognized in submissions. **The private Sector Advisory Group (PSAG)** as the part of the GCF was seen as one of good examples. The PSAG was seen providing recommendations enabling the GCF to make the best use of current knowledge on how existing efficient and advanced technologies can deliver solutions in the area of technologies. This was seen allowing business to provide inputs at an early stage of the process, and help to develop effective plans and solutions. Another example used was **the International Telecommunications Union**, UN affiliated body, that is based on public private partnerships, and counts more than 800 private sector entities.

39. To enhance access to information and documents to enable informed participation, follow up, and monitoring, establishment of an **information focal point within the national TNA team stakeholders** was recommended by one organization.

E. Could you identify appropriate means for TNAs to be conducted whereby project ideas turn into concrete ideas which can be ultimately implemented? How could the support related to the identification of technology needs and the implementation of the results of TNAs be further enhanced?

40. One organization found effective, when identifying TAPs and project ideas, to **tap into already existing projects**, which are not completed, to **finalize them, or extend their scope** thus leveraging knowledge acquisition and socialization processes. It highlighted advantages of participation of **local people knowledgeable of local issues**, including local NGOs. It said that those organizations and experts that work on technology development, deployment and dissemination, including private sector entities, should be involved in the TNA process from its onset.

41. It was recognized in some submissions that **when organizing TNA capacity building and dissemination workshops, financial community could be invited** to inform on the outcomes of the TNAs and TAPs, and also to learn from TNAs and TAPs on their financial modalities and schemes. **Project developers in identified sectors experienced with identified technologies** should be brought early into the TNA and TAPs development process in order to facilitate translation of sector needs into actions. It was also recognized that having an appropriate template available would help to enhance understanding of what champions should be taking into account when translate ideas into projects.

F. Do you consider existing guidance sufficient and appropriate to draft technology action plans and project ideas? How can the guidance be improved?

42. **Importance of partnership** between academia, industry (private sector) and beneficiaries was highlighted by one organization. It said that **putting together an action plan and implement it are two different responsibilities which require different skills**, which should be reflected in the updated guidance.

G. What information would be needed for investors and funding entities to make well informed investment decisions about TAPs and project ideas emanating from TNAs?

43. Investors and funders were seen in the submissions to require an additional information to those what are currently provided in the TAPs. It was noted that investors and funders may be looking at **the level of the risk associated with investments** to be able to conduct as realistic as possible assessment of their returns and profits. It was highlighted that **financiers should be involved throughout the TNA process** to ensure that the outcomes of TNA and TAPs are palatable to them.

44. One organization considered TAPs being a useful signal of planned action by national Ministries, however it said, that there is a potential for TAPs to be translated into investment portfolios that meet the needs of private and public **sector investors. Both sector investment portfolios, and individual project funding proposals, were considered necessary** as a result of TNAs and TAPs, **while each of them have different target audiences, and therefore require different type of skills.**

45. On the **sectorial planning** it was noted that it should reinforce planned governance reforms recognized by funders, such as incentives for private sector engagement, clear articulations of entry points for investors, and identification of the cost of funding incentives. For funders, **evaluation criteria** were seen **different for mitigation and adaptation technologies, and were recommended to be drawn**, for example, **from GCF criteria, and Adaptation Fund assessment criteria.**

46. On the **project planning** financiers were seen to seek for **information required for any business and development project type investment.** One of possibly relevant tools recommended was **“mybusinessplan”** tool designed in particular for energy entrepreneurs in developing countries.

47. One submission provided by a multilateral development bank stated that multilateral development banks as for example the World Bank, The Inter-American Development Bank, The Andean Development Corporation, and the Asian Development Bank work in similar ways, although the internal

process for approval might vary. These banks run two financing products for two clearly differentiated sectors: non-reimbursable technical cooperation and investment grants; and loans, for both the sovereign and non-sovereign sector. In this regard it was noted that in some cases public entities might receive non-sovereign loans.

48. In the same submission it was also stated, that all the multilateral development banks tend to prioritize climate change financing - from infrastructure investment in mitigation and adaptation, to institutional strengthening of relevant agencies, including, for example, environmental, energy, transport, water and wastewater, and agriculture. For sovereign loans (loans which are guaranteed or repaid by countries), financing was recognized to either investment programs, where specific investments are not individually identified but a set of parameters for inclusion are defined, such as rural electrification or other specific investments. Financing, however, was seen constrained by other parameters which role is to **demonstrate economic and financial viability of a project**. It was noted that for sovereign sector infrastructure loans, multilateral development banks often require clearly **identified financial sustainability: either through self-generating funds or through sustainable subsidies** focalized on disadvantaged populations. Multilateral development banks also often perform **impact evaluations on environment and gender issues**.

49. On promotion of TNA results one organization recognized that the presentation of project ideas at TT:Clear web site has significantly improved, however it said that **further consideration could be given to consistency of the reporting format**. It also said that advertising technology needs broadly could help to promote the results of the assessment and to provide an overview to financing institutions.

50. Commonly reported information needed for investors were:

- (a) endorsement by national and local governments;
- (b) analysis of existing environment;
- (c) credibility;
- (d) assurance that priorities and needs are reflecting reality;
- (e) determination if the technology is suitable for where it will be deployed;
- (f) capacities of the technology users and maintenance capacities;
- (g) financial risks;
- (h) infrastructure, and physical terrain;
- (i) analysis of existing supply chains.

H. How effectively are the TNA and TAP results used in other processes such as National Communications, NAPAs, NAPs?

51. Most of the submissions recognized the evidences from TNAs and TAPs of using national communications, nationally appropriate mitigation actions, and national adaptation plans as substantive inputs into TNAs. It was also broadly recognized that **these processes should reinforce each other for their common benefits**.

I. How successful has the TNA been in the country in terms of increasing awareness on climate change issues, and also in obtaining support? How specifically can the TNA and TAP be supported to facilitate their implementation?

52. It was recognized in one submission that various initiatives targeting smart cities and sustainable cities are currently ongoing in multiple countries. In some TNAs and TAPs activities focused on cities, development of urban areas by energy, transport, industrial, agricultural and health activities were reported. **Promoting cities focused activities was seen one of many important ways of promotion of TNAs and "selling" them to cities-oriented investors**.

53. Another submission recognized need to promote well-reasoned evolution and changes from previous TNAs, and **highlighting the open-ended TNA process** which is rich on information as it is reflecting and tracking the development of country, and could increase awareness on climate change matters.

54. To facilitate implementation it was seen important to reflect strongly financial and capacity building needs and plans in the TNAs and TAPs, on the top of technological needs and plans. Detailed and thoroughly explained **capacity building and financial needs were seen having potential to leverage attention of investors with environmental priorities.**
