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Opportunities and options for enhancing adaptation action through education and training, and public and youth participation

Technical paper by the secretariat

Summary

Education and training, alongside public and youth participation, are key to enabling effective and inclusive adaptation to climate change. This technical paper examines opportunities and options for enhancing adaptation action through education and training, and public and youth participation, including associated challenges.



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Abbreviations and acronyms

COP	Conference of the Parties
COVID-19	coronavirus disease 2019
FAO	Food and Agriculture Organization of the United Nations
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
LEG	Least Developed Countries Expert Group
NAP	national adaptation plan
NAP Global Network	National Adaptation Plan Global Network
NDC	nationally determined contribution
NGO	non-governmental organization
SDG	Sustainable Development Goal
SR1.5	Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5 °C
TEM-A	technical expert meeting on adaptation
TEP-A	technical examination process on adaptation
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children’s Fund
UNICEF ROSA	United Nations Children’s Fund Regional Office South Asia
YOUNGO	youth non-governmental organization

I. Introduction

1. Education and training, alongside public and youth participation, are key to enabling effective and inclusive adaptation to climate change. Education and training are needed to help people understand the changing climate and develop the skills to act on that knowledge, to minimize risk and vulnerability and boost their adaptive capacity and resilience. Public participation, meanwhile, is integral to an inclusive adaptation process that ‘leaves no one behind’. In that regard, given the disproportionate impact of climate change on young people, and the immense potential of young people to contribute to adaptation solutions, youth participation in adaptation planning and action warrants particular attention.

2. Education and training initiatives related to climate change adaptation can cover a wide range of topics, be for various purposes and target many different audiences: from a general introduction to adaptation aimed at schoolchildren, to a specialized training programme for workers on how to cope with a specific climate change impact on their job. Similarly, public and youth participation can take a variety of forms throughout the adaptation process: from advocacy and activism, to participating in consultations and surveys, and designing and implementing adaptation solutions. Through this mosaic of topics, approaches and actors, adaptation action may be enhanced from the local up to the global level.

A. Technical examination process on adaptation

3. This technical paper is an output of the TEP-A (see box 1). In 2020, its fifth and final year, the TEP-A focused on the topic of enhancing adaptation action through education and training, and public and youth participation.

Box 1

Technical examination process on adaptation

The TEP-A was launched in 2015, at the time of the adoption of the Paris Agreement, to be conducted from 2016 to 2020 with the aim of identifying concrete opportunities for strengthening resilience, reducing vulnerabilities and increasing the understanding and implementation of adaptation actions.^a Jointly organized by the Subsidiary Body for Implementation and the Subsidiary Body for Scientific and Technological Advice, and conducted by the Adaptation Committee, the TEP-A involved:

- (a) Facilitating the sharing of good practices, experience and lessons learned;
- (b) Identifying actions that could significantly enhance the implementation of adaptation, including actions that could enhance economic diversification and have mitigation co-benefits;
- (c) Promoting cooperative action on adaptation;
- (d) Identifying opportunities to strengthen enabling environments and enhance the provision of support for adaptation in the context of specific policies, practices and actions.

Following a review of both the TEP-A and the technical examination process on mitigation in 2017, COP 23 invited expert organizations to volunteer to lead the organization of the related technical expert meetings. In addition, COP 23 urged the various bodies and actors leading the TEP-A to focus the process on specific policy options and opportunities for enhancing adaptation that are actionable in the short term, including those with sustainable development co-benefits. The TEP-A was expanded as a result of the aforementioned review, with COP 23 inviting Parties and non-Party stakeholders to host regional TEMs-A to examine the finance, technology and capacity-building resources necessary for scaling up actions in regional contexts.^b

^a Decision 1/CP.21, para. 124.

^b Decision 13/CP.23, para. 9.

4. In 2020, the COVID-19 pandemic led to an unprecedented shift to holding virtual meetings and making use of other innovative methods of collaboration. In its final year, the format of the TEP-A was pivoted to embrace the opportunities afforded by these new modes of working and to make use of the virtual tools and spirit of innovation; for example, the 2020 TEMs-A took place virtually, with interested contributors from around the world able to join the discussions. Furthermore, to strengthen the focus on youth, one of the subtopics for 2020, a virtual Youth Policy Case Competition was included in the TEP-A for the first time (see para. 65 below). Additionally, the TEP-A in 2020 included a children’s art competition, aimed at teaching them about adaptation and stimulating their creativity to imagine a climate-resilient future.¹

B. Scope and structure of the paper

5. In terms of its scope and major themes, this technical paper largely follows and builds on the key elements covered in the TEMs-A held in 2020, drawing on the expert insights and ideas that emerged from the meetings. The paper is not intended to present a comprehensive literature review or discussion of the topics of education, training, public participation and youth as they relate to adaptation planning and action. To contextualize and complement the expert insights that form the basis of the analysis, the paper draws on academic and grey literature, as well as UNFCCC documents and products.

6. Chapter II provides an introduction to adaptation education and training initiatives. Chapter III discusses public participation in adaptation planning and action, highlighting opportunities and good practices for meaningful public participation as well as persistent challenges. Chapter IV examines the role of youth in adaptation planning and action, including barriers to realizing their potential as agents of change in advancing adaptation, and presents examples of youth engagement in adaptation planning and implementation. Finally, chapter V presents concluding reflections on enhancing adaptation action through education and training, and public and youth participation.

7. The overarching topic of this paper has been divided into three subtopics (education and training, public participation, and youth engagement, as in the 2020 TEMs-A) to facilitate a structured analysis. However, the analysis and the TEMs-A highlighted the significant linkages and overlap between the subtopics; for example, education and training can promote public and youth participation in adaptation, and youth participation may involve them designing or leading adaptation education and training initiatives.

C. Education, training, public participation and youth in the UNFCCC context

8. Education, training and public awareness have always been recognized as integral components of climate change action under the UNFCCC. Article 6 of the Convention states that Parties shall, in implementing their commitments under the Convention, promote and facilitate the development and implementation of educational and public awareness programmes on climate change and its effects, public access to information on climate change and its effects, public participation in addressing climate change and its effects and developing adequate responses, and training of scientific, technical and managerial personnel; and cooperate in and promote, at the international level, the development and exchange of educational and public awareness materials on climate change and its effects, and the development and implementation of education and training programmes.

9. The eight-year Doha work programme on Article 6 of the Convention, adopted at COP 18,² defines the scope of and provides the basis for action related to Article 6 of the Convention. It delineates action that Parties, intergovernmental organizations and NGOs can take in implementing the Convention within the scope of the work programme: for Parties,

¹ The competition did not inform the substance of this paper, but the winning art pieces will be featured in the user-friendly version of the paper, to be published in April 2021.

² Decision 15/CP.18.

such action includes strengthening national education and training or skills development institutions to deliver climate change learning; promoting and enhancing the inclusion of climate change in school curricula at all levels and across disciplines; and encouraging the public, as part of public awareness programmes, to contribute to mitigation and adaptation action.

10. Article 12 of the Paris Agreement reinforces the centrality of these components in tackling climate change, stating that Parties shall cooperate in taking measures, as appropriate, to enhance climate change education, training, public awareness, public participation and public access to information, recognizing the importance of these steps with respect to enhancing action under the Paris Agreement.

11. Work under the UNFCCC related to Article 6 of the Convention and Article 12 of the Paris Agreement is captured under the umbrella term Action for Climate Empowerment, the ultimate objective of which is to empower all members of society to engage in climate action, through education, training, public awareness, public participation, public access to information, and international cooperation,³ and thereby advance the global response to climate change.

12. In 2020, the aim of the TEP-A was to show how a subset of Action for Climate Empowerment components – education, training, public participation and youth – can help to drive action on adaptation. This work complemented other efforts taking place under the UNFCCC addressing and advancing similar themes, including related to capacity-building.

