Adaptation **C**ommittee

5 August 2019

Fostering engagement of the agri-food sector in resilience to climate change

Report on the workshop

Summary

The workshop on *Fostering engagement of the agri-food sector in resilience to climate change* took place in Geneva, Switzerland from 29-31 October 2018. It was organized jointly by the International Trade Centre (ITC) and the UNFCCC secretariat, under the guidance of the AC, and with support from the Governments of Germany and Japan as well as the European Commission.

The workshop underscored the vital importance of engaging the private sector in adaptation efforts, and the disproportionate vulnerability of certain private sector actors—in particular SMEs—to the impacts of climate change. It also found that there is a clear business case for adaptation but found that awareness as well as support for assessing and implementing adaptation measures is still at a low level. Further, workshop participants emphasized that the private sector does not operate in a vacuum, but rather that their adaptive capacity is closely tied to an enabling political and regulatory environment.

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1. Introduction and background

1. In its flexible 2016-2018 workplan, the Adaptation Committee (AC) agreed to advance activities on the engagement of the private sector. This included building on the Nairobi work programme's Private Sector Initiative and working towards achieving the objective of providing guidance on ways to enhance support, including finance, technology and capacity-building, for the process to formulate and implement national adaptation plans (NAPs).

2. As agreed at AC11, a mapping of actors was undertaken, entailing the preparation of a review of relevant literature,[1] together with an open survey of private sector adaptation action and motivations.[2] Reports on these activities, as well as an overview report presenting key findings as well as possible next steps were considered by the AC at AC12.

3. As a follow-up to this work, the AC agreed to convene a workshop in 2018, to advance activities on the engagement of the private sector, and foster greater contribution of the private sector, including examples of involvement so far.

4. The AC considered a concept note[3] at AC13 and agreed to focus the workshop on the agriculture and food sector, including Small and Medium Enterprises (SMEs).

5. The substance and structure of the workshop were informed by several stages of preparatory work undertaken in the months leading up to the event. The literature review revealed an obvious need to understand how to engage the private sector in adaptation. The private sector is already engaged in a wide range of ways, yet there are many opportunities to stimulate further adaptation action and enhance and better coordinate current and future action.

6. Additionally, the literature review illustrated that certain sectors and types of private sector organisations (such as infrastructure, health and agricultural sectors and SMEs) warrant more attention, given that they provide vital services to society, in particular in the agriculture and food sector, that their resilience and sustainability directly contributes to that of communities, that they may be situated in areas that are most vulnerable to climate impacts, especially those in developing countries, and that they affect millions of people's livelihoods.

7. The survey undertaken prior to AC12 backs the notion that MSMEs are struggling to effectively adapt to climate change. In the survey, 40 per cent of respondents reported that their company had a strategy or plan in place to deal with climate-related risks, with 33 per cent reporting that their companies did not currently but were planning to develop one. More than half of national companies (60 per cent) reported that they already had a plan, while 50 per cent of multinational companies and 37 per cent of SMEs reported the same. Compared to these other groups, microenterprises demonstrated a lower involvement with the development of climate strategies, with only 28 per cent reporting having an existing strategy or plan.

8. Prior to the workshop, there was an open call for contributions, during which interested organizations could send in their concepts for the organization of an open lab or mini workshop session. 26 concepts by 34 organizations were submitted. Given that 15 slots were available, the concepts were screened to determine their overall fit with the concept of the workshop and were merged where overlaps were obvious. In total, 15 open labs and mini workshop sessions were conducted by 24 contributing organizations.

9. This report synthesizes the outcomes of the workshop. First, it highlights the workshop proceedings and the key issues that formed the core substance of the workshop. Subsequently, it offers an overview of the key lessons and messages that emerged from the meeting. Finally, it concludes by sketching out possible next steps for building on the outcomes of the workshop.

[1] AC/2017/17/Add.1, available at https://goo.gl/JDcsbV.
[2] AC/2017/17/Add.2, available at https://goo.gl/ncDF5y.
[3] AC/2018/7, available at https://unfccc.int/sites/default/files/resource/ac13_8b_ps_workshop.pdf.

2. Proceedings

10. The workshop on *Fostering engagement of the agri-food sector in resilience to climate change*[4] took place in Geneva, Switzerland from 29-31 October 2018. It was organized jointly by the International Trade Centre (ITC) and the UNFCCC secretariat, under the guidance of the AC, and with support from the Governments of Germany and Japan as well as the European Commission.

11. The workshop convened 100 participants, including six AC members, along with entrepreneurs, government representatives, experts from UN-affiliated agencies, farmers, scientists, researchers, business owners, civil society organizations, and development, investment, and cooperative banks to discuss challenges and opportunities that lie at the intersection of climate resilience, trade, and the agri-food sector.

