Consultation Workshop Report on Innovative Financial Instruments for Climate Technology Adoption in Rural Cambodia

Date: 13th May 2024, Phnom Penh, Cambodia

Under the auspices of the Ministry of Environment of the Kingdom of Cambodia, a one-day consultation workshop "Innovative Financial Instruments for Climate Technology Adoption in Rural Cambodia" was held in Phnom Penh on May 13th, 2024. This event was a collaborative effort between the UN Climate Technology Center & Network (CTCN), Sustainable Solutions for Africa (SSA) and the Ministry of the Environment.

The workshop was presided over by **H.E. Dr. Heng Chanthoeun**, Deputy Director General and Representative of His Excellency Director General of the General Department of Policy and Strategy, **Mr. Ou Chanthearith**, Director of the Department of Science and Technology and National Designated Entity (NDE) of CTCN, and **Ms. Sandra Freitas**, CEO and Co-Founder of Sustainable Solutions for Africa (SSA).

The workshop accommodated 38 in-person participants and 13 remote participants, 51 participants in total. Attendees included officials from the Ministry of Environment, representatives from relevant ministries, financial institutions, educational institutions, private sectors, development entities, and NGOs. The workshop featured a dynamic and intensive program consisting of presentations, panel discussions, interactive group activities, and surveys. This gathering marked a significant step in identifying and analyzing innovative financial instruments for climate technology adoption.

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Acronyms and Abbreviations

CTCN	Climate Technology Centre and Network
GCF	Green Climate Fund
NAPs	National Adaptation Plans
NDAs	National Designated Authorities
NDCs	Nationally Determined Contributions
NDE	National Designated Entity
MoE	Ministry of Environment
MAFF	Ministry of Agriculture, Forestry and Fisheries
ARDB	Agricultural and Rural Development Bank
SSA	Sustainable Solutions for Africa
TAPs	Technology Action Plans
TNAs	Technology Needs Assessments
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

1. Workshop Background and Objective

Cambodia is actively addressing the pressing challenges of climate change, striving to shift towards a more climate-resilient and sustainable low-carbon development. To foster a more robust climate response, Cambodia has pinpointed key areas for adaptation and mitigation, highlighting the importance of innovative finance solutions to encourage the adoption of green technologies and expand the use of renewable energy. Despite its abundance in water and renewable energy resources, Cambodia has yet to fully tap into this potential.

Upon request of the National Designated Entity (NDE) of Cambodia, the UN Climate Technology Center Network (CTCN) awarded to Sustainable Solutions for Africa to implement the project of the market assessment in the application of climate technologies in the agriculture sector for rural development to support Cambodia in implementing its Nationally Determined Contributions (NDCs). The proposed project will support market analysis of climate technology application in the agriculture sector which includes irrigation, water, harvesting and agro-food processing such as solar cooling, solar pumping, and food product saving and packaging. This endeavor is expected to enhance production efficiency and climate resilience in the agriculture and water sectors, thereby contributing to rural development in Cambodia. The result of this project guides the development of a detailed, actionable plan for the government to assist in formulating funding concept ideas, including GCF concept notes. It is also designed to clarify the roles of relevant stakeholders and foster collaboration and knowledge-sharing during both the development and commercial stages.

This CTCN project, dedicated to market assessment of climate technologies for rural development, was planned in stages; and identifying climate technologies for Cambodian agriculture was the initial step. Following that, exploring innovative financial instruments to facilitate climate technology adoption was the next step in the project. This consultation workshop played a significant role in bringing together stakeholders to address the gap by identifying and analyzing innovative financial instruments that could make these technologies more accessible to farmers.

The objective of the consultation workshop on innovative financial instruments for climate technology adoption in rural Cambodia was to convene key stakeholders to:

- Provide an overview of financial instruments tailored to technology adoption in the agriculture and water sectors of rural areas.
- Select appropriate financial instruments to apply and scale up project outcomes, developing funding concepts for rural development in Cambodia.
- Consider modalities and partners for mobilizing financing for the adoption of climate technologies in agricultural production.
- Discuss policy and action recommendations for innovative financial instruments that would support the adoption of climate technologies.

The workshop was an important milestone in the market assessment of climate technologies for the rural development project in Cambodia. It aimed to create a comprehensive and workable plan to expand climate programs through blended finance, including climate funds and local financing, to contribute to reducing greenhouse gas emissions and effectively support Cambodia's NDCs. The effort also considered the challenges faced by vulnerable groups in financing agricultural technology adoption.

The outcomes of this workshop were intended to raise awareness about the potential of climate technologies in Cambodian agriculture, discuss the challenges rural farmers face in accessing financing for adopting climate technologies, explore innovative financial instruments to address these challenges, and provide policy recommendations for improving agricultural practices in rural areas.

2. High-level meeting on Potential Climate Programs and Partnership

During the consultation workshop on innovative financial instruments for climate technology adoption in rural Cambodia, the high-level meeting was organised at the Broadcast Lunge on the 2nd floor of the Hyatt Regency of Phnom Penh from 9:30-10:30am on May 13, 2024. This meeting was attended by:

- **H.E. Dr. Heng Chanthoeun**, Deputy Director General of the General Directorate of Policy and Strategy, Ministry of Environment of the Kingdom of Cambodia.
- **Mr. OU Chanthearith**, Director of the Department of Science and Technology of the General Directorate of Policy and Strategy, Ministry of Environment of the Kingdom of Cambodia and National Designated Entity (NDE) of CTCN.
- **Ms. FREITAS Adeyemi Akpene Akua Sandra**, CEO and Co-founder of Sustainable Solutions for Africa (SSA), Sustainable Solutions for Africa (SSA).
- **Mr. AM Pirom**, Deputy Director of Department of Agricultural Land Resources Management (DALRM), General Directorate of Agriculture, Ministry of Agriculture, Forestry and Fisheries.
- **Mr. Thay Jeudi**, Director of Green Finance Department, Agricultural and Rural Development Bank (ARDB).

The meeting discussion focused on the suitable solutions and the roadmap to build the actionable plan that is beneficial for the government of Cambodia in developing a funding concept. Additionally, the meeting enhances relevant stakeholders' collaboration in developing climate technology programs for rural development. With these regards, Ms. Sandra Freitas has delivered the objectives of this meeting, the goal of this workshop as well as this project mandate to all stakeholders to ensure deeper understanding on the matter. H.E. Dr. Heng Chanthoeun has highlighted some of his ideas on priority actions that was identified in the Cambodia's Nationally Determined Contributions Update and engaging the relevant stakeholders especially private sectors to contribute in ongoing actions for climate change. Mr. Thay Jeudi and Mr. Am Pirom have shown their organization's actions and initiative to mobilize climate funding to support and contribute in the Nationally Determined Contributions on Climate Change such as providing financial support to the ground level for agricultural development. Moreover, they also provided the new policy support from MAFF on innovation new technology to promote crop productivity that include the new modernizing cooperative agriculture, and distribute agricultural extension to the community's level. During the meeting, the GCF grants funding facility was also identified. In addition, funding facility will be utilized to address capacity barriers with relevant stakeholders by focusing on establishing or expanding their financial capability (eg. bankability) and local financial institutions. Recently, MAFF is supported by FAO to develop and finalized the priority action plan for climate change for MAFF and related sectors. Finally, the meeting also suggests including the programs for demonstrating forecasting climate change scenario to assist the farmers in their preparation to adapt to climate change and make sure that the main challenges of the rural communities has solved in the suitable

locations, right periods and appropriate circumstances. Furthermore, it is crucial to determine the type of funding support (grant, loan, or subsidy) on particular actions as well as proportion of lending in percentage that will be used to leverage the agricultural technology adoption.

3. Workshop Participants

The workshop successfully convened a diverse group of stakeholders, including representatives from the governments, educational and research institutions, development partners, financial institutions, private sector, civil society, and NGOs. Notably, 37% of the participants were the women. The event also welcomed representatives from the Ministry of Environment, Ministry of Economy and Finance, Cambodian government bank – Agricultural and Rural Development Bank (ARDB), and other financial institutions.

In total, there were 51 participants, with 38 attending in person and 13 connecting remotely via the Zoom platform. For a complete list of participants, please refer to Annex 2.

The Workshop was further distinguished by the presence of two high-level officials from the Ministry of Environment, and the representative from Sustainable Solution for Africa, who opened the inaugural session:

- **H.E. Dr. Heng Chanthoeun**, Deputy Director General of the General Directorate of Policy and Strategy, Ministry of Environment of the Kingdom of Cambodia.
- **Mr. OU Chanthearith**, Director of the Department of Science and Technology of the General Directorate of Policy and Strategy, Ministry of Environment of the Kingdom of Cambodia.
- **Ms. Sandra Freitas**, CEO and Co-founder of Sustainable Solutions for Africa (SSA).