D. Key messages from the technical examination process on adaptation in 2020

13. The following key messages related to enhancing adaptation action through education, training, and public and youth participation were derived from the inputs to the TEP-A in 2020, including those from speakers at and contributors⁴ to the TEMs-A, the series of policy briefs developed to support the process,⁵ and the additional material consulted for this paper:

(a) Formal, non-formal and informal education play important and complementary roles in enhancing adaptation knowledge and action for people of all ages throughout society. Incorporating climate change and adaptation into science and social science curricula, promoting related extracurricular activities, and fostering connections between ministries of environment and education can help to improve, in particular, formal education on adaptation, noting that implementing these approaches requires training programmes for teachers, buy-in from both teachers and schools, and budget stability;

(b) Innovative approaches to adaptation education, such as games-based education, may help to engage younger children in the complex and sometimes overwhelming topic of climate change adaptation;

(c) Specialized training programmes are vital for equipping vulnerable individuals with knowledge specific to their circumstances that they can use for decision-making on adaptation and safeguarding their health, livelihoods and productivity. Going forward, training initiatives for upskilling and reskilling could play an important role in facilitating the transition to a climate-resilient economy and ensuring the workforce has the skills necessary for designing and implementing adaptation solutions;

(d) High-level commitment to an inclusive and participatory NAP or other adaptation planning or implementation process at the outset sends a clear message that

³ See <https://unfccc.int/topics/education-youth/the-big-picture/what-is-action-for-climate-empowerment>.

⁴ In 2020, key contributors to the TEP-A included the Alliance for Global Water Adaptation, the International Centre for Climate Change and Development, the International Federation of Red Cross and Red Crescent Societies, Islamic Relief and UNICEF ROSA, which helped to organize one or more TEMs-A; and FAME Lab, FAO, the Global Center on Adaptation, SLYCAN Trust and the YOUNGO constituency, which contributed policy briefs and helped to organize one or more TEMs-A.

⁵ Available at <http://tep-a.org/policy-briefs/>.

participation and engagement are central to adaptation, and that investment in participation should be prioritized;

(e) Leveraging existing organizations and platforms, including faith-based organizations, women's organizations and indigenous groups, can help to broaden the reach of public participation efforts and engage more people in learning about and taking part in adaptation planning and action;

(f) Gender-sensitive public participation in adaptation is essential to avoid exacerbating existing inequalities and to ensure all individuals and communities have the opportunity to shape a resilient future for themselves. Entry points, activities and tools can be deployed throughout the process to support a gender-sensitive approach to adaptation planning and action;

(g) Young people have immense potential to be agents of change for advancing adaptation in their communities and around the world. They must be recognized as such, and engaged actively and meaningfully throughout all stages of the adaptation process at the local, subnational, national and regional level;

(h) The processes of formulating and implementing NAPs and of updating and fulfilling NDCs offer good opportunities for engaging youth in adaptation planning and action. Youth can help to identify priorities and options for inclusion in NAPs and NDCs, and, once the related documents are finalized, can use their skills and expertise to advance implementation of the adaptation measures identified;

(i) Youth participation in adaptation should not be reduced to a symbolic gesture and youth should not be portrayed or treated as a homogeneous group. One approach to avoiding this type of tokenism, which is counterproductive to meaningful engagement, is to engage youth in their different capacities and according to their different interests and areas of expertise: young scientists should be engaged in their capacity as scientists, young entrepreneurs in their capacity as entrepreneurs, young farmers in their capacity as farmers, and so on.

II. Adaptation education and training

14. Adaptation education and training initiatives are vital for enabling people to prepare for and cope with the impacts of climate change. In the SR1.5, the IPCC highlighted that education and information can help accelerate behaviour change aligned with adapting to climate change. Additionally, COP 18 recognized that education, training and skills development are fundamental for all Parties to achieve sustainable development in the long term, and that a goal of education is to prepare children, youth, women, persons with disabilities and grass-roots communities for adapting to the impacts of climate change.⁶

15. The United Nations system also recognizes that education and training are central to efforts to adapt to climate change. For example, the United Nations Alliance on Climate Change Education, Training and Public Awareness is composed of 14 member organizations and entities from across the United Nations system, including FAO, ILO, UNDP, UNESCO, the UNFCCC, UNICEF and the United Nations Entity for Gender Equality and the Empowerment of Women, working closely with one another and with governments to help build a climate-resilient world.⁷ Meanwhile, UNESCO is engaging in widespread Education for Sustainable Development efforts, which incorporate climate change, seeking to improve access to quality education on sustainable development at all levels and in all social contexts, transform society by reorienting education and help people develop the knowledge, skills, values and behaviours needed to foster sustainable development.⁸

16. Parties are increasingly incorporating climate change education into their climate change plans and actions and are reporting thereon in their submissions to the UNFCCC. As

⁶ Decision 15/CP.18, preamble.

⁷ See <https://unfccc.int/topics/education-and-outreach/focal-points-and-partnerships/un-alliance-on-climate-change-education--training-and-public-awareness>.

⁸ See <https://en.unesco.org/themes/education-sustainable-development>.

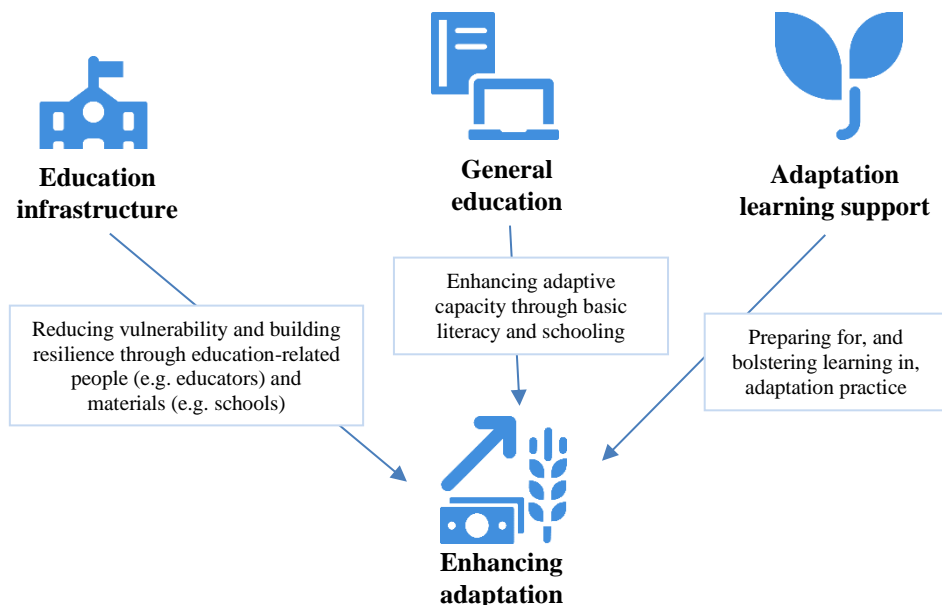
at June 2018, 95 per cent of NDCs and national communications included some mention of climate change education, of which 43 per cent did so in relation to adaptation and 19 per cent in relation to the related areas of impact reduction and early warning (UNESCO, 2019).

A. Enhancing adaptation through education

17. Education can contribute to enhancing climate change adaptation in a variety of ways. Feinstein and Mach (2020) identify three distinct, although overlapping, roles for education in this regard (see figure 1).

Figure 1

Roles for education in enhancing climate change adaptation



Source: Adapted from Feinstein and Mach, 2020.

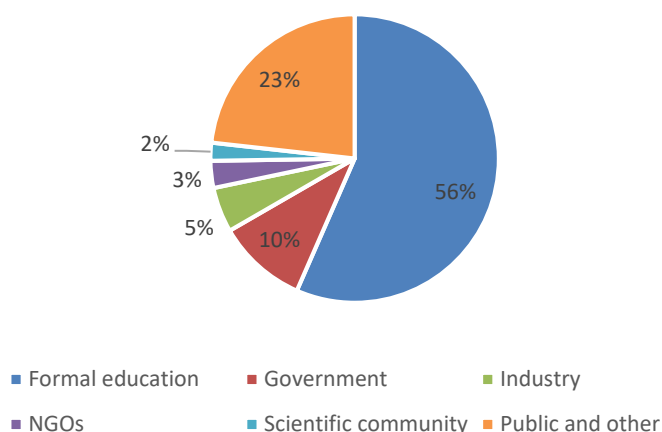
18. Firstly, protecting and deploying education infrastructure (i.e. the people and materials, such as teachers and schools, that education depends on) can contribute to reducing vulnerability and building resilience. Measures for this purpose include bolstering the resilience of physical infrastructure, such as locating schools in low-risk areas or renovating buildings to reduce exposure to hazards, and safeguarding the health, safety and livelihoods of educators. Secondly, improving general education to enhance adaptive capacity relates not to education with a specific focus on adaptation or climate change, but to how people spending time in school in general and having basic literacy can contribute to advancing adaptation. The underlying logic is that general education can facilitate information flow throughout society and thereby enhance awareness and disaster response, encourage economic diversification away from sectors at risk from climate change, and reduce inequities. In the longer term, general education may also contribute to increasing adaptive capacity thanks to its positive impact on, for example, the economy, health, collaborative resource management and democratic governance. Thirdly, using adaptation learning support to prepare for, and bolster learning in, adaptation practice is focused on applying tools, strategies and approaches in learning and education that either enable people to participate in adaptation or support people in developing new skills, knowledge and social roles while implementing adaptation action. Adaptation learning support takes many forms and encompasses different techniques, such as technological tools (e.g. computer simulation), field manuals and structured workshops. Feinstein and Mach (2020) underscore the importance of this third role for education in particular, stating that education’s greatest potential contribution to effective climate change adaptation lies in its capacity to help people prepare for and learn from climate impacts.