12. The days were structured around a plenary session, to provide an overview of the topics, followed by interactive open lab and mini workshop sessions that allowed for thematic deep dives. In the plenary sessions, experts, practitioners, and other stakeholders reflected on the main theme of the day. Following each plenary, participants had a choice of three to six sessions to attend that day, with three parallel sessions running at any given time. These sessions encouraged participants to collaborate to better understand the risks faced by different actors in the agri-food sector, envision future scenarios that could shape adaptation strategies, determine potential indicators for assessing climate resilient supply chains, articulate challenges and opportunities tied to adaptation actions in the agri-food sector, reflect on innovations serving to advance resilience within the sector, and accomplish other goals through knowledge sharing and collective brainstorming. This structure yielded a rich exchange of experiences and views that elevated each participant's individual contribution to a shared construction of relevant problems and their potential solutions.

13. The workshop opened with introductory remarks from the Deputy Executive Director of the ITC, the Director of the Food and Agriculture Organization (FAO) Geneva, and a member of the AC leading the private sector workstream, who each outlined the key themes and objective for the following three days of discussions. Participants subsequently heard from keynote speakers from Navigant and Adapta Group, who shared their experiences with building resilience in the agri-food sector through using science-based targets to adapt value chains to climate change and implementing regenerative agriculture practices, respectively.

14. Following the keynote presentations[5], the workshop turned to a plenary discussion exploring tools, data, and methodologies to assess climate risks and options for designing adaptation strategies to build resilience. Panellists included a representative from Equator Seeds Ltd, who highlighted the challenges Ugandan farmers face in adapting to climate change, including a dearth of reliable information on future risks and complications arising from protracted conflict; a representative from Bioversity International, who outlined how using an index to measure agricultural biodiversity can reduce risk arising from the overrepresentation of a small number of species in global food production; a representative from Business for Social Responsibility, who emphasized the importance of partnerships, science-based targets, and holistic risk assessments to build comprehensive adaptation strategies; and a scientist from ETH Zurich, who illustrated how bridging the disconnect between farmers, input suppliers, and consumers can help create holistic food system resilience. The remainder of the day featured mini workshops and open labs that continued to delve into the same theme of evaluating climate risks in agri-food value chains and developing strategies to effectively manage and adapt to those risks.

15. The second day of the workshop shifted focus to tools and approaches for implementing adaptation strategies in the agri-food sector. To launch the day's discussions, the morning began with a plenary discussion on using public funding to support implementing climate change adaptation for SMEs. Panellists contributing to this plenary included a representative from the World Business Council for Sustainable Development, who explained how investments in climate-smart agriculture (CSA) boost resilience; a representative from the Co-operative Bank of Kenya, who delineated the multitude of challenges faced by smallholder farmers in accessing finance; a representative from the Insuresilience Global Partnership, who outlined the potential of insurance and other climate risk financing methods to foster resilience; and a representative from Bluetown, who highlighted how last mile delivery of low cost Wi-Fi in the Global South can accelerate adaptation in the agri-food sector. Like the first day, participants then dispersed into a series

[4] Programme available at http://bit.ly/PSW_Programme
[5] Keynote and session presentations available at http://bit.ly/PSW_Slides

of mini workshops that extended the discussion of the plenary theme of implementing adaptation strategies.

16. On the third and final day of the workshop, discussions examined how to design policies to scale up private sector adaptation action. Throughout the opening plenary, panellists exchanged views and insights on policies and policy development processes that have stimulated private sector investment and engagement in adaptation. Panellists included a representative from FAO, who elucidated how agricultural subsidies and outreach arrangements can incentivize sustainable practices among the private sector; a representative from the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), who explained how the combination of ICT tools, private finance, public assistance, and policies and institutions can create an enabling environment for adaptation in the agri-food sector; a representative from the NAP Global Network, who illustrated how engaging the private sector at the very beginning of NAP formulation through mechanisms such as public dialogues amplifies their engagement; and a member of the AC, who highlighted some of the key challenges governments face in effectively engaging the private sector in adaptation and raising awareness of existing policies and programmes.

3. Key issues addressed at the meeting

17. The workshop reinforced the findings of the preparatory work undertaken in advance of the workshop which underscored the vital importance of engaging the private sector in adaptation efforts, and the disproportionate vulnerability of certain private sector actors—in particular SMEs—to the impacts of climate change.

18. Climate change impacts, including rising temperatures, droughts, heatwaves, floods, and other extreme weather events, pose a number of significant challenges to private sector actors working in the food and agriculture sectors. Some of these challenges include rising incidences of pests targeting various crops, unpredictability in weather patterns undermining farmers' abilities to effectively plan and allocate resources, and destruction of crops and infrastructure as a result of extreme weather events. In turn, these can contribute to further problems affecting broader communities and the global food system, including price volatility and potential risks to food security. The burden of these impacts often falls first and heaviest on smallholder farmers and SMEs.

