

WORKSHOP REPORT

DeRISK SE Asia: Project result and experience sharing workshop in Vietnam

"Applying seasonal climate forecasting and innovative insurance solutions to climate risk management in the agriculture sector in SE Asia (DeRISK SE Asia)"



Hanoi, 24 November 2022

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Summary

The workshop was co-chaired by the Alliance of Bioversity International & the International Center of Tropical Agriculture (Alliance Bioversity & CIAT) and Ministry of Agriculture and Rural Development/ Crop Production Department (MARD-DCP). The workshop gained interest from partners coming from international and national research organisations, universities, non-governmental organisations, private sectors, and governmental organisations. The key results of the workshops were presented by project implementers and key national as well as provincial partners. The scaling and policy outcomes were shared by Department of Crop Production/ Ministry of Agriculture and Rural development (MARD/DCP). Based on the results and experiences shared by the projects, participants shared their comments on how to sustain project approaches and results as well as improving current climate services' gaps in agricultural production in Vietnam. Specifically, governmental partner (DCP) shared their interest and commitment on continuation of Agro-climatic Bulletins (ACBs) implementation and scaling in Mekong River Delta (MRD) while other donor and projects showed interest in cooperating with DCP and the Alliance of Bioversity & CIAT in wide scale climate services/ ACBs in the Central Highland and South-Central Coast of Vietnam in the next coming years. The potential collaboration among partners for further improving climate services in agriculture also was discussed and planned to be followed up through other projects/programs.

Background

The 'DeRISK SE Asia' project (2018-2022), supported by the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), is led by the World Meteorological Organization (WMO) and implemented by the University of Southern Queensland (USQ) and the Alliance Bioversity & CIAT. After 4 years, we like to showcase and celebrate key outputs, milestones and outcomes generated with project partners, stakeholders, and collaborators in Vietnam during a special event. This occasion aims to convene the partners who made significant contributions to this project and enabled implementers to deliver and create an impact in enhancing climate risk management practices in response to the challenges experienced by the agriculture sector.

Objectives

The closing meeting aims to:

- Present the key accomplishments and milestones achieved in climate forecasting and research, delivery of agro-advisory, crop insurance, irrigation management, and crop modelling and policy contributions within the 4-year implementation.

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- Generate responses and recommendations from the government, private sector, NGOs, development organizations, and donor community on sustaining outputs and scaling project outcomes.
- Stimulate discussion, building on lessons learned and identifying gaps in project implementation, to develop ideas and plans which can serve new and future programs, including Asia Mega-Delta.

Date and venue: The workshop was organised on 24th November 2022 at Dolce Hotel by Wyndham Hanoi Golden Lake, B7 Giang Vo, Ba Dinh District, Hanoi

Agenda: a-half day workshop (see Appendix 1)

Number of participants: 36 (16 women/20 men), see Appendix 2 for list of participants.

Key activities and discussions

Opening session

- Opening remarks by Mr. Le Thanh Tung, Deputy Director of MARD-DCP: Mr. Tung shared the overall objectives of the workshop, including sharing project results and experiences as well as looking forwards for further discussion on how to maintain and scale out project results and approach.
- Welcome message by WMO: Mr. Robert Stefanski, the World Meteorological Organization (WMO) provides [a welcome speech](#). He started with the project information, which includes BMUV as the project donor, WMO, CIAT, and USQ as implementing partners and followed by general objective of the project. He wishes for a successful closing workshop and looks forward to future collaborations with partners
- Overview of the DeRISK Southeast Asia: Dr. Kees Swaans, the Alliance of Bioversity International and CIAT Regional Lead for Climate Action in Asia, provides [an overview of the DeRISK SE Asia project](#), highlighting the project goal, objectives, target countries (Cambodia, Lao, Myanmar, and Vietnam), work packages, activities across different countries, as well as the project results and lessons learned.