19. Although the first and second roles for education did feature in some of the discussions and related resources throughout the 2020 TEMs-A, the meetings were focused primarily on

the third role. The experts and contributors highlighted opportunities in formal, non-formal and informal settings for advancing education and learning on adaptation. Formal education includes education that takes place at schools and training institutions as part of the education system; non-formal education is organized education outside the formal education system, such as that offered by community groups or other organizations; and informal education encompasses the lifelong acquisition of skills, knowledge, values, and so on, from friends, family and general day-to-day experience (Smith, 2002).

Figure 2

Target audiences of climate change education globally



Source: UNESCO, 2019.

20. Formal education systems are frequently highlighted in relation to climate change education, including in Party submissions to the UNFCCC (see figure 2). Approaches to incorporating adaptation into the formal education system include (SLYCAN Trust, 2020; UNICEF ROSA, 2020):

(a) Integrating adaptation in the local context into curricula at the local and national level, such as by providing information on key topics related to climate change and adaptation, sharing examples of practical adaptation measures that students can take now and in the future, and through projects and problem-solving activities where students can apply their adaptation-related knowledge;

(b) Supporting extracurricular activities, such as field trips or youth camps, that focus on climate change and adaptation;

(c) Training teachers on adaptation-related topics (such as disaster risk reduction and climate change planning, policy and implementation) and providing continuous professional development opportunities so that educators can maintain up-to-date knowledge;

(d) Promoting ‘green school’ policies, whereby schools embody the values and practise the lessons they teach related to climate change and sustainability;

(e) Developing adaptation plans for schools;

(f) Ensuring that adaptation-related information is included in curricula in science-based, social science and other relevant subjects.

21. Strong connections between ministries of environment and education can facilitate the design and implementation of such approaches for introducing or improving adaptation education. Reforming curricula is often a lengthy and cyclical process, however, and successfully and systematically incorporating adaptation into formal education systems requires budget stability, buy-in from both teachers and schools, and training programmes for teachers (UNICEF ROSA, 2020).

22. In designing and delivering adaptation-related education, and climate change education more broadly, innovative and interactive approaches can make the content more

approachable and accessible. One of the core objectives of the UNESCO Climate Change Education for Sustainable Development programme is to promote innovative teaching approaches, including interdisciplinary and participatory learning (UNESCO, 2010). In addition, some organizations and institutions have developed games and activities to be incorporated into climate change adaptation education (see box 2).

Box 2

Adaptation education through games

Organizations are exploring opportunities to deliver adaptation education to children and youth in novel and engaging ways, including through interactive adaptation-focused games. The aim is to educate young people about climate change impacts and adaptation action and inspire them to take adaptation action and become agents of change within their communities.

Day of Adaptation, an organization based in the Netherlands, has developed a collaborative board game, Minions of Disruptions™, that encourages participants to learn about adaptation and find ways to combat climate change.^a In the game, teams work together in the race against climate disruptions caused by greenhouse gas emissions. Superheroes in the game, “Zillians”, help teams boost resilience and protect themselves against the disruptions. The game is often played within the framework of an initiative called Game Day, where facilitators from the Day of Adaptation team guide schools and other organizations through the game and lead a discussion on next steps in furthering their adaptation and resilience-building efforts.^b Thus, the game helps to build capacity, initiates a conversation on adaptation in a fun and inclusive way, and prompts schools and other organizations to begin identifying specific adaptation actions they can take.

Another initiative incorporating games into adaptation education is Y-Adapt, an interactive games-based adaptation curriculum for children and youth aged 13–25.^c Y-Adapt was collaboratively developed by the Red Cross Red Crescent Climate Centre, the Philippine Red Cross, Plan International and the Engagement Lab at Emerson College in the United States of America. It features seven sessions that integrate a range of games and challenges, such as a card game to identify how people, places and resources fit into systems; a board game where important resources in communities must be prioritized; and an interactive challenge and role-play competition to create adaptation action plans. The curriculum is designed to help young people identify an adaptation action that they can implement in real life and then share it with other youth around the world to inspire further action. Actions that have been taken by children and youth so far as a result of the curriculum include cleaning drains in Haiti to reduce flood risk, initiating dengue awareness campaigns in Guatemala, planting and protecting mangroves in the Philippines and planting community gardens in Uganda.^d

^a See <https://dayad.org/game-day/>.

^b Source: Presentation by a representative of Day of Adaptation at the TEM-A on 14 July 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/virtual-workshop-youth-engagement-to-enhance-adaptation-action/>.

^c See <https://www.weadapt.org/knowledge-base/y-adapt>.

^d Source: Presentation by a representative of the Red Cross Red Crescent Climate Centre at the TEM-A on 11 August 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/youth-intergenerational-adaptation-dialogue/>.

23. Integrating climate change adaptation into all three types of education can help to equip people of all ages with the knowledge and tools necessary to understand adaptation and enact positive change in their communities (SLYCAN Trust, 2020). In combination, the three types of education can provide a holistic and comprehensive adaptation education, providing a stronger basis for action.

24. To complement formal and non-formal adaptation education, government institutions, NGOs, the private sector and others can contribute to enhancing the role of informal education on adaptation. For example, they can incorporate information and resources on

adaptation into media campaigns, radio programmes, theatre and music, and conferences (SLYCAN Trust, 2020), helping to reach those not part of the education system, including adults and children who do not go to school (UNICEF ROSA, 2020).

25. Education and training can also play an important role in advancing the NAP process. The NAP technical guidelines note that, in order to address capacity gaps and weaknesses in undertaking the NAP process, countries can design and implement programmes on climate change communication, public awareness-raising and education (LEG, 2012). In doing so, countries can iteratively improve their NAP process over time to facilitate meeting the medium- and long-term adaptation needs identified.

B. Enhancing adaptive capacity and adaptation action through training

26. In addition to both general and adaptation-related education, context-specific training can help boost adaptive capacity in a more tailored manner. Training programmes can complement education initiatives by helping individuals with different vulnerabilities to better understand and react to their own circumstances. Training programmes are targeted at different sectors (e.g. agriculture, water resources, transportation, infrastructure), different actors (e.g. government officials, business representatives, youth, educators) and different skills or specialities (e.g. adaptation monitoring and evaluation, visualization techniques for climate change scenarios and adaptation planning). Some organizations are also beginning to conduct adaptation-related training that is specific to certain climate impacts and vulnerabilities (see box 3).

Box 3

Training to boost workers' adaptation to increased workplace temperatures

FAME Lab is a research group based at the University of Thessaly in Greece that focuses on helping people understand and adapt to environmental factors that have an impact on their health, productivity and more. Recently, FAME Lab has been conducting research into how training programmes can help workers better adapt to increased workplace temperatures and the resulting occupational heat stress. Occupational heat stress, cases of which are increasing as a result of climate change related temperature increases, can lead to illness (such as hyperthermia, which if left untreated can result in kidney, liver and gut damage), death and economic losses.

Specialized training programmes are essential for helping workers safeguard their health and productivity in difficult working conditions. FAME Lab is working with partners to develop such training programmes and related plans in multiple industries and countries. It is following the ILO six-step process for developing worker education and training: assessing needs, gaining support from key actors, establishing education objectives and content, selecting education methods on the basis of objectives and workforce profile, implementing the education programme, and evaluating and following up on the programme.