4. Summary of the Sessions

The workshop was organized by SSA on behalf of CTCN, in close collaboration with the NDE office for program design and distribution of invitations. It took place at the Hyatt Regency Phnom Penh, #55, Street 178, Sangkat Chey Chumnas Khan Doun Penh, in Meeting Suite 2 on the L Floor, on May 13, 2024.

This event was conducted in a hybrid format, accommodating both in-person attendance and remote participation via the Zoom platform. Live interpretation between Khmer and English was available for all participants, whether attending in person or remotely.

For detailed information about the program and session timings, please refer to the Agenda in the Annex 1.

The workshop was dedicated to analysing innovative financial instruments to ensuring access to finance for rural communities to adopt the climate technologies by sharing insights on the result of climate technologies assessment, showing case a variety of financial instrument and policy recommendation. Besides that, there also emphasize those knowledges through panel discussion and group work activities following the plenary sessions.

Session 1 High Level Opening

The workshop was opened by distinguished guests:

- Welcome speech by **Mr. OU Chanthearith**, Director of the Department of Science and Technology of the General Directorate of Policy and Strategy, Ministry of Environment of the Kingdom of Cambodia.
- Address by **Ms. Sandra Freitas**, CEO and Co-founder of Sustainable Solutions for Africa (SSA).
- Opening remarks by **H.E. Dr. Heng Chanthoeun**, Deputy Director General of the General Directorate of Policy and Strategy, Ministry of Environment of the Kingdom of Cambodia.

The esteemed speakers underscored the critical role of innovative financial instrument that is the key challenges that Cambodia need be to strengthening, raising awareness and acceptance of those funds to apply climate technologies advancement to expand agriculture products and contribute to reduce greenhouse gas for Cambodia. H.E. Dr. Heng Chanthoeun, Deputy Director General of the General Directorate of Policy and Strategy of the Ministry of Environment highlighted the commitment of Cambodia government in developing the national policy on sustainable green development and environmental circular strategies 2023-2030 that align with Cambodia's dedication to climate change efforts, adherence to NDCs, and commitment to the principles of the UN Framework Convention on Climate Change (UNFCCC), with a particular focus on sustainable agriculture. Mr. Ou Chanthearith, Director of the Department of Science and Technology emphasized the vulnerability of agriculture to climate change. He stressed the need to address this issue through access to financial mechanisms and the expansion of climate-resilient technologies to contribute to mitigation and adaptation NDC goals. Ms. Sandra Freitas, CEO and Co-founder of Sustainable Solutions for Africa (SSA) highlighted the importance of technology transfer and cooperation with organizations proficient in energy technology and resource mobilization. Also, it is mentioned the key points on climate technologies adoption that should understand people's needs, and then what should be supported to meet the needs. The speakers collectively emphasized the importance of joint efforts and partnerships in steering Cambodia towards a sustainable, low-carbon, and climate-resilient future, particularly in rural regions where agriculture is a cornerstone of the community's livelihood and economic development.

Session 2 Innovative financial instruments for climate technology adoption

Sok Pheak's presentation on innovative financial instruments for climate technology adoption comprised three parts:

Part 2.1: Key results of Market assessment of climate technologies for rural development in Cambodia

Part 2.2: Overview of solutions for climate programs in Cambodia

Part 2.3: Review of International and local financial partners.

Part 2.1 detailed the climate technology areas that require technical assistance (TA) and climate funding for rural development in Cambodia. According to the survey, the identified areas had varying levels of participant endorsement for TA: rice crop development (65%), horticulture (82%), harvesting and post-harvesting

techniques including agro-food processing (94%), biodigester and biochar food processing (53%), water management (76%), and agricultural land management techniques (65%).

The main barriers to the adoption of identified climate technologies for rural development were discussed, with varying degrees of acknowledgment from participants. These barriers included insufficient knowledge at all levels (76%), limited incentives and policy support for adoption (76%), underdeveloped market and poor linkage with relevant providers (65%), and restricted access to finance and high costs of adoption (65%). Business models with the potential to promote climate technologies adoption for rural development in Cambodia is Public-Private Partnerships (PPPs) (86%) and Microfinance institutions (MFIs) (71%), respectively. Additionally, the educational value of the climate technology areas was discussed.

The conclusion of the part 2.1 contained suggested solutions and implementation strategies, including policy recommendations and governance to facilitate capacity building, financial mechanisms and incentives, as well as technology transfer.

Part 2.2 conveyed highlights of different strategies of rural development programs in Cambodia. These included the CCCA Program, SPCR Program, FP228 Cambodian Climate Financing Facility, PEARL Project, Cambodia's GCF Project, Cambodia's GEF Program, CIF and PCCR, ASPIRE's Scaling Up Climate Resilient Agriculture, and the Science and Technology Research Partnership for Sustainable Development (SATREPS) by JICA.

Part 2.3 outlined the key international and local financial partners. It also provided a summary of the gaps, barriers, and risks associated with adopting climate technologies in rural Cambodia, together with Financial instruments for scaling up rural development beyond grant. A recommended "hard-to-reach" rural regions and potential partnerships for the proposed intervention could be consultated with the NDE.

Session 3 Panel discussion on innovative financial instruments challenges and opportunities, policy and action recommendations in Cambodia

The panel discussion was designed to facilitate the sharing of knowledge on climate financing with focuses on government experiences, leveraging funds, public-private partnerships, and capacity building.

Key questions were discussed during the panel discussion with participation from government agencies' representatives, private sectors, and development partners. Firstly, issues faced by the Cambodian government in accessing and utilizing innovative financial instruments for rural areas were raised. This was followed by a discussion of success stories by the government and how these could be replicated or scaled up. Next, discussion was centered around ways the government can enhance its capacity to effectively manage and allocate finance to appropriate projects. The Cambodian government perspective on the climate technologies is crucial for responding to climate impact and contribute the GHG emission reduction and livelihood improvement.

The next questions focused on opportunities for Cambodia to leverage international climate funds, and how climate technology adoption in rural areas can be scaled up. This question was addressed to the ARDB. The discussion resulted in endorsing the need to strengthen partnerships with international partners and donors, deemed essential for success in this area. It established a clear guideline to be provided to relevant stakeholders, with a focus on addressing the needs of farmers and rural communities. It was also the bank and private's requirement for local acceptance with support from existing policies and laws or policies to be made for climate financial instrument accessibility. The following discussion highlighted the key successful climate technologies in supporting the government policies and scaling up to other potential areas. The existing policy engagement supported the smallholder farmers and microbusiness for supporting rural area in Cambodia through the application of potential climate technologies and more beneficial to their income and low-cost establishment, particularly in the agricultural cooperatives (AC) nation-wide.

The pivotal role of public-private partnerships in mobilizing climate resources was underscored. It was agreed that technology adoption would be improved through the collaboration of government agencies, private sector entities, and civil society organizations. The discussion, therefore, centered on identifying effective incentives to encourage private sector engagement and investment. It was agreed that capacity-building is a crucial factor in enhancing the understanding and utilization of innovative financial instruments. This prompted conversations around understanding and utilization of innovative financial instruments among policymakers, financial institutions, and local communities in Cambodia. This involved talking about ways in which capacity-building efforts can be tailored to meet the specific needs and priorities of rural Cambodian communities. Additionally, the discussion highlighted the importance of educational and training programs in building the capacity of relevant stakeholders.

Session 4 and 5- Deep-dive breakout session and presentation of the discussions

Participants were grouped in accordance with preference and experience into the following three groups:

- Group 1: Benefits and challenges of upstream and downstream financial instrument solutions in Cambodia
- Group 2: Financial partners and modalities for rural development finance
- Group 3: Policy recommendations to scale up climate financial mechanism.

Each group was assigned specific questions to discuss and then present to the rest of the participants. These questions focused on topics such as climate technology success stories in Cambodia, as well as broader issues relevant at all levels.

Group 1 began by discussing examples of successful climate programs to identify the factors behind their success. This helped determine which climate funding modalities could be increased or introduced to better meet Cambodia's climate goals. They then addressed the primary challenges faced by rural communities and businesses in accessing and utilizing financial instruments. Key issues included a lack of knowledge and training on effective utilization, as well as the gap between hard-to-reach farmers and businesses/governments. Finally, the group discussed potential risks and strategies to mitigate them.