19. However, there is a business case for adaptation action in the agricultural sector and it can be facilitated. There are a wide range of strategies, instruments, approaches, and innovations that can help private sector actors adapt to these impacts, which collectively hold the potential to construct a revitalized agri-food sector that is better equipped to feed a rising population in a world punctuated by extreme weather events and their associated disruptions.

3.1. Assessing climate risks for enterprises in the agri-food sector and designing adaptation strategies

20. Workshop participants stressed the various challenges that enterprises in the agriculture and food sector face when trying to assess climate-related risks to their operations and design appropriate adaptation strategies to secure their business against likely climate change impacts. One central challenge is the availability and accessibility of climate-related data and information. Farmers, SMEs, and other private sector actors do not have sufficient, reliable information on future risks to the agricultural sector specific to their area of work. Often, these actors can only access historical data and information that cannot adequately inform them about their vulnerabilities to climate change and therefore cannot serve effective adaptation planning. Further, this uncertainty can cause farmers, and those who rely on their outputs, to suffer significant losses in productivity and income due to weather unpredictability. Crucially, interventions designed to overcome this challenge need to be accessible to farmers on the ground. Additionally, participants emphasized that non-environmental factors, such as protracted armed conflict, can exacerbate these challenges, compounding risks for some of the most vulnerable private sector actors.

21. Insufficient access to finance, particularly for SMEs and smallholder farmers, remains a significant barrier to assessing risks and developing and implementing adaptation strategies. Experience from Kenya demonstrates that private (impact) investors, cooperative banks and other commercial banks can help address this challenge by providing loans, equity investments, accounts, and other payment solutions

tailored to customers from the agriculture sector. Most financial products that are available to agri-food actors on the market often carry prohibitively high-interest rates that effectively render them off limits to smallholder farmers and SMEs who cannot afford the market rates. Hence, these products are, currently, insufficient to fully bridge the financing gap facing smallholder farmers and other underserved actors in the agri-food sector. The discussions highlighted a series of actions that could help advance the capacity of the sector to develop adaptation strategies, This includes, for example: increased public sector financing; improved knowledge of banks to evaluate risks of adaptation projects; improved capacity of actors to demonstrate their business case, facilitated for example through both an improved scientific knowledge base stemming from the public and private sector, as well as, increased exchanges of experience between lenders as well as actors.

Box 1. Helping farmers and SMEs overcome resource and capacity gaps

Ignitia is a company tackling the data challenge by bringing local tropical weather forecasts directly into the hands of West African farmers via low cost SMS. The forecasts help farmers optimize their planning and resource use, decrease their losses and increase their income, thereby bolstering their capacity to adapt to the changing climate. To ensure that forecasts are delivered in an accessible manner, Ignitia markets its product under a different name in each country, using the local language. This helps overcome challenges arising from low literacy rates in rural areas.

HELVETAS Swiss Intercooperation developed a guideline, titled "Assessing Climate Risks and Vulnerabilities in Market Systems," which helps SMEs understand climate risks in their sub-sector, identify emerging market opportunities, and formulate a proactive, comprehensive risk management approach. Divided into eight steps, the Guideline walks SMEs through the process of building resilience, beginning with mapping core functions and ending with monitoring and measuring results. It has been applied in various agri-food sub-sectors in Madagascar and Nepal, helping SMEs identify both short term actions and longer term incremental and transformative changes. In Nepal, for example, this included helping coffee growers identify short-term measures such as intercropping and moisture management, and longer-term options such as shifting coffee production to higher altitudes.

The ITC is working with SMEs and stakeholders from their business ecosystem (e.g., international buyers, and trade and investment support institutions, financiers and technology providers) to strengthen climate resilience in global value chains. The ITC project "Strengthening Competitiveness through Climate Resilience in International Value Chains" deploys tailored technical assistance to SMEs and their stakeholders, both face to face and through online coaching, to improve climate risk management across the value chain. Through the usage of the Climate Expert approach (developed by GIZ and financed by BMZ), ITC is supporting SMEs to create bankable adaptation measures using a cost-benefit analysis and is assisting the linkages to financiers and technology providers for measure implementation.

22. The meeting highlighted that awareness of climate risks and vulnerabilities varies by sector and by position on the value chain. For example, some participants noted that awareness of climate risks tends to be higher in the agriculture sector than in the textile sector. Additionally, international buyers often do not proactively take ownership of climate change adaptation and resilience building measures, regarding these actions as the responsibility of actors who are further down the value chain.