Training programmes and adaptation plans can be complemented by related resources and platforms. The HEAT-SHIELD project, funded by the European Union and in which FAME Lab is a key participant, is focused on addressing increasing workplace temperatures and other climate change impacts on workers, and developing corresponding adaptation strategies in the manufacturing, construction, transportation, tourism and agricultural industries. As part of the project, an online platform was created where employers and employees can obtain free personalized expert advice on protecting workers from the effects of increasing workplace temperatures, such as advice on hydration and minimizing heat load, and sector-specific solutions and recommendations.

Sources: (1) Presentation by a representative of FAME Lab at the TEM-A on 28 July 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/virtual-workshop-education-and-training-to-enhance-climate-adaptation-action-across-sectors/>; (2) FAME Lab, 2020; (3) <http://www.famelab.gr/heat-shield/>; (4) <https://www.heat-shield.eu/>.

27. Efforts to accelerate adaptation and the transition to low-carbon and climate-resilient societies are likely to necessitate significant additional training for upskilling (i.e. building on skills in a given area or role) and reskilling (i.e. building skills in a new area or role) workers across industries in order to remedy the “current and growing skills shortages” that threaten to “hamper the rapid deployment of new technologies to mitigate and adapt to climate change” (ILO, 2017). Responding to these trends, Colleges and Institutes Canada, a national network of colleges, universities, institutes of technology and related entities, has recommended creating a national framework to promote reskilling and upskilling programmes aligned with emerging employer needs related to adaptation and mitigation, and incorporating adaptation and mitigation into post-secondary education across the country (Colleges and Institutes Canada, 2019). Researchers from the Grantham Research Institute on Climate Change and the Environment in the United Kingdom of Great Britain and Northern Ireland estimated that around 10 per cent of workers in the country are likely to need reskilling in a just transition to a resilient and zero-carbon economy, with the greatest needs for reskilling likely to be in the construction, transport and manufacturing sectors (Robins et al., 2019).

III. Public participation in adaptation planning and action

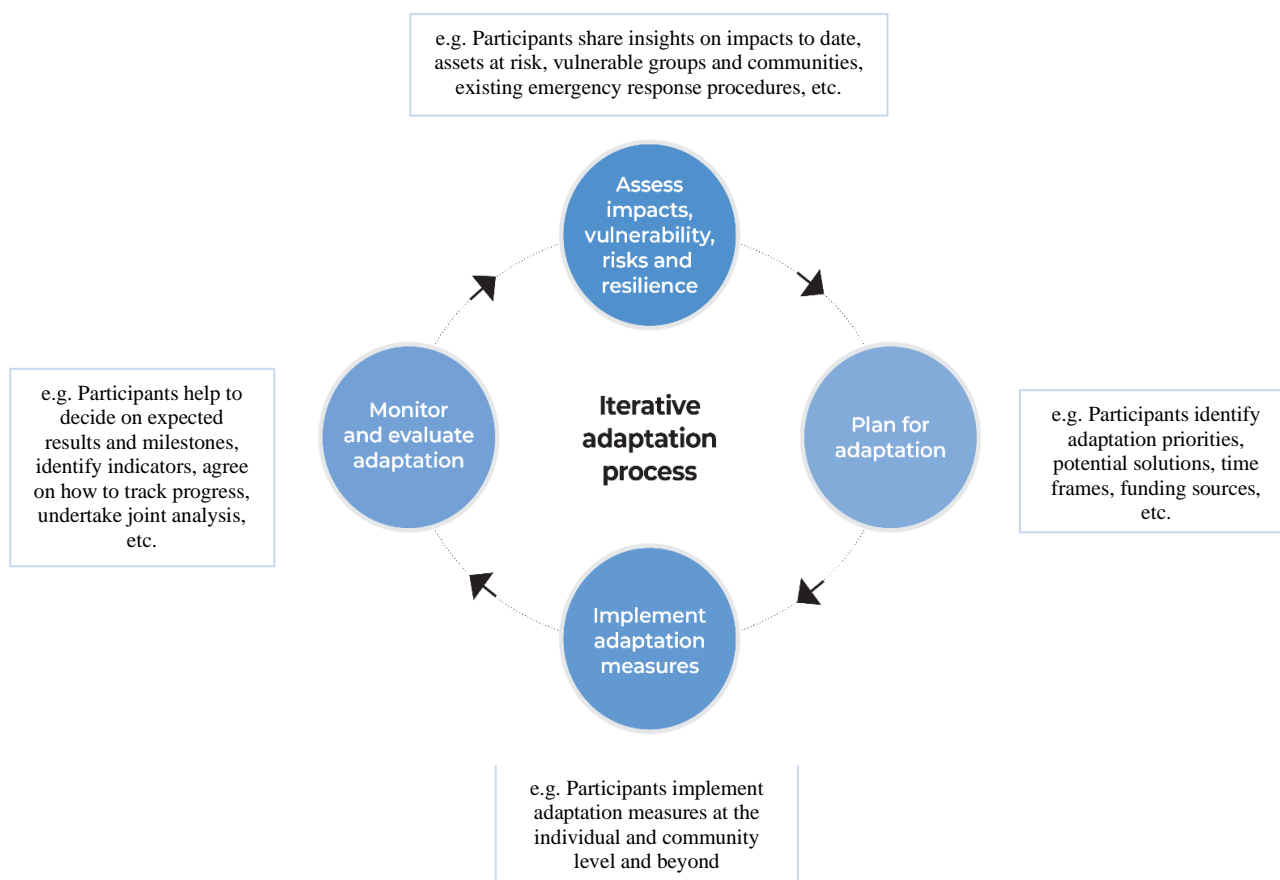
28. Meaningful and inclusive public participation in adaptation planning and action helps to ensure that adaptation interventions address the needs and vulnerabilities of all members of society. There is no universal definition of public participation, but it can be considered an umbrella term incorporating various forms of interaction with people, from informing and listening through dialogue, debate and analysis, to implementing jointly agreed solutions (Hügel and Davies, 2020). Public participation is broadly considered a centrepiece of effective environmental planning and management, especially perhaps in the case of adaptation, as compared with other domains of environmental action, because of the general understanding of adaptation being largely a context- and place-specific endeavour, with implications for relatively delimited sets of stakeholders and requiring a knowledge base tailored to local settings (Few, Brown and Tompkins, 2007).

29. Public participation in adaptation can take a wide variety of forms at all stages of the adaptation cycle, from assessing impacts, vulnerability, risk and resilience, to planning for adaptation, implementing adaptation measures, and finally monitoring and evaluating adaptation (see figure 3). Mechanisms for participation can be deployed throughout the adaptation process, such as surveys, focus group discussions, sectoral dialogues, workshops, parliamentary hearings and inviting written submissions. Some approaches to orchestrating public participation may be more suited to one particular stage of the process: community risk assessment, for example, which emerged from the disaster risk reduction sphere and refers to a collection of participatory methods for assessing hazards, vulnerability and capacity in support of community-based disaster risk reduction (van Aalst, Cannon and Burton, 2008), is particularly suited to the stage of assessing impacts, vulnerability, risk and resilience. Community risk assessment incorporates a range of tools and methods, such as livelihood surveys, transect walks, focus group meetings, key informant interviews, surveys and discussions.

30. Many of the mechanisms for facilitating public participation require extensive time and resources on the part of governments and other actors, but these should be viewed as worthwhile investments in effective adaptation action. As climate change adaptation efforts have increasingly shifted to incorporating bottom-up and place-based approaches, the basic logic underlying the value of public and community engagement holds that, through engagement at the grass-roots level, the activities that emerge have the people’s ‘ownership’ and participation, are based on trust and therefore have more chance of success (van Aalst, Cannon and Burton, 2008). Indeed, the SR1.5 repeatedly highlights the value of inclusive decision-making, participation and stakeholder engagement in advancing adaptation, stating that many strategies for sustainable development enable transformational adaptation for a 1.5 °C warmer world, provided attention is paid to reducing poverty in all its forms and to promoting equity and participation in decision-making. Looking at the intersection of adaptation planning and urban planning in particular, the SR1.5 notes that, in circumstances

where adaptation planning efforts threaten to further marginalize poor citizens, by, for example, displacing impacts onto their communities, it is critical to consider factors such as inclusive participation, justice and equity if urban risk management efforts are to succeed.

Figure 3
Public participation throughout the iterative adaptation process



Source: Adapted from Adaptation Committee, 2019a.