Table1: Survey results on benefits and challenges of upstream and downstream financial instrument solutions in Cambodia

No.	Group 1: Benefits and challenges of upstream and downstream financial instrument solutions in Cambodia	Response Summary
1	What are some known success stories and lessons learned from previous climate programs funded in Cambodia? Additionally, what other climate funding modalities could be increased or introduced to further benefit the country's climate goals?	There are many funded programs in Cambodia such as biodigester program, crop insurance, grain rice on miller to increase their strange size. These programs were provided to the local farmers by term-refund payment, loan, and crop facilities.
2	What are the primary challenges that rural communities and business in Cambodia face when trying to access and utilize financial instruments for development projects?	The challenges of rural community and SMEs in Cambodia are: -Not user friendly -Lack of knowledge -No ability to pay leading to indebtedness -Expensive financial services.
3	What are the potential risks associated with utilizing financial instruments in the agricultural sector in Cambodia, and how can they be mitigated?	The risks or challenges of utilizing financial instrument in agricultural sector such as the farmer or SMEs unknown about climate financial instrument, unpredictable market, unreliable supply chains, harvest lost, implementing in different way of loan objective and couldn't repay back the loan. etc. There would be mitigated by: -Government should ensure market for agricultural products -Penalties of not following condition loans -Encouragement for SMEs.
4	Please summarize, how farmers in hard-to-reach areas can be most efficiently supported to adopt climate-smart agriculture technologies and improve their livelihoods.	The solution for encourage the farmers to adopt those CSA including: train farmer on the benefits of climate technology and set the acceptable price of agricultural products for farmers

Group 2 was tasked with discussing the financial institutions and other partners involved in supporting rural development in Cambodia. They examined how these institutions had adapted their financial products to meet local needs, emphasizing that without such adaptations, optimal effectiveness could not be achieved. They then evaluated which financial instruments in Cambodia are most effective in addressing affordability, sustainability, and risk mitigation in rural development projects. Finally, they discussed how financial partners assess and select rural development projects for financing to determine how the mobilization process can be streamlined.

Table2: Survey results on financial partners and modalities for rural development finance

No.	Group 2: Financial partners and modalities for rural development finance	Response Summary
1	What types of financial institutions and other partners are involved in supporting rural development in Cambodia, and how do they adapt their financial products to the specific needs of these communities?	There are many types of financial institutions as well as technologies support, technical support, financial support such as: -Farmer Association community financial instrument -Commercial bank and microfinance -Rural credit operator -Government, NGO and international funds -All main supplier. To adapt their financial support, they need to understand the local needs and provide flexibility approaches such as invoice payment, term of loan, grants, or technology supply depend on their requirement and circumstance. Providers support shall be identified and have their analyzing tools or their analyzed mechanisms and consideration on risk mitigation as well as understand the communities and SMEs needs, vision, and mission, and work with other stakeholders to support and mitigate the risk that align with national development goal.
2	Which financial instruments are most effective in Cambodia, and how do they address affordability, sustainability, and risk mitigation in rural development projects?	Financial instruments in Cambodia shall be changes to blending finance or innovative finance, guaranteed scheme, insurance, fund to individuals or main leader in community that flexible and response to communities need: eg. payment for service provider to community such as Solar water pump station, water irrigation Service provider (Case study: SOGE, CEDA), food processing, energy supply, harvesting and post-harvest technology etc.
3	How do financial partners assess and select rural development projects for financing? What can be improved to streamline mobilization of climate finance for rural development.	The financial partners will assess and provide the finance to the project based on analyzing on green loan framework, technology benefit, sustainability, incentive, customer characteristics, cash flow, condition and collateral as well as their purpose related to climate change mitigation and adaptation. It could be more effectively if the projects will work closely with lines ministries and communities' building awareness of all stakeholder technology interest, incentives for farmers (Lower interest) which assign in the financial provider mandate.
4	Please summarize, how can farmers in hard-to-reach areas be most efficiently supported to adopt climate-smart agriculture technologies and improve their livelihoods?	There should be identify the issues in local communities, and design methods support based on their challenges by the governments, private sectors, NGOs, financial institution, authority and communities. The most effective support could be technical support workshop, training party, on-farm demo (CSA) raising awareness and capacity-building, showcase, give examples, project pilot and business, roadshow, tool assessment, tool management, technical support, and policy recommendation.

Group 3 first identified potential improvements to better support rural development and community needs in Cambodia, with a focus on enhancing resilience and adopting zero-emission technologies. This included suggestions for new incentives. Recognizing that mobilizing additional resources requires motivating project developers, public/private partners, and other stakeholders, they then discussed how policy could be improved to encourage such motivation. Finally, the group identified which groups of people should be prioritized to enhance community-based climate resilience.

Table3: Survey results on policy recommendations to scale up climate financial mechanism

No.	Group 3: Policy recommendations to scale up climate financial mechanism	Response Summary
1	What improvements to climate finance mechanisms could better support rural development and community needs in Cambodia, particularly in enhancing climate resilience and zero-emission technologies adoption in rural areas? What incentives could be introduced?	Since Cambodia haven't establish any documents related to climate finance, so there has been suggesting to develop policy or guideline on this issue. The incentives can be as following: 1. Technical assistance and capacity building to rural communities and farmers 2. Low interest loan and small grants focusing on climate resilience agriculture 3. Public private partnership: engage partnership like investment, network to scale up and partnership. Develop policy for climate finance to support farmers with low interest rates 4. Provide loan to farmer without interest if the farmer faces some risk in case.
2	What policy improvements could motivate project developers, public/private partners, and other stakeholders to mobilize additional resources for climate-friendly projects in rural areas?	There were many policy and strategic plan related to climate change and carbon neutrality. However, there are several motivating strategies shall be adopted such as tax exemption or reduction tax, risk mitigation mechanism, carbon credit for collateral, climate change policy update and strategies Inventory, etc.
3	Which groups should be prioritized for support in adopting climate technology and strengthening community-based climate resilience, and how?	The priority groups shall be supporting such as: -The SMEs: through grants or low-interest loan -The people in remote areas -Agricultural communities, Small holder farmers.
4	Please summarize, how can farmers in hard-to-reach areas be most efficiently supported to adopt climate-smart agriculture technologies and improve their livelihoods?	In Cambodia, agricultural communities develop their own agricultural technologies throughout their habit and technical provider from NGOs, or communities model based on their crop production. So, there would be better if the government compile and develop all community's technology and techniques on agricultural productivity, it will be more increasing capacity and resilience to the farmers as well as benefit to researchers. There are some approaches to consider such as tracking Climate Change with Sustainable soil management, Climate-smart water management for sustainable agriculture Integrated pest management to cope with rising pest attacks and diseases, climate smart approach on enhancing agricultural value chain, agricultural landscapes and promote livelihood by community practice, by private and public sector association, help them with the loan without interest rate, provide technical or knowledge support on agriculture.

Finally, each group was asked to provide a summary of how climate-smart agriculture technologies can be effectively incorporated into the lives of hard-to-reach farmers. The responses emphasized enhancing cooperation through collaboration, as farmers are likely to resist new technologies if they are not educated on the benefits beforehand.

Summary workshop survey results

The participants were asked to fill the workshop summary survey to summarize the discussions outcome. The survey data was captured using a Google form.

Survey Results:

1. Main barriers to accessing finance for climate technology adoption by local farmers and agribusinesses for rural development in Cambodia (Figure A.3.1, Annex 3):

- Participants identified insufficient knowledge/training (76%), limited incentives and policy support (76%), underdeveloped market and poor linkage with relevant providers (65%), and restricted access to finance and high cost of adoption (65%).

2. Financial solutions to support the adoption of climate technology in rural Cambodia beyond grants (Figure A.3.2, Annex 3):

- Responses included low-interest or interest-free loans, grants or subsidies, payment plans, tax credits or exemptions, and guaranteed schemes with repayment flexibility.

3. Categories of farmers with unequal access to financing and capacity building for climate technology adoption (Figure A.3.3, Annex 3):

- Vulnerable groups included smallholder farmers, farmers surrounding Tonle Sap Lake, poor families, and those lacking capital and markets.

4. Terms farmers would accept for financing climate technology adoption (Table 3.4, Annex 3):

- Suggestions included low-interest or interest-free loans, grants, payment plans, tax credits, guaranteed schemes with repayment flexibility, and trade credit with flexible terms.

5. Policy recommendations to improve access to finance for climate technology adoption in rural areas (Table 3.5, Annex 3):

- Recommendations included green finance taxonomy, low-interest rates, tax incentives, low-risk weighted assets for financial institutions, stakeholder input, creating ecosystems, defining key players, creating roadmaps, and risk mitigation strategies.