Session 1- Looking back: climate risk management for last-mile farmers

A series of presentations presented in the session 1. The detailed of the presentations can be found via [this link](#). The summary of presentations as follows

- (1) Evaluating global climate models for local and regional suitability, including decision analysis tools, presented by Torben Marcussen. The presenter shared the results of evaluating seasonal forecast of different climate models (e.g., Evaluation of SCF skill of 9 Global Climate Models/GCMs, considering 4 variables (rainfall; mean temperature (T); Tmax; Tmin) and 3 forecasts (chance of: exceeding median; anomaly mean; being in low, middle or upper tercile) and development of a 'combination model' forecast

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(research). He shared the more information can be found in the website of the Project <https://deriskseasia.org/>

- (2) Mapping the demand for climate services for enhanced planning and decision-making, presented by Ms. Angelica Barlis, the DeRISK project manager. She shared the key information on participatory mapping process and the results of 1) validation of the national livelihood map, 2) identification and prioritization of major cropping systems based on livelihood zones, 3) development of crop calendars and related management practices, 4) recall of climate-related risk events and management response, 5) identification of climate information and support networks for each management response, and 6) climate service requirement.
- (3) Co-development and dissemination of Agro Climatic Bulletins (ACBs): the case of Tien Giang Province, followed by a video called as Agro-climatic Bulletins: Improving farmers' decision-making through climate information services: This section was shared by Ms. Vo Thi Kim Phuong, deputy director of Tien Giang sub-DCP, Vietnam. She shared the key project implementation activities/approach, key results on Agro-climatic Bulletin implementation and lessons learned.
- (4) Valuing the seasonal climate forecasting for agriculture in Vietnam, presented by PhD. Duc Anh, University of Southern Queensland (USQ)
- (5) Application and integration of climate-smart crop production and water management in Vietnam, presented by Mr. Michael Scobie, University of Southern Queensland (USQ): His presentation focuses on a digital application that allows farmers to calculate the availability of water for irrigation and water budget management. The application is being developed, and the participant is very interested in water irrigation and budget management. The piloted sites were conducted in Yen Bai, Buon Ma Thuot, Dong Nai and Dak Lak. Three chosen crops/trees are coffee, cassava and citrus.
- (6) Developing targeted seasonal climate forecasting - crop yield modelling system for improved climate risk management – case of robusta coffee production, presented by Mr. Louis Kouadio, USQ: He mentioned the results on (1) Relationships between weather, management practices and robusta coffee yield at the farm scale and (2) 2-Prototype Integrated seasonal climate - robusta coffee yield forecasting system.
- (7) Agricultural insurance for coffee in Vietnam: piloting a co-contribution model in the Central Highlands, presented by Mr. Shahbaz Mushtaq, University of Southern Queensland (USQ) and representative from ECOM Sustainability Management Service (SMS): He shared a study conducted in Central Highland, Vietnam and focused on coffee.
- (8) Adaptation plans, scaling, and policy outcomes: CS-MAP and Agro-Climatic Bulletins, Mr. Le Thanh Tung, Deputy Director, MARD-DCP. Mr. Tung shared the project approaches and key results achieved at the policy levels (Decision 344 for the national Green Growth strategy where the CS Map will be expanded), regional instruction letters as well as provincial level implementation plans for scaling ACBs application in Mekong River Delta. He also shared short-term and long-term plans of

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DCP and the project for sustaining project approaches and further works on climate service in Vietnam.

Questions/comments and responses

Comments and questions from Ms. Ha/International Cooperation Department under MARD:

Comments: Ms. Ha/ICD appreciates the DeRISK project implementation and results. But she recommended more promotion activities needed to reach more people and governmental departments.

Questions: Can monthly forecasts come up with timely advice for farmers? Are the number of hydrological stations enough for making downscaled weather and seasonal forecast? How does the project solve the problem when the measuring station is not enough to give accurate data and forecast for a small area?

Responses:

Mr. Kees Swaans replied in MRD now DeRISK is combining the seasonal, monthly, and 10-day forecast. In the future, we will aim to automate some parts to spend less time with relevant officials. The next step is to find ways to popularize and automate some processes while keep the participatory part. Even with the general forecast, our method still can adapt to the experienced local, when receiving the forecast, Technical Working Group discusses with the district, and local official to decide the advisories for a specific area, and crop based on experience with crop situations on the ground.

Ms. Thuong/Southern Regional Hydromet Center responded that during the production of the forecast, the distribution of meteorological stations is not uniform. But there are relatively dense automatic measuring stations. They used the correlation between the surrounding regions to make the forecast.

Mr. Lam/NCHMF – In 3 Ready-set-go phases, the seasonal forecast is for long-term planning, while the other 2 types help in direct planning. 10 days forecast for direct planning. To forecast the climate, the current network of measuring stations is okay, but forecasting natural disasters such as locally heavy rain may not be guaranteed, small-scale needs a denser network.