31. Governments, adaptation practitioners and others designing and carrying out public participation efforts for adaptation may envisage and aim for different types of benefit resulting from their efforts. For example, in Sierra Leone, engaging communities, indigenous peoples, civil society and other stakeholders in adaptation planning and implementation is seen as a way to promote public support for adaptation in the country, to contribute to higher adaptation ambition and to improve the effectiveness and resilience of adaptation.⁹ In general, the benefits arising from public participation in adaptation can be divided into two categories (Burton and Mustelin, 2013), both of which are often cited as reasons for advancing public participation in adaptation: developmental benefits for participants, such as gaining knowledge about a given issue or reinforcing their value as a citizen; and instrumental benefits arising from the products of participation, such as better policies or decisions in terms of greater political legitimacy or improved managerial efficiency.

A. Challenges and barriers

32. Although public participation is widely recognized as integral to inclusive and effective adaptation planning and action, it is by no means a straightforward process. There are significant challenges and complications that governments and others seeking to include

⁹ Source: Presentation by a representative of the Sierra Leone Meteorological Department of the Ministry of Transport and Aviation at the TEM-A on 4 August 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/virtual-panel-public-participation-to-enhance-adaptation-action/>.

public participation in their adaptation efforts must take into consideration. According to the SR1.5, public participation in climate change policy often faces implementation challenges and may not always result in better policy outcomes. This may be the case, for example, when stakeholders have divergent or conflicting preferences or do not regard climate change as a priority.

33. Wamsler et al. (2020) have explored some of these dynamics specifically as they relate to outcomes for adaptation and nature-based solutions. Looking at citizen involvement in various municipalities in Sweden, they found that current practices often lead to outcomes that are counterproductive to advancing adaptation and nature-based solutions, such as when citizens use public participation and engagement mechanisms to contest the consideration of adaptation action and nature-based solutions (typically on the basis of personal interests that conflict with proposed measures), or when citizens fail to intervene when municipalities neglect adaptation and nature-based solutions in their planning processes.

34. Wamsler et al. (2020) do not argue that public participation is counterproductive per se, but rather that the underlying structural conditions are giving rise to these dynamics. A range of barriers in both the personal sphere (related to citizens) and the political and practical spheres (related to municipalities) are at play in current approaches to citizen engagement. Related to municipalities, they include lack of supporting policies, regulations and planning tools; lack of financial and human resources; and traditional planning methods that have a technical focus and little stakeholder engagement. By contrast, barriers related to citizens include personal or conflicting interests; resistance to change; lack of environmental awareness and/or belief in climate change; education, income, age and political orientation; pre-existing conflicts and/or place attachment; social power structures and networks; and perceptions of individual influence and responsibility. Addressing these structural impediments to effective and productive citizen engagement that advances adaptation and nature-based solutions will require, among other things, decision makers and civil servants to develop their capacity to design and execute participatory forms of governance for complex problems such as adaptation.

35. Moreover, despite “great strides” in broadening participation in adaptation and climate action, disparities persist in terms of which segments of the population are actively making use of the opportunities provided by the participation mechanisms (Hügel and Davies, 2020). On the one hand, civil society groups and private sector organizations are now regular contributors to processes and conversations surrounding climate change that were previously the domain of scientists and technical experts; on the other, formal participation by unorganized publics in climate adaptation remains limited.

36. In addition, challenges emerge from the overall landscape of public participation efforts related to climate change adaptation. Because adaptation is a continuous iterative process (see figure 3) in which many different levels of government and other actors are engaged, it is important to approach public participation in adaptation in a manner that is coordinated and optimizes efficiencies. Failure to do so can give rise to a situation in which many different actors are using many different methods to engage the same communities, possibly leading to duplication of efforts and consultation fatigue.¹⁰ The integrated vulnerability assessment process is one approach that overcomes this challenge through a standardized and replicable method of identifying and assessing vulnerability whereby the resulting data are uploaded to an online database that is accessible by different decision makers. This is a coordinated national-level process that makes use of a range of public participation methods, including at the village and household level, thereby increasing the efficiency of the vulnerability assessment while also maintaining locally specific information and community perspectives.¹¹

¹⁰ *Source:* Presentation by a representative of the NAP Global Network at the TEM-A on 4 August 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/virtual-panel-public-participation-to-enhance-adaptation-action/>.

¹¹ As footnote 10 above.

B. Good practices

37. Although there is general acceptance of the potential value of participatory processes, the fact that they are “often messy, cumbersome and slow” (Hügel and Davies, 2020) and riddled with challenges (as described in chap. III.A above) can tempt policymakers and practitioners to reduce participation to a superficial exercise rather than a process of meaningful engagement. Despite the various challenges, meaningfully engaging the public in adaptation planning and action can help ensure that adaptation interventions reach and meet the needs of those who are most vulnerable to the impacts of climate change. It is therefore helpful, in relation to the NAP process or other adaptation efforts, to have high-level commitment to an inclusive and participatory process at the outset.¹² This sends a clear message that investment in stakeholder engagement is a priority, and that participation is central to the process rather than a hindrance.

38. To move away from superficial practices and towards meaningful engagement, policymakers and practitioners must consider methods for better engaging with unorganized publics in adaptation planning and action. One important step in this regard is redistributing expertise in decision-making structures by admitting all participants as experts in their own capacity (Hügel and Davies, 2020). This opens a space for all contributors to bring their experience, knowledge and values to the adaptation process as a complement to scientific and technical expertise.

39. In this context, experts participating in the 2020 TEMs-A emphasized the importance of targeting different types of stakeholder and integrating existing groups and platforms into public participation efforts. Those designing the participation mechanisms can take advantage of stakeholders’ varied expertise and leverage their potential to catalyse change across a range of domains. For example, adaptation policymakers and practitioners can tap into the rich knowledge of the private sector for designing and implementing adaptation plans and actions and boosting public awareness of adaptation.¹³ Indeed, the TEP-A in 2019, which focused on adaptation finance, including the private sector, highlighted the myriad ways in which the private sector can contribute to adaptation, including through financing action, providing adaptation-related products and services, and managing transboundary climate risks.¹⁴

40. Technical experts highlighted faith leaders and faith-based organizations as another type of stakeholder that holds great potential to broaden the reach of public information, awareness and participation efforts as they relate to climate change.¹⁵ Faith is an important driving force for public mobilization for many individuals and communities, and therefore engaging faith leaders and faith-based organizations can yield fruitful second-order engagement benefits by drawing more people into the conversation and action related to adaptation. The United Nations system has recognized the importance of faith-based organizations in environmental protection and sustainable development. According to UNEP (2018), there are over 190 environmental faith-based organizations globally working on climate change, biodiversity and other environmental issues at the local, regional and global level. With spiritual values driving individual behaviour for over 80 per cent of people around the world, and religion and spiritual beliefs serving as key drivers for political engagement,

¹² As footnote 10 above.

¹³ Source: Presentation by a representative of Lakeshore Agro-Processors Enterprise at the TEM-A on 4 August 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/virtual-panel-public-participation-to-enhance-adaptation-action/>.

¹⁴ The technical paper resulting from the TEP-A in 2019 (FCCC/TP/2019/3) also highlighted various steps that governments can take to incentivize private sector engagement in adaptation, such as taking action to increase demand for adaptation products and services (e.g. creating rules and regulations for evaluating, disclosing and managing climate risks), aiming to sustain suppliers of adaptation-related products and services (e.g. creating data and technology standards to facilitate easy interaction among those in the climate risk market) and de-risking investment in adaptation (e.g. by providing early-stage funding for emerging adaptation-related technologies).

¹⁵ Source: Presentation by a representative of Islamic Relief Pakistan at the TEM-A on 4 August 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/virtual-panel-public-participation-to-enhance-adaptation-action/>.

social inclusion and other dynamics in many countries, such organizations can play a key role in advancing adaptation.

41. Beyond faith-based organizations and the private sector, women’s organizations, indigenous groups, universities, professional groups and other established entities can also contribute to enhancing meaningful and effective participation in adaptation.¹⁶ Incorporating these different groups and stakeholders throughout the adaptation planning process may also help to strengthen the relevance of adaptation action and boost the implementation of chosen measures. Cloutier et al. (2015) conducted a research experiment in the Quebec City region of Canada in 2010–2013 with the objective of assisting local decision makers with adaptation planning in a local context. The experiment involved hosting several sectoral workshops, intersectoral forums and design workshops related to adaptation planning with various types of stakeholder from the region, including land-use planners, community-based organizations, private sector groups, social workers, resident committees and researchers. The authors concluded that the knowledge and experience of these actors is directly relevant to various phases of the urban adaptation planning process, including diagnosing issues, assessing risk, and selecting and prioritizing adaptation options and solutions. Engaging such representatives and community members also provides an opportunity for municipal professionals to initiate collaboration with local actors to advance their adaptation efforts.