6. Overall educational value of the workshop (Figure A.3.6, Annex 3):

- Participants found the workshop educative.

7. Educational value of the workshop discussion sessions (Figure A.3.7, Annex 3):

- Participants rated the discussion sessions as educative.

8. Adequacy of addressing the needs and concerns of different stakeholders (Figure A.3.8, Annex 3):

- The workshop adequately addressed the needs and concerns of farmers, local micro-businesses, government agencies, and financial institutions.

9. Achievement of workshop objectives (Figure A.3.9, Annex 3):

- The workshop successfully achieved its objective of finding solutions for accessing climate finance for climate technology adoption in rural Cambodia.

10. Most beneficial aspects of the workshop and areas for improvement (Table 3.10, Annex 3):

- Participants appreciated the procedures for obtaining climate finance, green finance discussions, assessment reports, and group discussions. Some suggested more stakeholder input and conducting the workshop in rural areas with farmer participation.

Additional comments or feedback on workshop content, format, or organization (Table 3.10, Annex 3):

- Feedback included appreciation for good organization, suggestions for more stakeholder participation, and comments on the modern use of QR codes for attendance.

Closing remarks and way forward

The closing remarks conveyed a reflection on the broader goals of the project, highlighting the alignment of collective efforts with fostering sustainable rural development and enhancing climate resilience in Cambodia. The emphasis was on analyzing the market for climate technologies, developing actionable plans, and mobilizing financial resources to achieve Cambodia's NDCs and advance towards a greener, cleaner, and sustainability for more prosperous future. Throughout the workshop, participants explored the intricacies of innovative financial instruments, avenues for leveraging international climate funds, the role of the private sector in climate finance, and strategies for building capacity in this critical domain. These discussions provided valuable insights and laid the groundwork for concrete action and collaboration.

The closing remarks stressed the importance of building on the momentum generated during the workshop. By capitalizing on the insights gained and the partnerships forged, a course towards ambitious and pragmatic implementation can be charted. This involves refining funding concepts, strengthening stakeholder engagement, and prioritizing initiatives that deliver tangible benefits to rural communities. Additionally, the need to remain adaptive and responsive to evolving challenges and opportunities was underscored. Emerging technologies such as blockchain and satellite imagery were noted for their potential to enhance the efficiency and transparency of climate finance mechanisms. Innovative financing mechanisms like green bonds and climate risk insurance were identified as pivotal in mobilizing resources for climate-resilient projects. The remarks concluded by emphasizing the commitment to collaboration, innovation, and shared prosperity, with a call to catalyze transformative change and leave a lasting legacy for future generations. Gratitude was extended to all participants for their invaluable contributions, insights, and dedication throughout the workshop, acknowledging their instrumental role in shaping discussions and charting a path forward.

Conclusion

The workshop was a significant achievement, revitalizing and incorporating key inputs from participants to identify and explore potential financial mechanisms for climate technology adoption in agriculture for rural development. The discussions included policy recommendations focused on expanding climate technology, especially in remote rural areas, to develop road maps and action plans for accessing financial resources from the Climate Fund and local financing. This initiative aims to promote gender equality, climate resilience, and the expansion of agricultural products, ensuring sustainable development that contributes to reducing greenhouse gases and achieving Cambodia's NDC under the National Framework on Climate Change.

The agenda covered the investigation of potential technological solutions, the identification of creative financing avenues, and the formulation of policy recommendations. Participants exchanged insights on both impediments and prospects, highlighting the immediate need and the critical roles different stakeholders play in implementing sophisticated climate solutions.

Recognizing the program's potential and the necessity to support the NDCs, the next steps will involve initiating an actionable plan to access climate finance and mobilize private sector funding for the adoption of climate technologies in rural development. This approach aims to ensure a sustainable and scalable impact. Achieving these goals will be facilitated by creating a nexus among network stakeholders, emphasizing the importance of collaboration, learning, and innovation.

The workshop underscored the value of cooperation, local insights, and shared learning. Special appreciation was directed towards Mr. OU Chanthearith and his team for their pivotal role in organizing the workshop, as well as to all the contributors for their dedication to fostering a sustainable future for rural Cambodia. The workshop concluded with high praise from the attendees.

Annex 1- Workshop Concept Note and Agenda

Concept Note

for the Consultation workshop on innovative financial instruments for climate technology adoption in rural Cambodia

Hybrid Event at Hyatt Regency in Phnom Penh, Cambodia

Date: 13 May 2024, Monday

Based on the request by the National Designated Entity in Cambodia, the Climate Technology Centre and Network (CTCN) initiated the Market assessment of climate technologies for rural development in Cambodia project. CTCN awarded to Sustainable Solutions for Africa, aims to drive sustainable rural development in Cambodia through the application of climate technologies in the agriculture sector. The primary objective is to support Cambodia in achieving its NDCs by enhancing climate resilience and production efficiency in agriculture and water management.

Project Scope

The proposed project will support analysing the market in the application of climate technologies in the agriculture sector, including irrigation, water, harvesting and agro-food processing such as solar cooling, solar pumping, and food product saving and packaging. This is expected to improve production efficiency and climate resilience in rural development in agriculture and water sectors in Cambodia.

Expected Outcomes

The project's ultimate goal is to create a roadmap for a detailed and actionable plan, serving as a foundation for the government to develop funding concepts, including GCF concept notes. Furthermore, it will facilitate stakeholder engagement by clarifying roles and fostering collaboration during both the development and commercialization stages of climate technologies.

Consultation workshop on innovative financial instruments

The consultation workshop on innovative financial instruments for climate technology adoption in rural Cambodia will convene key stakeholders to:

- Provide an overview of financial instruments tailored to technology adoption in the agriculture and water sectors of rural areas.
- Select appropriate financial instruments to apply and scale up project outcomes, developing funding concepts for rural development in Cambodia.
- Consider modalities and partners for mobilizing financing for the adoption of climate technologies in agricultural production.
- Discuss policy and action recommendations for innovative financial instruments that would support the adoption of climate technologies.

The workshop will mark a significant milestone in the Market assessment of climate technologies for rural development project in Cambodia. It aims to develop a detailed and actionable plan on how climate programs can be expanded through blending finance from climate fund providers and local financing, ensuring the initiative's sustainability and high impact supporting the NDCs. It is essential to remind that social, economic, financial, and environmental criteria are crucial when applying innovative financial instruments. Additionally, the workshop will address the benefits and potential barriers women face in adopting these technologies as an integral element of potential programs. These efforts are intended to cultivate enduring positive change by harnessing climate technologies for the benefit of Cambodia's rural communities.

Agenda for the MoE-CTCN-SSA Consultation workshop on innovative financial instruments for climate technology adoption in rural Cambodia

Hybrid Event at Hyatt Regency in Phnom Penh, Cambodia

Date: 13 May 2024, Monday

Session time in local time	Session details
Registration 8:30-9:00	Registration & Welcome Tea/Coffee
Session 1 9:00-9:30	**High Level Opening** • *Welcome Speech by OU Chanthearith, Director of the Department of Science and Technology* • *Address by Sandra Freitas, CEO and Co-founder of Sustainable Solutions for Africa (SSA)* • *Opening remarks by H.E. SUM Thy, Director General of the General Directorate of Policy and Strategy* • *Group photo*
Session 2 9:30-10:15	**Innovative financial instruments for climate technology adoption** *by Sok Pheak, project focal point* • *Overview of funding solutions for climate technology adoption* • *Presentation on global innovative financial instruments* • *Review of international and local financial partners* • *Overview of solutions for climate programs in Cambodia* • *Financial instruments for scaling up rural development beyond grant*
10:15-10:30	Tea/Coffee Break
Session 3 10:30-11:45	**Panel discussion on innovative financial instruments challenges and opportunities, policy and action recommendations in Cambodia** *by the representatives from the Ministry of Environment, Ministry of Rural Development, Ministry of Agriculture, Forestry and Fisheries, NCDD, and ARDB* • *Challenges and opportunities in using innovative financial instruments* • *Discussion on policy and action recommendations*

	• *Q&A*
11:45-13:00	Lunch Break
Session 4 13:00-13:45	**Deep dive breakout session** *by group leads, moderated by the organizer* *The groups will be led by the organizer and participants will be grouped according to their preference and knowledge / experience:* *Group 1: Benefits and challenges of upstream and downstream financial instrument solutions in Cambodia* *Group 2: Financial partners and modalities for rural development finance* *Group 3: Policy recommendations to scale up climate financial mechanism* *Survey completion by each group*
13:45-14:00	Tea/Coffee break
Session 5 14:00-14:45	**Plenary session: Insights from the breakout discussions** *by group leads, moderated by the organizer* • *Summaries and insights from breakout sessions* • *Final survey completion by participants*
Session 6 14:45-15:00	**Closing remarks and way forward** • *Final reflections by Sandra Freitas* • *Closing statement and vote of thanks by OU Chanthearith and H.E. SUM Thy* • *Group photo*