Mr. Son/IMHEN: The data system is used from the nationwide station system, using the dynamic forecasting model according to the measuring grid. Combine multiple informational data (remote sensing data) into the message. The Mekong Delta has not much variation between spaces, unlike the North with mountains, there are more differences, requiring a denser network. Therefore, the current relatively density meteorological, salinity, rain, ... monitoring station ensures providing information to support people in decision-making in the south.

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Questions and comments Mr. Ngo Sy Giai, IMHEN: DeRISK is an interesting project. We can see good results in many countries, and the project has been much helpful, especially for the crop production subsector. To sustain the project result we should have a guide on the climate information or the climate database. The accuracy of the bulletin? I am not clear about the climate risks, did the bulletin mention? How can we integrate the metrics into the forecast? What is the development of advisory in the different crops and different seasons?

Responses from Mrs. Hanh DCP on project sustainability

DCP is working with CIAT to apply ACBs development and dissemination process as a technical advance for locals to get funding from the government to sustain the ACBs. MARD has issued decision 344 for the national Green Growth Strategy where the CS Map will be expanded and DCP will provide the guidance to corporate/link with the ACBs with CS-Map

People use the ACBs' information to adapt their rice, vegetables, fruit trees, and livestock. Weather in the South is different from the North, farmers cultivate rice the whole year. The ACBs has helped officials and farmers a lot. People read the ACBs for risk potential before developing a crop calendar, then choose appropriate rice varieties. Based on the weather (storm) information from ACBs, adopted farmers will harvest earlier to avoid loss.

Comments from Mr. Thoai, Forestry University: He suggested project to look further on willingness to pay for climate information services from the users (e.g., farmers). He shared his experience on this topic under Agro-climate information service (ACIS) project in Ha Tinh province, Vietnam. ACIS project was implemented by ICRAF.

Questions and comments from Mr. Minh, UNDP: Comments to simplify the five steps of ACBs to replicate things to take a simple approach. Reported with more than 100,000 people having access to the bulletin is interesting and want to hear about the change in the economic benefits. The sample size to do this survey?

Responses: Ms. Tam, project country coordinator shared that the sample size for the Cost and Benefit Study is more than 200 farmers. The economic benefits' result was correlation and farmers' self-reported saved cost of production. We will need to have more study to see the benefits/impacts of ACBs to farmers' agricultural production.

Comments from Mr. Minh, UNDP: UNDP is interested in further work on climate services and build on the existing results from the DeRISK project. Mr. Minh confirmed to engage DCP in the next project in the Central Highland and South-Central Coast, Vietnam if DCP is interested in.

Session 2- Panel discussion

Panel discussion moderated by Dr. Kees Swaans and panellists included Mr. Lam/NCHMF, Ms. Monica/UNDP, and Ms. Kim Thuy/Sub-DCP Can Tho.

Dr. Kees Swaans asked panellists about their current works on climate services, key challenges, and future plans to improve climate services for farmers.

- Mr. Lam from NCHMF shared that NCHMF has already offered forecasts for different time scales (0-6h, 3 days, 10 days, seasonal and yearly, etc.) for different climate risks. NCHMF is currently developing the national climate service framework. The biggest limitation for VN is user platform- how to access the users. Currently the climate information is still general, without focusing on specific region and specific target users. With the support from cooperation projects like Derisk, we can strengthen capacity not only for local hydro-met agents but also for central level ones and be able to develop specific services for specific users for the next 5 years.
- Ms.Monica -UNDP emphasized on the need of establishing a digital platform for agro-meteorological information service, the need to link between climatic data with agricultural data and how MARD cooperate with Hydromet agencies under MONRE. In Vietnam, we already collaborated with Vietnam Hydrometeorology agency to automatically collect data; in Laos we have submitted the agro-climatic data collection system, that means crop calendar, near-real time pest and disease monitoring. This is necessary to be put in a digital platform, said Ms.Monica. One key challenge in Vietnam is the poor cooperation between ministries MARD and MONRE and their agencies. MARD should assign staff as a team to monitor the collection of real-time data; and state budget should be used for the development of these climate services.
- Mr. Lam spoke more about the cooperation between DCP and Hydromet agencies. We have shared 10 day and seasonal forecast to DCP. Now this information is used by DCP to generate forecasts for agriculture production. Recently we had some projects which produce products for Agri sector. To integrate at higher level, as Ms. Monica mentioned before, the readiness of the data among ministries and agencies is important. We have real-time, 3h, 3 days and seasonal data from monitoring and from models already available but integrating into a joined system with other sectors is difficult. The current forecast is general for all sectors, and they will process the data for their own use. It's important to have a discussion with other sectors to understand their needs. Then we can have a system to automatically produce forecasts through models and by forecasters. We will need further cooperation. To increase effectiveness, all information e.g areas of rice production, growth stages, water levels, etc. should be integrated into one system. If we know, for example, a specific area/sector needs forecast for a specific disaster, the information we offered will be more useful and specific. Cooperation

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projects like Derisk will give us more chances to discuss with others for better cooperation.