42. There are approaches to adaptation that incorporate many of these principles and practices and are participatory and inclusive by design. Community-based adaptation, for example, is an approach to long-term adaptation planning that is built around the recognition that local communities, especially the members most vulnerable to the impacts of climate change, must be engaged in the adaptation process (Adaptation Committee, 2019b). Similarly, adaptation researchers and practitioners are increasingly advocating for locally led adaptation in recognition of the need to shift power to local people so that they can have a hand in deciding their adaptation actions, and of the fact that “adaptation will be less effective and more likely to produce maladaptive outcomes” without their participation (Soanes et al., 2021). In January 2021, a set of the following eight principles for locally led adaptation was launched with the aim of guiding governments, practitioners and other stakeholders away from “empty participation rhetoric” towards effective, locally led adaptation (Soanes et al., 2021):

- (a) Devolve decision-making to the lowest appropriate level;
- (b) Address structural inequalities faced by women, youth, children, people with disabilities, displaced people, indigenous peoples and marginalized ethnic groups;
- (c) Provide patient and predictable funding that can be accessed more easily;¹⁷
- (d) Invest in local capability in order to leave an institutional legacy;
- (e) Build a robust understanding of climate risk and uncertainty;
- (f) Implement flexible programming and learning;
- (g) Ensure transparency and accountability;
- (h) Implement collaborative action and investment.

43. At the national level, countries have been finding various ways to engage the public in the NAP process (see box 4).

¹⁶ As footnote 10 above.

¹⁷ The technical paper resulting from the 2019 TEP-A (FCCC/TP/2019/3) highlighted the enduring need to increase the amount of adaptation finance reaching the local level: of the 18 per cent of global climate finance received by the least developed countries, only 10 per cent ended up in local communities. Options for remedying this include implementing policies that include a commitment to directing a minimum amount of adaptation finance to the local and community level, and promoting access mechanisms for funds and other sources of finance that can be accessed directly by community-led organizations.

Box 4

Public participation in the national adaptation plan process

COP 17 agreed that enhanced action on adaptation through the NAP process should follow a country-driven, gender-sensitive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science and, as appropriate, traditional and indigenous knowledge, and by gender-sensitive approaches.^a

Countries have taken a variety of approaches to abiding by these guiding principles for the NAP process and facilitating inclusive public participation. Several countries in the Pacific region, including Kiribati and Tuvalu, have been using integrated vulnerability assessment through a participatory process. Through the integrated vulnerability assessment framework, they used a standardized and systematic approach to collecting data on how local communities are affected by environmental and developmental changes through focus group discussions, household surveys and other methods for directly soliciting community-level perspectives and concerns. These data were then used to support the identification of different adaptation options and to provide a baseline for monitoring and evaluating NAP implementation.

Other countries have taken advantage of existing public participation methods to gather input for their NAPs. Using processes that stakeholders are familiar with can help encourage more individuals and organizations to participate in the process and instill confidence that their views will be considered. For example, in South Africa, as part of its parliamentary approval process for policies and laws, the Government publishes draft documents in the Government Gazette for public comment. This was done during the NAP process and more than 30 stakeholders submitted comments on the draft document, which were considered in editing and refining it. In this case, stakeholders raised concerns related to gender inequality and particularly vulnerable groups, and as a result more attention was paid to these areas in the revised NAP.

Another approach to engaging the public in the NAP process is through stakeholder dialogues. For example, Peru's Ministry of Environment has held a series of national dialogues with the participation of civil society, academia, the private sector and indigenous groups, which are seen as a key mechanism for engaging the public in the development of national climate policy.

Source: Presentation by a representative of the NAP Global Network at the TEM-A on 4 August 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/virtual-panel-public-participation-to-enhance-adaptation-action/>.

^a Decision 5/CP.17, para. 3.

C. Gender considerations

44. Gender sensitivity is a key principle underpinning the NAP process. More broadly, considering gender in designing, using and evaluating public participation mechanisms for adaptation is vital for ensuring that the mechanisms are inclusive and no one is 'left behind'. There are socially determined and gender-related differences in how individuals and communities experience the impacts of climate change, as well as in their capacity to respond to these impacts and influence related decision-making processes.¹⁸ These disparities result from factors such as gender inequality in decision-making and in access to resources.¹⁹ Concerted efforts to achieve gender-balanced and diverse public participation are therefore integral to realizing effective adaptation.²⁰

45. Ensuring the gender sensitivity and gender inclusivity of public participation in adaptation planning and action can be complex and challenging. For example, in Sierra

¹⁸ As footnote 10 above.

¹⁹ FCCC/TP/2013/11, para. 72.

²⁰ As footnote 10 above.

Leone, the lack of gender inclusivity in some rural communities is a significant challenge in relation to public engagement efforts.²¹ Household gender dynamics and cultural norms can lead to women being excluded from major adaptation-related decision-making processes, such as the relocation of a village due to coastal erosion and flooding, even in cases where these processes are designed to be participatory (Bertana, 2020). As climate change impacts intensify and decisions on adaptation become more consequential, these dynamics threaten to undermine the capacity of those who are marginalized on the basis of their gender to shape a climate-resilient future that meets their needs.

46. To overcome these challenges and help to ensure that everyone is given equal opportunities to contribute to and benefit from climate change adaptation, a range of gender-sensitive tools, practices and approaches have been developed for adaptation planning and action. The Adaptation Committee, the LEG and the NAP Global Network published in 2019 the *Toolkit for a Gender-Responsive Process to Formulate and Implement National Adaptation Plans (NAPs)* as a supplement to the NAP technical guidelines, which highlights preparatory steps (e.g. identifying opportunities to apply gender-related international commitments and domestic laws and policies in the NAP process), entry points and enabling activities (e.g. considering gender equality when prioritizing adaptation actions, or engaging in capacity-building for facilitating gender-responsive approaches, respectively) and key tools for a gender-responsive NAP process (e.g. gender analysis or gender-responsive budgeting). Many of these activities and tools can be used more broadly for advancing gender-responsive adaptation, along with other general tools and specific practices.²² To ensure that these approaches are achieving their objectives, governments and others applying the tools and implementing the activities should ensure that a monitoring and evaluation framework is in place to assess progress and inform future efforts.

IV. Youth engagement in adaptation planning and action

47. This is a time of ecological breakdown and widespread climate disruption. In this context, over the past two years the world has witnessed unprecedented levels of mobilization on the part of children and youth demanding that governments and corporations take urgent action on climate change. While children and youth are disproportionately vulnerable to the adverse effects of climate change, they are also key actors in the fight against climate change and hold great potential to be effective agents of change in relation to climate adaptation action. It is therefore worthwhile to examine specifically youth engagement in adaptation planning and action.

48. Young people are demonstrating their eagerness to take part in conversations related to adaptation from the local to the international level and highlighting their capacity to engage constructively in the adaptation process. In January 2021, the *Global Youth Call to Action: Adapt for Our Future* was published, with young people calling on world leaders to adapt for their future (Global Center on Adaptation, 2021). The Call to Action was developed on the basis of inputs from hundreds of thousands of young people from 120 countries. It notes that youth bring new ideas and radical ambition, which are required to develop adaptation solutions and implement them on a large scale, and that, when they are empowered, young people can build climate resilience and adaptive capacity in their communities. It calls for a “decade of action” aimed at preparing younger generations for the transition to climate-resilient green development, as well as for a set of actions across six key categories ranging from raising awareness on adaptation, to promoting universal education, training and skills development for youth empowerment, and fostering youth participation in implementing the Paris Agreement and achieving the SDGs.

A. Challenges to youth participation

49. Although young people are eager to contribute to adaptation solutions, they face a number of significant challenges in making meaningful contributions to adaptation planning

²¹ As footnote 9 above.