23. Participants identified that increased awareness across sectors and value chains is necessary to effectively bolster private sector resilience to climate change. Thus, assessments of climate risk in the agri-food sector and adaptation planning should not be limited to farmers but should also look further upstream in the supply chain and examine other actors including processors, manufacturers, traders, and retailers.

24. The meeting also highlighted specific risks facing the agri-food sector. One risk arises from the global food system's narrow reliance on a few species and a few varieties of plants and animals for a disproportionate amount of our global food production. Bioversity International has developed an action-oriented agricultural biodiversity index that will measure agricultural biodiversity and help generate scorecards for companies and countries, which outline actions that can improve the use of biodiversity in their food production systems.

25. In addition to discussing risks and challenges, participants demonstrated the value of a wide range of tools, strategies, and initiatives to assist private sector actors to assess their risks and design appropriate adaptation strategies to mitigate and manage those risks. Several participants noted that, among these tools, science-based targets are particularly crucial for guiding enterprises towards a climate resilient future. Setting and working towards science-based targets can help companies assess their long-term adaptation needs, drive innovation towards meeting those needs, and thereby help secure their long-term profitability and resilience.

26. Efforts to "connect the unconnected" can help advance adaptation planning efforts across the Global South. Bluetown is a company working to provide last mile delivery of low-cost Wi-Fi in developing countries, enabling farmers, SMEs, and other private sector actors working in agri-food to access tutorials, climate data, online banking, and other key resources that can guide adaptation planning and bolster resilience. In addition to helping those actors already employed in the agri-food sector, integrating technology and connectivity into the sector can help the sector appeal more to growing youth populations across the developing world.

27. Recognizing that climate change adaptation and resilience building efforts vary significantly depending on geography, enterprise type, and several other factors, some participants highlighted strategies for adaptation planning tailored to a subset of private sector actors in the agri-food sector. The Value Chain Analysis for Resilience in Drylands (VC-ARID) approach, for example, is a three-step approach to building resilience along the value chain specific to arid and semi-arid regions. The approach accounts for the highly variable ecological and climate conditions, informal economic activity, and other key elements that characterize the business landscape for agri-food actors in arid and semi-arid regions. The methodology's first step involves mapping the value chain, the second step involves assessing climate risks at each level of the value chain, and the third and final step involves identifying adaptation and private sector investment options for climate-resilient value chain transformation. In combination, the three steps offer SMEs the opportunity to identify and implement targeted resilience investments that are well suited to their environment.

28. For larger private sector actors operating in the agri-food sector, one efficient strategy identified by participants for undertaking climate risk analyses and resilience building efforts is to add these elements to existing initiatives and programs. Climate risk evaluations can often be added to existing risk management and evaluation systems, removing the need to create separate divisions or systems, and leveraging the expertise of those employees already charged with overseeing the company's risk exposure.

29. Similarly, participants noted that larger corporations in the agri-food sector hold great potential to support the resilience building efforts of other vulnerable actors by leveraging their existing resources. Those corporations pursuing community engagement efforts can layer climate considerations and resilience building into their programs that target, for example, women or water security. Indeed, participants stressed that gender-responsive work should always consider climate change factors, and climate change work should always be gender responsive. Corporations that collect and store localized data in their private databases can also act as stewards of data sharing for adaptation, given that it is the localized data that is often among the hardest to obtain.

3.2. Implementing climate change adaptation strategies

30. Several participants remarked that the traditional model of agri-food production and supply chains is poorly equipped to manage the disruptions associated with climate change and extreme weather events. To help empower food producers and buyers to cope with, and thrive in the face of, these impacts, the WINnERS Project is helping food companies diversify their sourcing and mitigate risk by modelling climate and weather risk exposure, helping farmers improve farming practices and creditworthiness, using weather and climate index-based insurance services to share risk across supply chain actors, encouraging buyers to source more from smallholder farmers, and promoting enabling regulatory environments for insurance products in developing countries. For example, the Project works with insurance companies to design products that help ensure that climate risks are distributed equitably across the entire supply chain, ranging from smallholder farmers to multinational corporations. The Project is funded in part by Climate-KIC, whose CSA Booster helps increase the development, marketing, and adoption of climate smart

agriculture solutions that help agri-food actors adapt to climate change, improve food production, and increase sustainable land use.