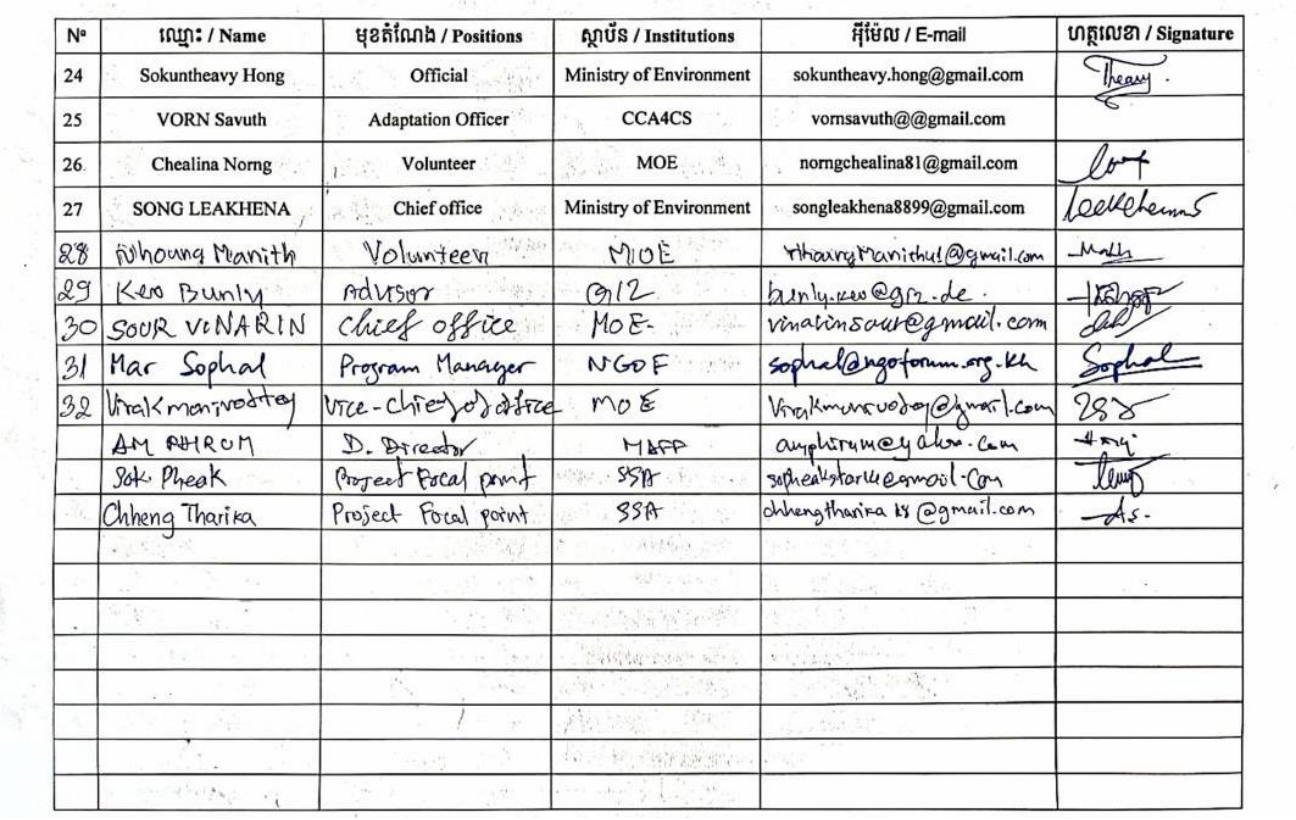
Annex 2 – List of Participants

1) List of in-person participants registered in the Workshop venue:

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ
3
បញ្ជីឥត្តមាន
សិក្ខាសាលាពិគ្រោះយោបល់ស្តីពី
«យន្តការហិរញ្ញវត្ថុប្រកបដោយភាពច្នៃប្រឌិតសម្រាប់អនុវត្តបច្ចេកវិទ្យាអាកាសធាតុនៅតំបន់ជនបទនៃប្រទេសកម្ពុជា»
List of participation on « Consultation workshop on innovative financial instruments for climate technology adoption in rural Cambodia »
Event at Hyatt Regency in Phnom Penh, Cambodia, **Date:** Monday 13 May 2024.

N°	ឈ្មោះ / Name	មុខតំណែង / Positions	ស្ថាប័ន / Institutions	អ៊ីម៉ែល / E-mail	ហត្ថលេខា / Signature
1	H.E. Heng Chanthoen	Deputy General Director of the General Directorate of Policy and Strategy	Ministry of Environment		On behalf
2	Mr. OU Chanthearith	NDE and Director of the Department of Science and Technology	Ministry of Environment	ou.chanthearith@moe.gov.kh	On behalf
3	Ms. FREITAS Adeyemi Akpene Akua Sandra	CEO and Co-founder of Sustainable Solutions for Africa (SSA)	Sustainable Solutions for Africa (SSA)	sandra.freitas@ssa.tg	
4	Sok Sireirath	Tonlesap App Agricultural Technician	AMK	Sireirath.sok@amkcambodia.com	
5	Bopreang Ken	Director	Department of Biodiversity	preangk@gmail.com	
6	Roatha Sroem	Commercial Product Head	Amret plc	roatha.sroem@amret.com.kh	
7	Sokchea Yang	Chief of the office	Ministry of Environment	yang_sokchea@yahoo.com	
8	Savuth Sem	Vice-Chief of Office	Department of Climate Change	sem_savuth@yahoo.com	
9	Lyheng Sean	Official	Ministry of Economy and Finance	lyheng.sean@gmail.com	

N°	ឈ្មោះ / Name	មុខតំណែង / Positions	ស្ថាប័ន / Institutions	អ៊ីម៉ែល / E-mail	ហត្ថលេខា / Signature
10	Seyla Sok	Deputy Director	MOE	seylasok@gmail.com	
11	Jeudi Thay	Director of Green Finance Development	Agricultural and Rural Development Bank, ARDB	t.jeudi@ardb.com.kh	
12	Chanmonita Soeung	Grants Analyst	Harvest III	chanmonita_soeung@harvest3-kh.com	
13	Bunthoeun Tep	SVP & Head of Risk Management Division	ACLEDA Bank Plc.	bunthoeun.tep@acledabank.com.kh	
14	Nitharith Darin	Employee	Ministry of economy and finance	darinnitharith@gmail.com	
15	Socheat Chum	Deputy Director	NCDDS	socheat.chum@ncdd.gov.kh	
16	Sokly Nouv	Associate treasury director	Wing bank	Sokly.nouv@wingbank.com.kh	
17	Danuch Sem	Official	Mor	semdanuch890@gmail.com	
18	Sreynoy Um	Officer	Ministry of Environment	sreynoyu@gmail.com	
19	Keo Rothana	Chief of office	Ministry of Environment	keorothana4@gmail.com	
20	Heng Sovannara	Project officer	Environmental Education and Recycling Organization (COMPOSTED)	hsovannara48@gmail.com	
21	សាំង វិនឡុង	Officer	Federation of Farmer Associations Promoting Family Agricultural Enterprise in Cambodia (FAEC)	Tigerlongclaw@gmail.com	
22	Sareth Nhem	Country Director	Heifer Cambodia	Sareth.nhem@heifer.org	
23	Lauren Kemp	Intern	MOE	laurenkemp265@yahoo.com	



N°	ឈ្មោះ / Name	មុខតំណែង / Positions	ស្ថាប័ន / Institutions	អ៊ីម៉ែល / E-mail	ហត្ថលេខា / Signature
24	Sokuntheavy Hong	Official	Ministry of Environment	sokuntheavy.hong@gmail.com	
25	VORN Savuth	Adaptation Officer	CCA4CS	vornsavuth@@gmail.com	
26	Chealina Norng	Volunteer	MOE	norngchealina81@gmail.com	
27	SONG LEAKHENA	Chief office	Ministry of Environment	songleakhena8899@gmail.com	
28	Nhoung Manith	Volunteer	MOE	Nhoungmanith41@gmail.com	
29	Keo Bunly	Advisor	GIZ	bunly.keo@giz.de	
30	SOUR VINARIN	Chief office	MOE	vinarinsour@gmail.com	
31	Mar Sophal	Program Manager	NGOF	sophal@ngoforum.org.kh	
32	Virak Manivoddey	Vice-Chief of office	MOE	Virakmanivoddey@gmail.com	
	AM AHROM	D. Director	MAFF	amphirum@yahoo.com	
	Sok Pheak	Project Focal point	SSA	sopheakstar@gmail.com	
	Chheng Tharika	Project Focal point	SSA	chhengtharika@gmail.com	