²² See, for example, document FCCC/TP/2013/11, chap. IV.B.

and action. Regional youth-focused and youth-led consultations held in eight countries in 2019 identified various key challenges in this respect under the two broad categories of institutional barriers and capacity barriers (Amponsem et al., 2019). Institutional barriers identified include lack of platform and recognition as key contributors, which relates to the framing of children and youth as passive victims of climate change; tokenism, which relates to youth engagement being reduced to a symbolic gesture rather than a meaningful contribution; insufficient transparency and excessive bureaucracy, which make it difficult and financially burdensome for youth and youth-led organizations to obtain information and gain formal recognition; and lack of access to education in general and climate change education in particular, which prevents young people from gaining skills and knowledge for effectively contributing to climate change adaptation and resilience-building efforts.

50. Capacity barriers can be subdivided into knowledge capacity barriers and financial capacity barriers. Knowledge capacity barriers relate to lack of technical or organizational knowledge, such as technical knowledge on adaptation or knowledge of organizational management and national and international politics or policymaking processes, which hinders youth adaptation action. Financial capacity barriers, which were repeatedly cited as a major challenge in the consultations referred to in paragraph 49 above, relate to the difficulty of accessing funding for adaptation action, which results from both the lack of funding opportunities targeted at young people and the difficulty for them to access any existing opportunities owing to lack of skills, expertise and/or experience.

51. Despite these barriers, young people are continuing to find ways to actively contribute to adaptation planning and action. Governments are also increasingly recognizing the potential of young people to drive progress towards adaptation, and are finding ways to facilitate their active participation in related processes.

B. Youth engagement

52. Youth engagement in adaptation efforts can take the form of, among other modalities, advocacy, decision-making and on-the-ground action, and can be facilitated in various ways, including through awareness-raising and training, capacity-building and empowerment. For effective youth engagement, it is critical to ensure that youth are not perceived or portrayed as a homogenous group with universal values, perspectives and priorities as this “misses the vast potential of their unique and collective capacities to drive solutions” (UNDRR, 2020). When engaging university students and young professionals in particular, this means, for example, engaging them in their respective area of knowledge and expertise, such as by inviting those studying agriculture to the field to share with farmers good adaptation practices relevant to the climate change impacts they are facing or expect to face in the future.²³

1. Adaptation planning and policymaking

53. The development, implementation and review of adaptation plans and policies offers ample opportunity for engaging youth and other stakeholders. Such engagement not only gives young people the chance to demonstrate their ideas and skills, but also contributes to “engendering their sense of ownership of the process” (Amponsem et al., 2019). This can help to secure long-term buy-in on the part of young people to continue actively contributing to adaptation efforts. Long-term buy-in is particularly critical both because adaptation is a long-term iterative process and because the decisions and actions taken now (or lack thereof) in relation to adaptation will continue to affect young people for decades to come.

54. Several expert participants in the 2020 TEMs-A highlighted youth engagement in the NAP and NDC processes as particularly worthwhile. The Global Youth Call to Action on Adaptation, referred to in paragraph 48 above, also drew attention to this, asking that governments recognize that youth must be engaged in the design, implementation and evaluation of adaptation plans and policies. Engagement in these processes can include identifying adaptation-related priorities and options during the planning stage, and using skills and expertise to implement identified measures.

²³ As footnote 13 above.

55. In 2018, Ghana published a NAP framework for guiding the development, coordination and implementation of its NAP process (Environmental Protection Agency Ghana, 2018). Consultations conducted in developing the framework included youth organizations, and the resulting product explicitly recognizes the need to involve youth in adaptation as one of its guiding principles. It acknowledges that youth participation in adaptation had so far been limited in the country, but states clearly that, going forward, youth should be given more opportunity to participate in designing and implementing NAP activities. Youth organizations in the country have already demonstrated where they can play an active role in the process. After Ghana's NAP readiness proposal had been approved by the Green Climate Fund, the Strategic Youth Network for Development, a national youth-led environmental NGO, examined the proposal to identify where youth are well suited to contributing to the NAP process,²⁴ and presented papers that made clear what young people can offer to the process, particularly in relation to technology, education and public awareness.

56. Several opportunities for youth engagement in Uganda's NAP process for the agriculture sector were identified and created.²⁵ The Decent Rural Youth Employment project, for example, supported by FAO, had multiple elements designed to boost both youth employment in the agriculture sector and their involvement in adapting the sector to climate change. As part of the project, youth were trained on climate change adaptation and mitigation, linkages were fostered with agricultural insurance organizations and companies, youth champions were directly engaged in interventions to strengthen resilience, and the Government awarded seed funding to the best 25 youth farmers. Good practices and effective approaches for involving youth in the NAP process that emerged from the Ugandan experience include:

- (a) Conducting a policy analysis to identify gaps in youth engagement;
- (b) Packaging messages in animations, videos and social media content;
- (c) Developing information packages and sharing them with families;
- (d) Using music, dance and drama, as well as debates, essay contests and other competitions, to engage youth of different ages;
- (e) Sharing economic analyses that demonstrate the benefits of climate action compared with the impacts and costs of inaction.

57. Moreover, the Ugandan experience underscored that, in addition to helping to advance adaptation, youth engagement can yield significant benefits for young people, from increased employment in green jobs, income and livelihoods, to improved ecosystem services and health.

58. Some NAPs outline specific action to facilitate youth participation. Throughout its NAP, Kiribati refers to youth considerations and engagement (Government of Kiribati, 2019), making clear that all strategies and actions in the NAP shall be inclusive of vulnerable groups, considering gender, youth and children, the elderly and people with disabilities. Further, one of the actions in the NAP is to facilitate participation of children and young people in climate change adaptation and disaster risk management initiatives and conduct youth empowerment, which is to be realized by, among other things, training children and youth on adaptation and disaster risk management, supporting youth- and child-led adaptation projects, and developing and implementing strategies in collaboration with youth to promote mental health and address climate change related anxiety.

59. In relation to NDCs, young people often find it challenging to engage in NDC processes or discussions for various reasons, including lack of information on the process,

²⁴ Source: Presentation by a representative of the Strategic Youth Network for Development at the TEM-A on 11 August 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/youth-intergenerational-adaptation-dialogue/>.

²⁵ Source: Presentation by a representative of FAO at the TEM-A on 14 July 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/virtual-workshop-youth-engagement-to-enhance-adaptation-action/>.

lack of access to the government agencies or representatives that are leading the related work, and lack of formal or clear opportunities for youth engagement.²⁶ To better understand how youth can participate in NDC processes, the Steering Committee of the NDC Partnership established a Youth Task Force to identify priorities, obstacles and recommendations in relation to youth engagement in climate action.²⁷ Following a youth-led consultation process that garnered hundreds of inputs from youth, country representatives, institutions and others, the Task Force developed a Youth Engagement Plan specific to NDC processes (NDC Partnership, 2020). The plan includes four key recommendations:

(a) **Design youth-inclusive NDC processes at the national level:** this might include considering the needs and rights of youth in developing NDCs, establishing or strengthening formal institutions or bodies for youth engagement, appointing an official to oversee youth engagement and inclusion in relation to NDC processes, or regularly engaging youth representatives in technical meetings with policymakers;

(b) **Support youth-led NDC-related projects:** by, for example, establishing a fund or funding window through which youth can access small grants to undertake NDC-relevant projects, supporting youth organizations in accessing funds from multilateral climate funds or other sources, or creating formal structures at the local level to facilitate youth participation in climate projects;

(c) **Build youth capacity for climate action:** activities may include providing and/or supporting youth-led training sessions and learning resources to help young people engage in domestic climate action, hosting regular workshops to bolster youth skills and networks, or creating a scholarship fund for academic or technical training to boost skills and knowledge related to climate action;

(d) **Engage youth meaningfully in global NDC Partnership processes and decision-making:** this could involve supporting youth organizations in becoming members of the Partnership.

60. While these recommendations may help strengthen youth engagement in NDC processes going forward, according to the NDC Partnership, countries are already recognizing the value of this engagement and taking steps to better incorporate youth participation as they update and act on their NDCs.²⁸ As at November 2020, 18 countries had made requests for support through the NDC Partnership that included some mention of youth, in the context of implementing projects relating to NDCs as well as updating NDCs. As an example, support has been confirmed for an effort in Nepal to involve colleges and universities in NDC research and development.