Box 2. MAIS program in Brazil

Across the globe, the dominant approach to agricultural production is to cultivate one crop variety on a large plot of land, where the focus is on food production rather than on sustainability. This approach leads to degraded land and food with diminished nutritional value. In Brazil, the Modulo Agroclimático Inteligente e Sustentável (MAIS) program, which recently received the UNFCCC Momentum for Change award, works with farmers, financial institutions, technical experts, companies and cooperatives to build resilience through climate-smart, regenerative agricultural practices. By treating the environment as an asset rather than an externality, the project restores degraded land, boosts the productivity of the food system, increases farmers' incomes, and can yield USD7 in social and economic output for every USD1 invested. Specifically, the project designs agricultural systems that are tailored to the biome in which they are situated. This could involve, for example, integrating various species of plants and animals into one farm such that the different species complement and boost one another's productivity. In one case, this included integrating a tilapia farm, which helped irrigate the land, several types of trees, honeybees that serve to pollinate the plants and produce biomass while also producing honey, livestock, and cactus varieties to feed the animals. Within 70 days, this yielded a dramatic transformation of the productivity of the food system and increased the farmers' incomes.

31. In addition to shifting traditional supply chain models and risk distribution, innovations in the agri-food sector can also help nudge the global food system away from staple crops whose cultivation is increasingly unsustainable against the backdrop of growing populations and rising food demand. One such staple crop is soy, which is a key ingredient in animal feed. Rising meat consumption and protein demand in emerging economies are expected to give rise to a 71m tonne soy market gap by 2025, which would require tens of millions of additional hectares of land to produce. DryGro, a company supported by Climate-KIC, is piloting a technology that grows an animal feed protein crop called lemna (duckweed) with very little water in closed shallow ponds that can be built on arid land. In addition to having protein content that is on par with or higher than soy, this crop also grows an order of magnitude faster, thus rendering it an excellent soy replacement for animal feed. DryGro technology recycles water, which renders the cultivation of this crop 98-99 times more water efficient than soy. Further, the technology can be deployed in closed environments and does not require arable land, and therefore reduces the need for clearcutting and can better weather shocks and stressors from climate change.

32. While data can help actors in the agri-food sector assess climate risks and plan adaptation strategies, data access can also help farmers and enterprises optimize the implementation of their adaptation efforts. Sandholt ApS is an earth observation company that helps improve resource use efficiency and enhance the resilience of local populations by translating data from sources like the European Union's Copernicus programme into accessible, easy to understand information for end users. For example, the company's services might involve gauging water stress and informing farmers about where, when, and how much to irrigate their crops based on satellite data.

33. Workshop participants reiterated that smallholder farmers and SMEs struggle to make their operations and their supply chains more climate-resilient because of a lack of resources and limited access to affordable financial products. Taking note of these difficulties and the urgent demand for accessible finance for adaptation, financial institutions are pursuing reforms in their lending criteria and financial products to help advance adaptation action in the agri-food sector:

a) The European Investment Bank (EIB), for example, is working to achieve a greater balance between mitigation and adaptation support in its climate action investments, which are presently heavily skewed towards mitigation activities. To achieve this objective, the bank is piloting a climate risk management system that will identify early-stage adaptation measures and will be deployed throughout the lifecycle of projects from appraisal to post-implementation evaluation to ensure that projects contribute towards resilience at each stage. At a broader level, the EIB is also aligning its operations with the European Union (EU) climate action targets and working towards a target of 25% of lending invested in climate change by 2025. Additionally, the Bank is investing

in climate funds and increasing credit access to local enterprises by lending to local banks that then lend the money to SMEs; and,

b) To help remedy the range of resource constraints that farmers and SMEs face in addition to insufficient finance, the European Bank for Reconstruction and Development (EBRD) matches its climate resilience financing with technical assistance to also address capacity limitations that render effective adaptation action more difficult. Further, the EBRD works with national governments to help promote a policy environment that is conducive to project success. It also has mechanisms tailored to the private sector that hold the potential to bolster resilience actors working in the agri-food sector. This includes, for instance, the EBRD's Finance and Technology Transfer Centre for Climate Change (FINTECC), which facilitates technology transfer to private companies in countries were advanced solutions—such as water recycling systems and advanced irrigation—have low market penetration rates.

34. In an attempt to bridge the financing gap for private sector actors in agri-food supply chains—particularly for SMEs and smallholder farmers—many participants noted the urgent need to better communicate the business case for adaptation and the potential impacts of adaptation projects to financial institutions and other investors. This includes learning to communicate project outcomes in quantitative and monetized terms, as well as improving the general financial literacy of SMEs and smallholder farmers.

35. Additionally, misalignment between donor time horizons and the time horizons required for agriculture interventions to succeed causes additional challenges in securing sustainable finance. Participants noted that while it often takes several crop cycles for an agriculture project to succeed, donors sometimes do not provide funding for a sufficiently long project period or get impatient and pull out before the project has a chance to produce results. In a related vein, agriculture projects are often discontinued when donors pull out or the donor period comes to an end, therefore signalling the need to consider options for supporting the continuity of projects in those later stages of the project cycle.