2) Remote participants

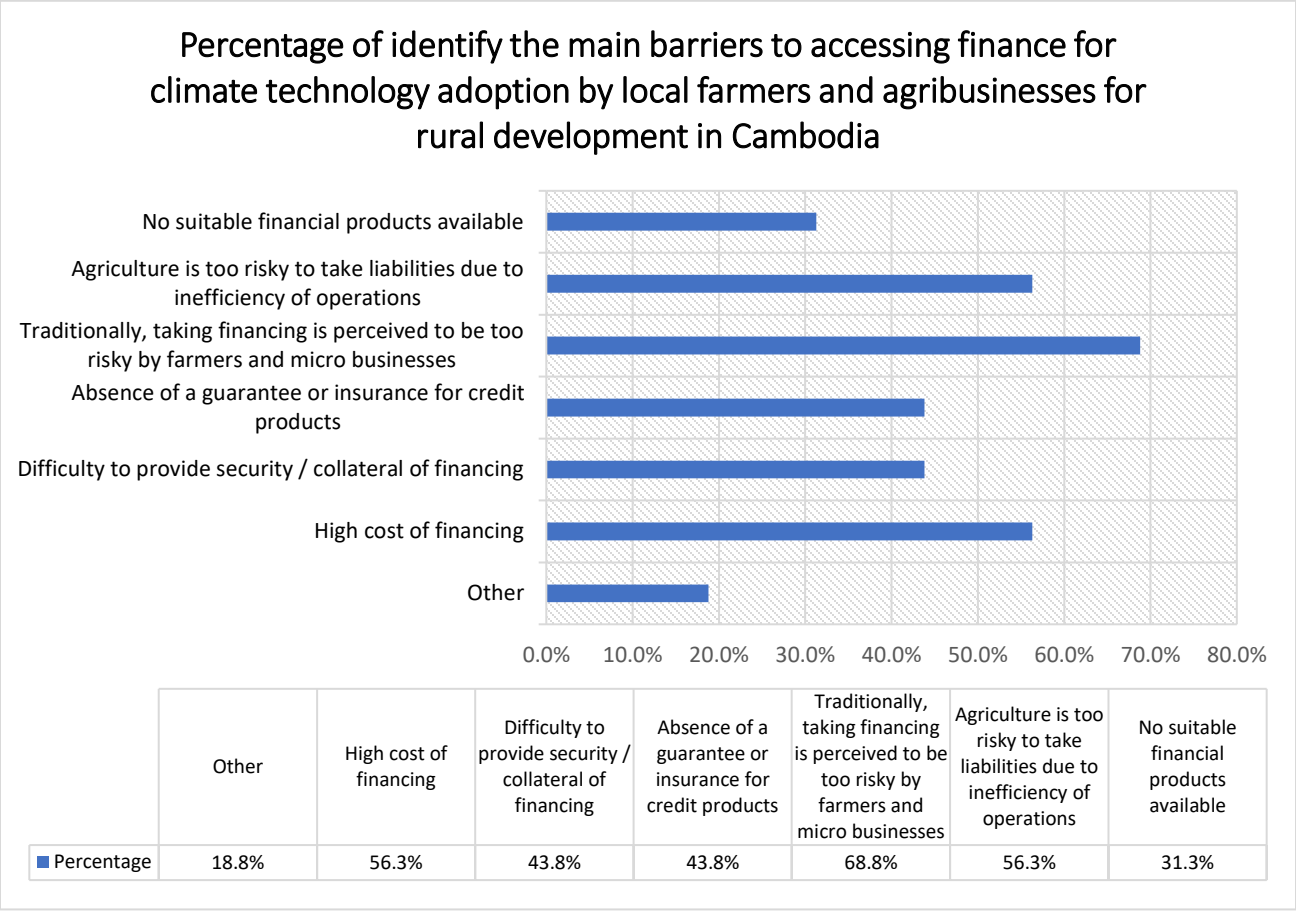
Table A.2 List of remote participants connected via Zoom

No	First Name	Last Name	Email	Organization	Job Title
1	Rachana	Chetha	R.chetha@unido.org	UNIDO	Project Assistant
2	Anna	Katsantonis	anna.katsantonis@ssa.tg	SSA	SIO
3	Rachana	Kong	rachana.kong@unitar.org	UNITAR	National Project Coordinator
4	Nhoung	Manith	nhoungmanith41@gmail.com	MOE	
5	Sophal	MAR	sophal@ngoforum.org.kh	The NGO Forum on Cambodia	Program Manager
6	Chhory	Ouksa	ouksa169@gmail.com	Solar green energy (Cambodia)	Project Coordinator
7	Lyheng	Sean	lyheng.sean2022@gmail.com	Ministry of Economy and Finance	Economist
8	Layheang	Song	layheang.Song@itc.edu.kh	Institute of Technology of Cambodia	Assistant Professor
9	Hongyee	Tan	hongyee.bb@gmail.com	MRD	Consultant
10	Kimsreng	TOR	k.tor@unido.org	UNIDO	Team Assistant
11	Sopheakna	Touch	s.touch@unido.org	UNIDO	Team Assistant
12	Samnang	Va	warsamnang@gmail.com	Independant Consultant	Renewable Energy Technology Technical Advisor
13	Taing	Veng Lim	Venglim.taing@ftb.com.kh	FTB	Senior Relationship Manager

Annex 3 – Survey Results

Question1. Please identify the main barriers to accessing finance for climate technology adoption by local farmers and agribusinesses for rural development in Cambodia.

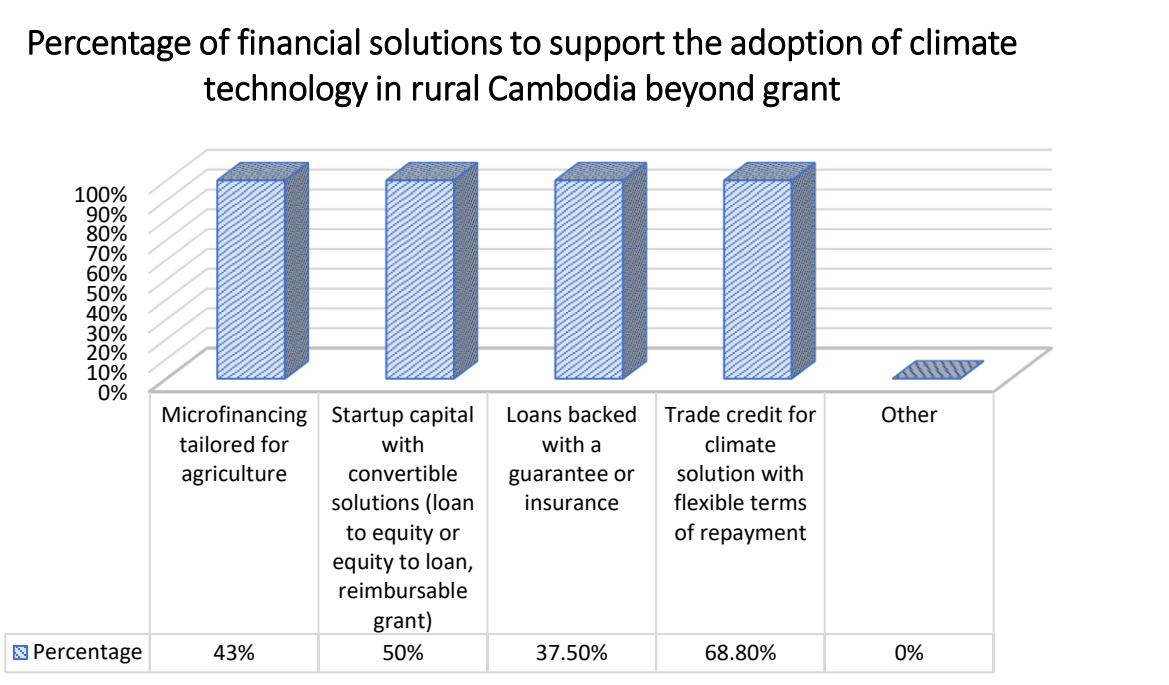
Figure A.3.1 Main barriers to accessing climate finance by local farmers and agribusinesses