- In Can Tho, the Sub-DCP already has a similar activity– the pest and disease bulletins implemented since 2013. This provides pest and disease forecasts for 7 days and broadcasted by local radio stations. For ACBs, first applied from WS 2022 for rice as this is main crop in Ca Tho (account for 80% agriculture land). We have conducted assessment and draw lessons from the implementation. In the future to upscale and maintain the ACBs, it should be integrated into local activities. For example, we cooperated with CTU in the project Apply IoT and GIS in monitoring pest and disease for rice. We can use this information to put in ACBs. Another activity is Applying digital technology in agricultural production. We established Zalo group to provide knowledge about agricultural practices. We can integrate ACBs into this. To further upscale the project, there are two key requirements: supportive policy from central level. If we have a policy from the MARD and central allow us to use local budget for ACBs. The second need is human capacity building for local staff (not only academic knowledge but also IT skills).

Comments from participants: IMHEN's representatives shared their experience with CARE's project. The information that climate forecasts provide, and the information farmers need to apply in production are different. Currently, the seasonal forecasts provided by hydromet agencies are difficult to understand even by local staff. We have cooperated with CARE to improve the capacity for farmers so farmer can understand the forecasts. We develop handbooks to provide agro-climate with understanding about agro-climate so they can make their own calendar/decision when they receive seasonal forecast. Also, there is a need to improve capacity for communal staff and village headers so they can support farmers, thus maintain the project achievements. IMHEN already have agro-climate map, Said by Dr. Giai. We can integrate climate risk maps into this to make it more informative.

Follow up and outcomes/ closing remarks by Mr. Tung, DCP.

Short term:

- Recognize ACBs as technical advance in MRD to mobilize local government funds for implementation
- Further development of CS-MAP and ACBs through DeRISK and new CGIAR initiative Asia Mega-Deltas
- Support capacity building and training to implement CS-MAP and ACBs at provincial and district level

Medium-Long term:

- Linking ACBs and CS-MAP through Green Growth Strategy
- Develop and integrate CS-MAP and ACBs in digital platform with support of Asia Mega Deltas

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- Scaling implementation across MRD and other regions.

Wider impacts/media coverage: showing the appreciation and importance of the event was the attendance by key partners from national as well as provincial levels. Media covered the workshop, in [national TV channel on Agriculture VTC16](#) and [Vietnam Agriculture newspaper](#).

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Appendix

Appendix 1: Workshop program

Time	Activity	In-charge
08:00 – 08:30	Registration	Secretariat
Opening session		
08:30 – 08:40	Introduction and welcome participants	Trần Thị Mỹ Hạnh, Department of Crop Production
08:40 – 08:55	Opening remarks	Mr. Le Thanh Tung, Deputy Director of Department of Crop Production/ MARD
	Welcome message (pre-recorded)	Robert Stefanski, World Meteorological Organization (WMO)
08:55 – 09:05	DeRISK Southeast Asia – An Overview (2018-2022)	Kees Swaans, DeRISK SE Asia, Project Leader (ABC)
Session 1: Looking back: climate risk management for last-mile farmers		
09:05-09:20	Evaluating global climate models for local and regional suitability, including decision analysis tools	Mr. Torben Marcussen University of Southern Queensland (USQ) -remoted
09:20-09:30	Mapping the demand for climate services for enhanced planning and decision-making	Ms. Angelica Barlis, Alliance of Bioversity & CIAT (ABC)
09:30-09:40	Co-development and dissemination of Agro Climatic Bulletins (ACBs): the case of Tien Giang Province	Ms. Vo Thi Kim Phuong Sub-Department of Crop Production, Tien Giang Province
09:40-09:45	Agro-climatic Bulletins: Improving farmers' decision-making through climate information services	(Animation video)
09:45-09:55	Q&A	
09:55-10:00	Introduction of knowledge products and exhibit display + group photo	DeRISK SE Asia / participants
10:00-10:15	<i>Coffee and tea break and viewing exhibits and knowledge products</i>	<i>Participants</i>
10:15-10:25	Valuing the seasonal climate forecasting for agriculture in Vietnam	PhD. Duc Anh, University of Southern Queensland (USQ)