36. Participants also identified a paradox in the area of finance for the agri-food sector: SMEs and smallholder farmers lack access to affordable and sufficient financing solutions, but, at the same time, international banks often struggle to find clients for their programs that support this type of work. Bridging this gap by connecting finance-seekers in the agri-food sector with available financing programs and products can assist private sector actors in both planning for and implementing adaptation actions. Representatives from the banking sector present during the workshop noted that one possible step to help address this is for banks to collectively volunteer to take on additional brokerage roles. This brokerage role would involve pointing prospective clients to available financing options on offer at other banks when their own offerings cannot meet the clients' needs. While assuming this role requires banks to accept an additional burden of learning about the adaptation finance landscape and coordinating with other institutions, it offers the potential for each bank to solve the problem of undersubscribed programs and maximize the impact of their adaptation finance portfolios. In addition to facilitating connections to existing financing schemes, new and better schemes are required to reach the small companies currently underserved. Existing finance offerings often target SMEs at the larger end of the spectrum, while especially those at the smaller end of the spectrum remain underserved.

37. In addition to considering costs of financial products, workshop discussions highlighted that ensuring accessibility of financing should involve considerations of the end user's demographic characteristics, including gender, culture, and religion. A representative from the Overseas Development Institute noted, for example, that the BRACED Programme is exploring a range of financial services tailored to end users. In one case, this includes evaluating the role of Sharia-compliant financial services in predominantly Muslim areas of the Sahel where livelihoods are tied to agropastoralism practices.

3.3. Designing policies to scale up private sector adaptation action

38. Throughout the workshop, private sector representatives and other participants highlighted the importance of a policy and regulatory environment that is conducive to private sector adaptation and resilience-building efforts. Participants highlighted that policymakers can make use of existing policy instruments, which currently incentivize unsustainable agricultural practices, to shift agriculture towards greater resilience and climate-smart practices. For example, agricultural subsidies can be used to encourage farmers and other actors in the agri-food sector to adopt sustainable practices that help bolster food

security while adapting to climate change impacts. Other incentives and policies that can help create an enabling environment for private sector adaptation include more favourable lending terms, easier permitting processes, and more streamlined processes to support private sector actors undertaking climate-informed activities. Governments and policymakers can also use the various tools and levers available to them to support the adoption of ICT tools in the agriculture sector, which can help the sector leapfrog unsustainable practices.

39. Constructing a policy environment to stimulate investment in climate change adaptation cannot, however, be a unidirectional process whereby policies and programs are imposed on the private sector without consulting a wide range of businesses and considering their views. Specific to the area of national adaptation planning (NAP) processes, for example, a representative from the NAP Global Network sought to dispel the idea that the private sector's role in the NAP process is limited to the implementation phase. As countries are embarking on the NAP process, the private sector is typically considered an important actor in financing adaptation efforts, building products and infrastructure, innovating to fulfil policy objectives, and more broadly advancing the action component once the plan has been finalized. To maximize the effectiveness of the NAP process, however, the private sector needs to be engaged from the beginning stages as they are instrumental in identifying priorities and risks that may not be known to governments, civil society, or other actors engaged in the process. Moreover, the representative stressed that it is important to recognize that the private sector is not a monolith that can be sufficiently represented by one or two actors at the table. Different types and sizes of private sector actors each have their own risks, information, and experiences that are relevant for the NAP process and can enrich the discussion and, ultimately, the results that the process yields.

40. Workshop participants emphasized that engaging the private sector throughout the entirety of the NAP process is mutually beneficial. For governments, having private sector actors around the table helps to offer a starting point for costing adaptation actions, given that private sector actors tend to have more experience and expertise in this area than their public-sector counterparts. The enterprises and other private sector actors also reap significant benefits from this engagement, however, as they gain access to technical assistance and knowledge related to building climate resilience throughout their operations, including resources that can help them reduce risk or pilot new climate resilient products and services. For example, a beer company in Jamaica participated in the adaptation dialogues and consultations held as part of the country's NAP process; through these dialogues, the company gained knowledge and assistance regarding how to plant drought-tolerant varieties of cassava that could be used as an input into its brewing process.

41. Engaging in the NAP process can also reinforce existing incentives that encourage private sector investments in climate change adaptation. This includes supporting objectives such as business continuity, creating or reinforcing a positive company reputation and thereby enhancing their brand value, capitalizing on new markets and business opportunities, and improved compliance with policies, regulations, and investors' interests.