	Other	High cost of financing	Difficulty to provide security / collateral of financing	Absence of a guarantee or insurance for credit products	Traditionally, taking financing is perceived to be too risky by farmers and micro businesses	Agriculture is too risky to take liabilities due to inefficiency of operations	No suitable financial products available
Percentage	18.8%	56.3%	43.8%	43.8%	68.8%	56.3%	31.3%

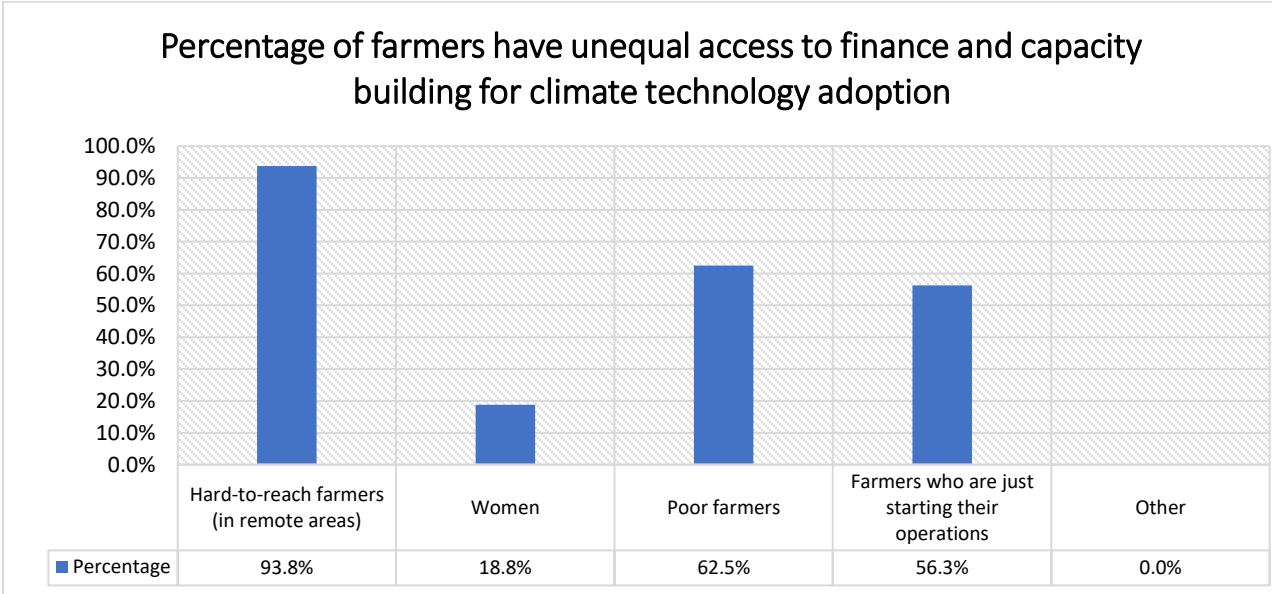
Question2. Please name financial solutions to support the adoption of climate technology in rural Cambodia beyond grant

Figure A.3.2 Spread of financial solutions to support adoption of climate technology beyond grant



Question 3. Which categories of farmers have unequal access to financing and capacity building for climate technology adoption?

Figure A.3.3 Unequal access to finance and capacity building by group



Question 4. Please suggest which terms farmers would accept for financing climate technology adoption in rural Cambodia.

Table 3.4 Survey result on the terms farmers would accept for financing climate technology adoption in rural Cambodia

Question	Response
Please suggest which terms farmers would accept for financing climate technology adoption in rural Cambodia.	• They know how and benefits of applying technology for agriculture related climate mitigation and adaptation. • Farmers who are vulnerable to climate change include farmers who lack capital and markets. • Have a clear purpose, well business managing, have ability to pay, apply the 5 Cs approach. • Any mechanism that ensures that the interest rate is low. • Provide loans with a low investment rate. • Guaranteed Scheme with repayment flexibility. • 1. Low-interest or interest-free loans 2. Grants or subsidies for purchasing climate-smart technologies 3. Payment plans allowing farmers to pay for climate technology over time 4. Tax credits or exemptions for investing in climate. • Affected farmers on climate change. • Small holder Farmer, Living surrounding Tonle Sap Lake. • Low interest rate and training them to understand the benefits of taking the steps to financing climate technology adoption. • Climate smart farming activities. • Poor family. • Good technology to increase yield, good technical assistant support production issue and low interest rate, create agriculture value chain and reduce documentation required for assessment. • Trade credit for climate solution and have flexible terms of repayment.

Question 5. What are the main recommendations for policymaking to improve access to finance for climate technology adoption in rural areas?

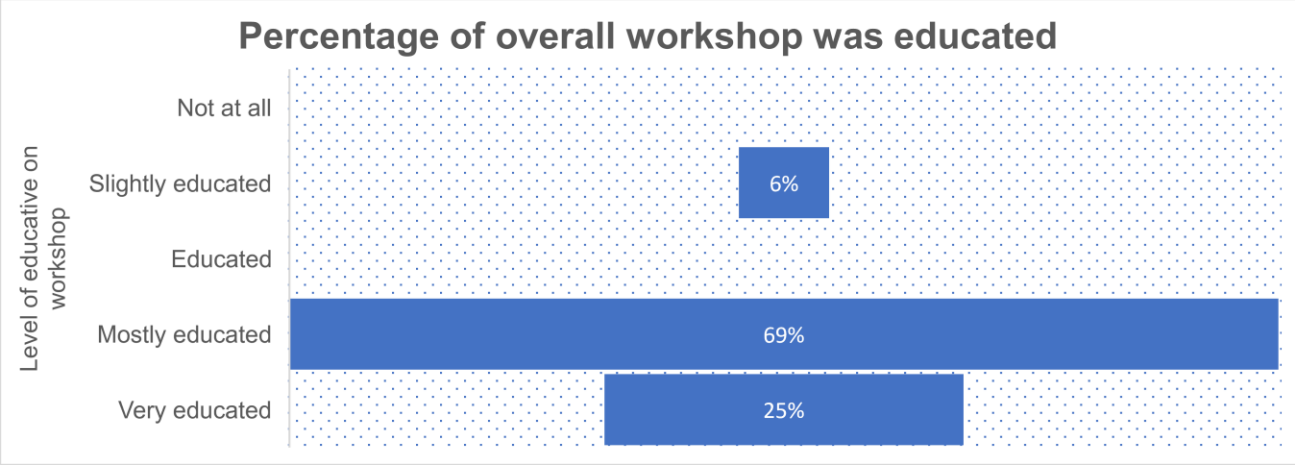
Table 3.5 Survey result on policy recommendations to improve access to finance for climate technology adoption in rural areas

Question	Response
What are the main recommendations for policymaking to improve access to finance for climate technology adoption in rural areas?	• Green finance taxonomy - Low interest rate or tax incentives - Low risk weighted assets for FIs. • Working or collecting input directly from stakeholders, especially those vulnerable to climate change. • Creating ecosystem, defining the key players in this system, creating roadmap, creating options of fund solutions, creating the risk mitigation strategies for all participants. • Formulate the policy related to Green Climate Finance for Cambodia 2) finding the proper leading agency.

	• Low investment tax, Loan with low investment rate. • Working closely and collaboratively with all the stakeholders (Government agencies, DFIs, private sectors, development partners, and so on) • Provide tax incentives and subsidies for financial institutions that provide loans and credit to farmers for climate technology adoption. Develop partnerships between financial institutions and climate technology providers to increase awareness and improve availability of suitable financing options for rural communities. • Capacitate rural financial service providers to better understand and serve the financial needs of farmers, particularly those in remote rural communities. • Modern technology agricultural reform policy. • Increase education, technology transfer, Infrastructure development, Promote Green Technology • Implementing policies that are appropriate for daily farmers. • Ensuring the sustainability of agriculture, supply, and prices. • Policy should be simple, not too complicated, and measurable when put into practice. • Zero emission, climate services, climate snare agriculture, integrated farming. • Explain and teach technology to farmers. • Must set the right interest rate in rural areas. • Disseminate and explain to the students to understand each stage clearly. • Determine size of expected loan provided to farmer more effectively to avoid risk happening during implementation.