61. Some countries have made explicit reference to youth in their NDCs.²⁹ For example, Cambodia included youth involvement as a cross-cutting area in its updated NDC, and in relation to adaptation it underlined opportunities for youth engagement in, for example, the infrastructure sector, where youth can offer valuable inputs to construction design, and the tourism sector, where they can work in ecotourism businesses. Beyond these key sectors, Cambodia sees children and youth having an important role across all sectors in developing, implementing, monitoring and enforcing climate action. Similarly, in its second NDC, the United Arab Emirates highlighted the potential for youth contribution to climate mitigation and adaptation and outlined its key investments and initiatives aimed at developing this potential. Specifically, the Emirates Youth Climate Strategy was launched in 2018 with the goal of promoting youth participation in climate action and developing youth capacity to address climate change related challenges; periodic Youth Circles on climate and sustainability have been organized; and the Masdar Youth 4 Sustainability platform was

²⁶ Source: Presentation by a representative of the Red Cross Red Crescent Climate Centre at the TEM-A on 14 July 2020; webcast available at <http://tep-a.org/technical-expert-meetings-on-adaptation/technical-expert-meeting-on-adaptation-2020/virtual-workshop-youth-engagement-to-enhance-adaptation-action/>.

²⁷ See <https://ndcpartnership.org/news/pia-2020-youth-engagement-plan-bringing-youth-voices-ndc-planning-and-implementation>.

²⁸ See <https://ndcpartnership.org/news/youth-and-2020-ndcs-driving-force-higher-climate-ambition>.

²⁹ NDCs are available at <https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>.

launched in 2020 to offer mentorship and engagement opportunities aimed at supporting youth environmental leadership.

62. Young people are also actively engaged in adaptation-related discussions at the international level through the YOUNGO constituency, which is the official UNFCCC constituency for children and youth. The YOUNGO constituency was formed in 2009 and, after operating under provisional status for two years, become fully recognized in 2011 at COP 17. The constituency has since served as the main conduit for youth participation in the UNFCCC process and has grown to include over 200 YOUNGOs and 5,500 individuals as members.³⁰ Its work is organized primarily through a set of topical working groups (e.g. on adaptation, loss and damage, youth participation, agriculture, finance and gender) that track negotiations under the UNFCCC, run campaigns, produce products and organize requested inputs. The YOUNGO constituency, particularly through its adaptation working group, contributed actively to the TEP-A in 2020 as a volunteer expert organization.

2. Leadership of adaptation action

63. While youth engagement in climate action has been especially visible over the past two years, and youth political advocacy in particular is often in the spotlight, young people have long been actively engaged in supporting and leading a range of tangible climate actions in their communities.

64. In its 2013 report on youth in action on climate change, the UNFCCC highlighted several examples of youth-focused and youth-led climate adaptation initiatives from around the world. For example, the El Mouddaa community-based adaptation initiative in Morocco sought to bolster local resilience by fostering resilient farming practices and sustainable water and land management, as well as by facilitating use of early warning techniques in the community. A youth organization managed the project and young people undertook a wide range of tasks to contribute to the project implementation, such as building dams to reduce floodwater and related damages as well as helping to designate land around the village for reforestation, revegetation and related purposes. As another example highlighted in the UNFCCC report, youth in Xai-Xai, Mozambique, took a leading role in a project seeking to advance local adaptation knowledge and action to combat risks arising from increased and more erratic rainfall. Specifically, youth groups helped to boost agricultural production and improve soil fertility by constructing barriers to halt soil erosion.

65. More recently, the Youth Policy Case Competition held as part of the 2020 TEP-A testified to the ingenuity and potential of young people to develop policy-relevant adaptation solutions for their communities and beyond. Chosen from more than 60 entries from dozens of teams of young people aged 18–30, the top six teams were invited to pitch their ideas for how to solve adaptation challenges that they are passionate about to a panel of expert judges at a virtual showcase in November 2020 for the chance to be invited to attend COP 26.³¹ They presented a wide range of ideas targeting different adaptation-related issues; for example, one team pitched a geosocial networking mobile application that enables users to search and match with adaptation projects that they can participate in or draw inspiration from; and another team proposed using youth-led local radio shows to address climate data gaps and inform related policymaking processes in Kenya. The winning team presented an electoral advocacy project whereby adaptation-related education and capacity-building is offered to candidates in municipal elections who agree to commit to incorporating climate change into their governmental plans, to support public participation in climate change related planning and implementation, and to discuss next steps with the team running the initiative if elected.

66. In the light of the demonstrated commitment and capacity of youth to contribute to adaptation action, the Adaptation Fund has taken steps to catalyse youth engagement in adaptation. The Fund launched a USD 10 million innovation programme in 2019 whereby small grants of up to USD 250,000 will be administered by UNDP and UNEP to recipients including youth innovators and community groups.³² One of the first innovation grants

³⁰ See <http://www.youngo.uno/about/>.

³¹ Find out more about the finalists and watch the virtual showcase at <http://tep-a.org/casecompetition/>.

³² See <https://www.adaptation-undp.org/adaptation-fund-launches-new-grant-programme-foster-innovation-adaptation-practices-vulnerable>.

awarded under the programme was to support an initiative in Armenia with a strong focus on youth, seeking to engage young future adaptation leaders via a digital education module focused on adaptation challenges and crowd-sourced solutions.

V. Conclusions

67. Since the TEP-A was launched in 2015 the urgency of adaptation has continued to grow. In 2016–2020, Parties, adaptation policymakers and practitioners, business representatives, researchers, youth and other experts were convened under the TEP-A to exchange views, share ideas and recount their experience of promoting enhanced action on adaptation in the short term. Activities under the TEP-A focused on a different overarching topic each year: reducing vulnerability and mainstreaming adaptation (2016); integrating adaptation with the SDGs and the Sendai Framework for Disaster Risk Reduction 2015–2030 (2017); enhancing adaptation planning in relation to vulnerable ecosystems, communities and groups (2018); and adaptation finance, including the private sector (2019).

68. Under its 2020 topic of enhancing adaptation action through education and training, and public and youth participation, the TEP-A highlighted how society can be mobilized and better equipped to enhance adaptation action. It is clear that formal, non-formal and informal education can all contribute to enhancing adaptation. Policymakers can take steps to better integrate adaptation into the education system, such as by incorporating it into both science and social science curricula, and to advance adaptation education outside the formal system by integrating it into, for example, media campaigns and entertainment. Games-based education and other innovative approaches may help to deliver adaptation-related education to children and youth who may otherwise find the topic challenging to engage in. To complement adaptation-related education, specialized training programmes are important for equipping people with the knowledge and skills to take informed decisions on adaptation specific to their circumstances and vulnerabilities.

69. Education and training can prepare individuals and communities to more effectively participate in adaptation planning and implementation. More broadly, policymakers and practitioners can facilitate public participation in adaptation by, among other things, ensuring high-level commitment to an inclusive and participatory process at the outset of the process in question and leveraging existing organizations and platforms to broaden the reach of the participatory process. Public participation initiatives and mechanisms should always be gender-sensitive. In addition, because young people will be disproportionately affected by climate change and the adaptation decisions taken today, and because they have the potential to be agents of change for advancing adaptation, it is critical to actively and meaningfully engage youth throughout the adaptation process. Youth participation in the NAP and NDC processes may be particularly fruitful as an entry point for advancing youth engagement in adaptation. Regardless of the process or initiative, however, youth participation efforts must never be tokenistic: youth should always be engaged according to their different interests and areas of expertise and in their different capacities as scientists, entrepreneurs, students, farmers, and so on.

70. The 2020 TEMs-A took place during the COVID-19 pandemic, which prompted many of the experts and contributors to reflect on the parallels between the pandemic and the climate crisis. They noted that many of the individuals and communities that are highly vulnerable to the pandemic are also highly vulnerable to climate change. They also underscored the need for a just, green and resilient recovery from the pandemic and to ensure that the recovery contributes to adaptation in a manner that is locally driven, inclusive and context-specific.

71. Although 2020 marked the end of the TEP-A, the opportunities, good practices and lessons learned throughout the five-year process provide an invaluable overview of some of the steps and approaches that countries can take to accelerate their adaptation planning and action. As countries recover from the pandemic and move forward with implementing the Paris Agreement and towards achieving the SDGs, the outputs of the TEP-A since 2016 can equip policymakers and practitioners with a slate of short- and medium-term options for planning, financing, implementing and evaluating adaptation action.

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