42. Crucially, participants noted that, to be effective, policies designed to advance private sector adaptation efforts need to be publicized and communicated to the private sector and the wider public. Governments can pursue creative methods to accomplish these outreach and engagement goals. St. Lucia, for example, engaged local musicians and visual artists to promote adaptation awareness and action after the country's NAP was launched. After giving the artists a brief lesson on adaptation, they were allotted a short period to create a piece of art exploring the theme of adaptation and resilience. These art pieces were then used as tools for raising the public's understanding of adaptation as something that is relevant to their day to day lives. Governments can also take advantage of existing platforms and authorities to promote messages about their policies and programs. The Government of Angola disseminates messages via SMS that inform people about droughts and related climate issues impacting their area. These types of mobile services are already in use throughout the country to promote upcoming shows and sports games, so adapting the service to circulate warnings and messages on local risks and vulnerabilities is a way to insert climate information into the daily routines of local populations. Similarly, the government works with traditional authorities to deliver adaptation related information in areas where local populations do not speak Portuguese.

43. Governments can further foster an enabling policy environment by increasing coordination and harmonization among their levels of government, as well as among their national ministries. Participants remarked that in some cases, farmers, SMEs, and other private sector actors engaged in the agriculture sector receive conflicting information and advice regarding best practices, which causes confusion and can delay or undermine attempts at adaptation action.

44. National and subnational governments can also develop programs and initiatives that help train youth in sustainable agri-business, which can help to strengthen long-term food security and bolster resilience to climate change.

45. When designing and implementing interventions intended to boost private sector resilience to climate change impacts, participants stressed the vital importance of taking a whole value chain approach when weighing options and selecting among them. A researcher from King's College London noted, for example, that in Jamaica, financial assistance given to cassava farmers in the aftermath of a drought led them to recover at a faster rate than the processors in the value chain, resulting in farmers producing more cassava than the market could absorb. Policymakers must bear in mind, therefore, that promoting partnerships, collaborations, and joint problem solving along the whole value chain will yield longer-term resilience than interventions that privilege short-term economic gains limited to one portion of the value chain.

46. For SMEs across Africa, workshop participants noted that there is an especially important role for public policy in facilitating adaptation practices that are sustainable and constructive in the long term. Research from the Grantham Institute for Climate Change and the Environment at the London School of Economics demonstrated how SMEs in Kenya and Senegal were more likely to pursue unsustainable adaptation practices—that is, adaptation practices that result in a contraction of business activity, such as selling assets or cutting employees—when they are repeatedly exposed to extreme weather events. To help prevent this long-term erosion of adaptive capacity, and instead support sustainable adaptation strategies, governments must design policy interventions that facilitate market access, access to information, and offer general government support and specific adaptation assistance.

47. Private sector representatives participating in the workshop stressed that, to secure buy-in from private sector actors, public policy interventions aiming to build resilience in the agri-food sector must be clearly framed as a win-win solution that both bolsters resilience and contributes to the farmer's or company's bottom line. This is especially crucial in cases where the farmer or company must opt-in or shift their behaviour.

48. Noting the centrality of trade to the agri-food sector, and the potential that trade possesses to bolster resilience in the sector in both the short and long term, workshop participants highlighted the relevance of World Trade Organization (WTO) agriculture rules to planning adaptation actions in this area. The WTO agriculture rules provide a framework for ensuring that international trade and sustainable development pursuits, including resilience building objectives, are mutually reinforcing. For example, governments looking to support risk management efforts in the agri-food sector, building on those undertaken by private sector actors, should look to the WTO rules as a guideline to what actions will be effective and beneficial in the long term. These rules can point policymakers away from certain price support measures that are rigid and less adaptive to changing conditions, and instead, encourage informed risk management approaches that both support resilience and international trade.

49. Additionally, related to the connection between trade and resilience, workshop discussions highlighted that the public sector can benefit from framing climate resilience as a long-term competitive advantage. In addition to contributing to the business case for adaptation investment, this framing helps embed adaptation action into national discussions and frameworks focused on trade and mainstream adaptation into economic and trade policy.

4. Lessons and key messages from the meeting

50. Through the plenaries, workshops, and open labs, several key messages and lessons emerged that can inform the future work of the AC, including:

a) There is an urgent need to illustrate and communicate the business case for adaptation in SMEs through compelling narratives, relevant data, and other key information sources and communication vehicles.

b) To effectively make this case, individual companies should cooperate across the supply chain, rather than operating in isolation whenever possible;

c) Making the business case for adaptation can help unlock sources of finance that are necessary for farmers and SMEs to build their resilience to a changing climate. Financial institutions can take initial steps towards bridging the finance gap by engaging in discussions among themselves (i.e. among international development banks, commercial banks, cooperative banks, investors, and other actors in the broader international climate financing architecture) to gauge how best to make their available financial products accessible and attractive to SMEs;

d) Insurance will play an integral role in bolstering the resilience of actors in the agri-food sector to climate change, but it is not a silver bullet. Insurance products need to be embedded in a comprehensive, sustainable strategy in order to address the dynamic and complex adaptation needs faced by private sector players in the agriculture and food sectors;