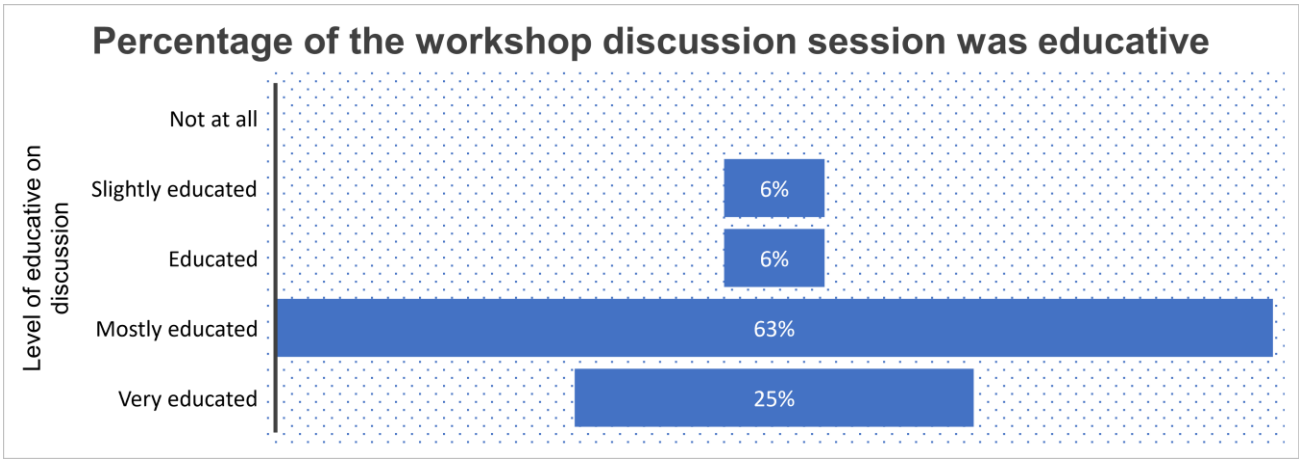
Question 6. Did your find the workshop educative overall?

Figure A.3.6 How educative the participants found the workshop overall



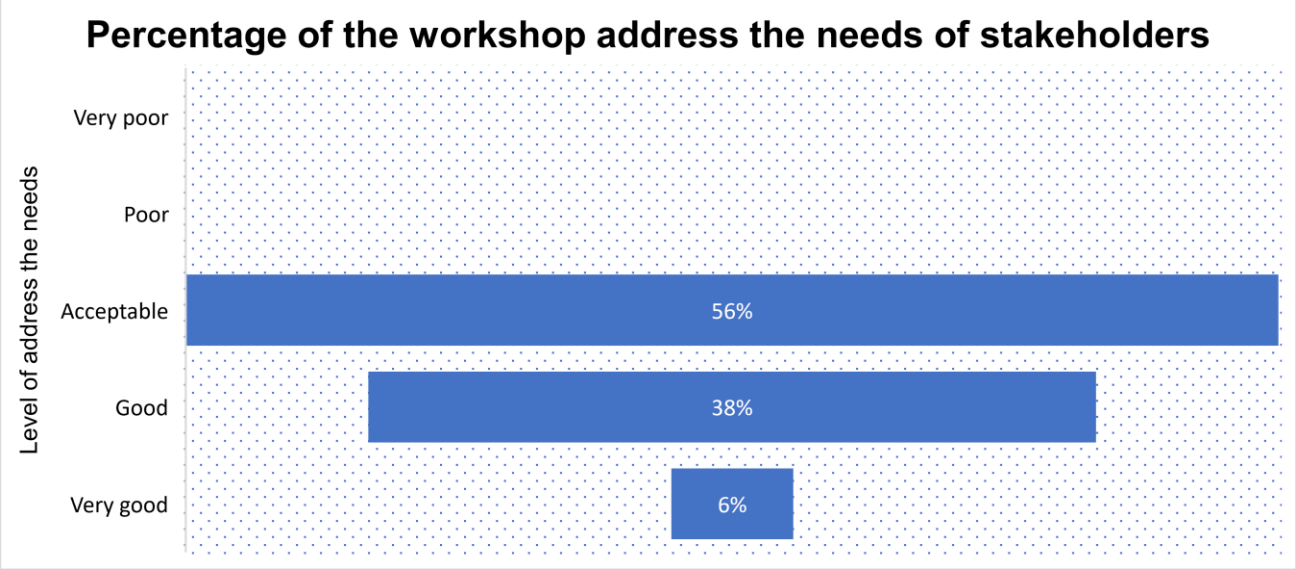
Question 7. Please rate whether the workshop discussion sessions were educative.

Figure A.3.7 How educative the participants found the workshop discussion



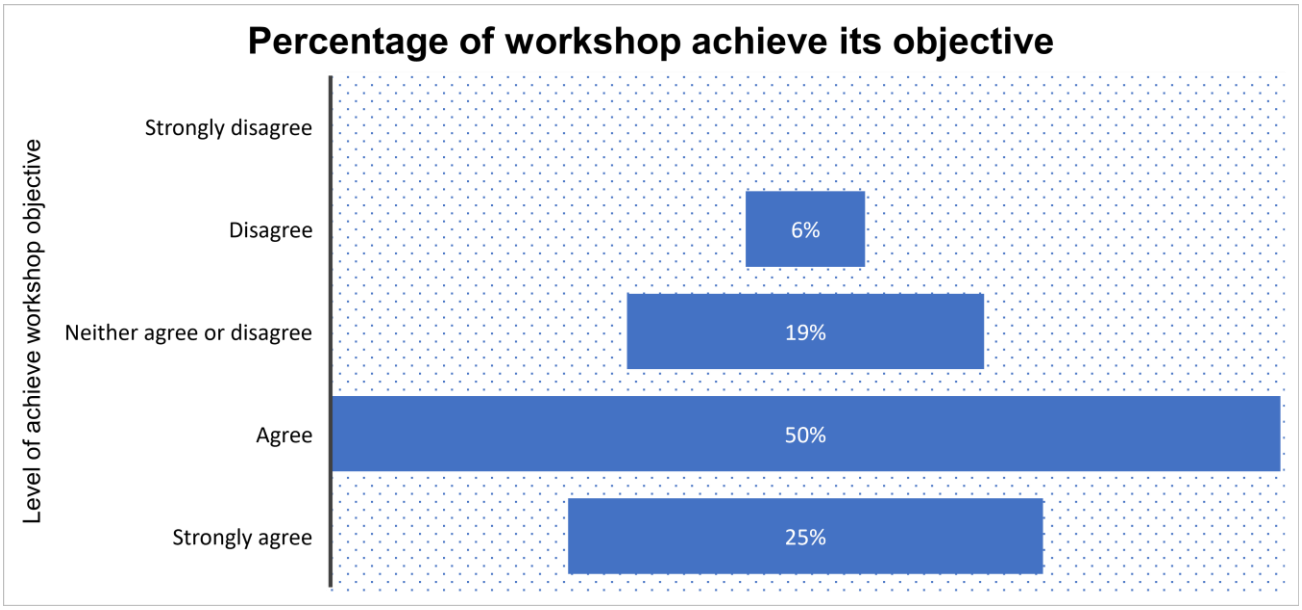
Question 8. Did the workshop adequately address the needs and concerns of different stakeholders, including farmers, local micro businesses, government agencies, and financial institutions?

Figure A.3.8 How well stakeholders' needs were addressed



Question 9. Did the workshop achieve its objective of finding solutions for accessing climate finance for climate technology adoption in rural Cambodia?

Figure A.3.9 Degree to which workshop objectives were achieved



Question 10. What aspects of the workshop did you find most beneficial, and are there any areas you feel could have been better?

Table 3.10 Survey result on the beneficial of the workshop, and could have been better

Question	Response
What aspects of the workshop did you find most beneficial, and are there any areas you feel could have been better?	• Good • Procedures for obtaining climate finance • Green finance • Assessment report is crucial, and group discussion. The Panel discussion should improve more frame and the way of facilitate. • The discussion aspect that helps to find the solution for the farmers and to find how to help them with their work with agriculture • Time constraints • Should be done in rural areas with the participation of farmers • Presentation and joint discussion • Panel discussion and group discussion. • Climate finance • When talking about projects in the development as well as the use of financial technology in rural areas. • Survey information and panel discussion.

Question 10. Do you have any additional comments or feedback you would like to share regarding the workshop content, format, or organization?

Table 3.10 Survey result on Comments or feedback of the workshop

Question	Response
Do you have any additional comments or feedback you would like to share regarding the workshop content, format, or organization?	• All good. • This workshop is too modern by using QR for scan attendance and the problem is the participants who use android they have problems with this • Request all relevant institutions to participate in large numbers • There should be more input from stakeholders, especially ministries, sub-national administrative institutions • The valuation of the project is too direct (example. Question # 1) to evaluate the previous program which participants may not be aware about those programs. • Good organized.