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Time	Activity	In-charge
10:25-10:40	Application and integration of climate-smart crop production and water management in Vietnam Developing targeted seasonal climate forecasting - crop yield modelling system for improved climate risk management – CASE OF ROBUSTA COFFEE PRODUCTION	Michael Scobie, University of Southern Queensland (USQ) Mr. Louis Kouadio, USQ
10:40-10:50	Agricultural insurance for coffee in Vietnam: piloting a co-contribution model in the Central Highlands	University of Southern Queensland (USQ) and ECOM Sustainability Management Service (SMS)
10:50-11:00	Adaptation plans, scaling, and policy outcomes: CS-MAP and Agro-Climatic Bulletins	Mr. Le Thanh Tung Deputy Director, MARD-DCP
11:00 – 11:10	Q&A	
Session 2: Looking ahead: panel discussion		
11:10–11:45	Climate services for smallholder farmers: lessons learned and way forward	Representatives from the government, research, university, NGOs, private sector
Closing session		
11:45 – 12:00	Concluding remarks	Mr. Le Thanh Tung Deputy Director, MARD-DCP
Lunch		

Appendix 2: List of participants

Order	Name	Title and organisation
1	Ngô Sỹ Châu	Head of Crop production and plant protection unit, Ninh Phuoc district
2	Phan Bá Doanh	Head of Sub-DCP Ninh Thuan
3	Lê Thanh Tùng	Vice Director of southern office-Department of Crop Protection (DCP)-

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4	Trần Thị Mỹ Hạnh	Specialist of Department of Crop Protection (DCP)-southern office
5	Võ Thị Kim Phương	Vice Director of Sub-DCP Tien Giang
6	Đỗ Thị Thường	Specialist of Southern Region Hydro-Meteorological Centre
7	Dương Quốc Nghiêm	Specialist of Crop production and plant protection unit, Tri Ton district
8	Lưu Minh Tuấn	Head of Sub-DCP An Giang
9	Huỳnh Ngọc Hạp	Vice Director of Sub-DCP Soc Trang
10	Nguyễn Thanh Hồng	Specialist of Crop production and plant protection unit, Long Phu district
11	Trần Hoài Nhân	Head of Crop production and plant protection unit, Long My district
12	Mai Hoàng Khang	Specialist of Sub-DCP Hau Giang
13	Trang Tửng	Vice Director of Sub-DCP Tra Vinh
14	Trần Thị Kim Thúy	Vice Director of Sub-DCP Can Tho
15	Nguyễn Đức Long	Vice Director of Sub-DCP Kien Giang
16	Ngô Sỹ Giai	Institute of Hydrology and Meteorology Science and Climate Change (IMHEN)
17	Trịnh Quang Thoại	Vietnam University of Forestry
18	Lê Đắc Phúc	Agritera
19	Monica Retri	UNDP
20	Nguyễn Hồng Sơn	Institute of Hydrology and Meteorology Science and Climate Change (IMHEN)
21	Nguyễn Đức Hòa	National Centre for Hydro-Meteorological Forecasting (NCHMF)

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22	Eliott Prigent	University of Paris 2 Panthéon-Assas
23	Hoàng Thị Thu Huyền	Center for Agrarian Systems Research and Development (CASRAD)
24	Bùi Văn Minh	UNDP
25	Hoàng Phúc Lâm	National Centre for Hydro-Meteorological Forecasting (NCHMF)
26	Vũ Thanh Hà	International Cooperation Department-MARD
27	Đặng Thị Nhài	VTC16
28	Nguyễn Diệu Linh	Vietnam Agriculture news
29	Nguyễn Kiều Tiên	Vietnamnews
30	Kees Swaans	Alliance Bioversity & CIAT
31	Angelica Barlis	Alliance Bioversity & CIAT
32	Huong Nguyen	Alliance Bioversity & CIAT
33	Trinh Thi Thanh Ha	Alliance Bioversity & CIAT
34	Vu Huong Ngan	Alliance Bioversity & CIAT
35	Vu Thi Bich Ngoc	Alliance Bioversity & CIAT
36	Le Thi Tam	Alliance Bioversity & CIAT

Appendix 3: workshop photos

<https://drive.google.com/drive/folders/1QFJe74rmlMaLPz0Y6wtCb-fBR3KgjfAh>

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