e) Focused investments in capacity building, infrastructure, and technology should be prioritized, as investment in these areas can catalyse widespread adaptation action among the private sector, particularly in developing countries. Increased public sector action, investments and financing are also necessary, as payment solutions and financial products currently on offer from the private sector are presently insufficient for meeting the agri-food sector's adaptation and resilience building needs;

f) Building resilience to climate change impacts in the agriculture and food sector requires taking a holistic approach that recognizes the prevalence of climate risks across the whole value chain ranging from farmer to consumer. Working within existing frameworks and programmes, and building climate risks into these existing initiatives, is a powerful means of identifying and mitigating these risks. For example, ongoing work to define and implement good agricultural practices should always consider climate-related risks;

g) In a related vein, all private sector actors need to integrate climate change into their business planning. This includes applying a climate change lens to existing strategies, mechanisms, and departments. This might involve, for instance, layering climate considerations into existing enterprise risk management systems, which will help to leverage existing expertise and instruments that have already proven effective in the company's operations;

h) To tackle the challenges that climate change poses to international value chains, it is necessary to enhance trade that serves to accelerate the transfer of resilient technologies and climate-friendly goods and services that can bolster adaptation efforts. At the same time, it is important to realize that, while trade is a valuable tool in accelerating private sector adaptation, it can also hinder it;

i) People should be at the centre of all efforts to transition to a resilient agriculture and food sector. To effectively prioritize the social dimension, meaningful and inclusive stakeholder engagement must be the first step in any process or strategy that aims to advance adaptation and build resilience. Crucially, this should include supporting women, youth and poor and vulnerable communities. Indeed, several participants highlighted the unique capacity of women, youth, and local communities to spearhead climate resilience efforts;

j) Private sector actors do not operate in a vacuum, and their adaptive capacity is closely tied to good governance, well-defined markets, social stability, the presence of building blocks for innovation, and the availability of appropriate incentives. These elements interact to influence the vulnerability of the agri-food sector to climate change and their ability to weather the storms of future impacts;

k) Adaptation and resilience solutions are often location-specific, both in terms of geographical location and location in the agri-food value chain. As a result, scaling up adaptation and resilience action from individual successes to broader progress is complex. At the same time, however, sharing experiences, lessons learned, and progress updates hold great potential to inspire new solutions and shed light on how to better connect the local to the global level; and,

l) An enduring challenge in private sector pursuits of adaptation action is the persistent lack of knowledge and data that renders strategic planning and implementation especially challenging, particularly for smallholder farmers and SMEs. Wherever possible, as a first step, it is important to support the deployment of earth observation systems and ensure that the data they gather is widely disseminated and freely accessible to advance resilience.

5. Next steps

51. The Adaptation Committee may wish to consider the following next steps:

a) Agree on a set of recommendations for consideration by COP 25;

b) Explore, in collaboration with partners, steps that could be taken to advance actions, including as illustrated during the closing session of the workshop, and to capture progress within the Private Sector Initiative (PSI). See table below:

Topic	***Action Needed***	***Who does it***
Data	• Building databases • Monitoring networks • Technology for access • Capacity building of SMEs in assessing climate risk in agriculture	• Governments and national agencies • International organizations
Finance	• Business case capacity building • Value chain analysis • Project sustainabiliy	• Financial institutions • MDBs • Farmers organizatons • Governments
Promoting climate change adaptation	• Building on what exist in countries	• SMEs and Governments and other stakeholders

c) Develop a user-friendly format information product to disseminate the findings of the workshop to the private sector and to the broader public, highlighting specific areas of interests;

d) Follow up on the private sector workshop throughout the latter half of 2019, as agreed in the 2019-2021 workplan, including by:

i) Collaborating with the NAP Global Network on a tool to enhance the capacity of private sector actors to engage in the formulation and implementation of NAPs;

ii) Collaborating with the International Trade Centre in their project "Building resilience of Small and Medium Enterprises (SMEs) to climate change" (subject to funding) or in other follow-up activities or products, such as future events or joint publications;

iii) Updating the UNFCCC Private Sector Initiative with case studies from the workshop, in partnership with the Nairobi Work Programme;

iv) Examining the possibility of hosting a follow-up Global Climate Action Event at the margins of COP25;

v) Exploring the potential for the private sector to work with and support research institutes; and,

vi) Exploring potential additional products and areas of interest for the AC to work on:

   a. The use of science-based targets for assessing risk and developing adaptation options;

   b. Assessing climate-related risks to operations, with a focus on building resilience of supply chains for specific sectors;

   c. Business case pitches for high-priority sectors, with a focus on how to better communicate the need to increase resilience to private sector actors; and;

   d. Mapping of support for smallholder farmers and SMEs to make their operations and supply chains more climate-resilient.