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GUIDE TO PARTICIPATORY SCENARIO PLANNING (PSP)

Experiences from the Agro-Climate Information Services for women and ethnic minority farmers in South-East Asia (ACIS) project in Ha Tinh and Dien Bien province, Vietnam

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GUIDE TO
PARTICIPATORY SCENARIO PLANNING (PSP)

Experiences from the Agro-Climate Information Services for women and ethnic minority farmers in South-East Asia (ACIS) project in Ha Tinh and Dien Bien provinces in Vietnam

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GLOSSARY

Climate hazards are climate events such as storm, heavy rainfall, drought, and long-term changes in climate variables with the potential to cause damage and/or loss of infrastructure, livelihoods, ecosystems and environmental resources, social and economic disruption, and so on.

Climate risk refers to the potential for negative consequences due to climate.

Climate-smart agriculture (CSA): In this guide, "CSA practices" refer to climate-smart technologies and components of farming systems intended to lead to livelihood adaptation and mitigation co-benefits, described in Participatory Identification of Climate-Smart Agriculture Priority (Duong et al. 2016).

CSA farmer interest group: A group of farmers who share the same interest in agricultural production and aim to cultivate their crops or raise livestock in a "climate-smart" way. By participating in the group, farmers can learn and share their agricultural experiences and information, as well as exchange labour during planting, managing, and harvesting periods.

Downscaling refers to transforming information that cover a large geographical scale into local information (e.g., to cover a district, watershed or village).

Facilitator(s): the one who can take a lead in supporting a participatory process and have knowledge on climate variability, changes, and adaptive actions. Government officers (extension, agricultural planners), meteorological office staff, civil society organizations (or farmer association staff), champions of community-based groups (farmer interest groups, women groups, Village Saving Loan Association), and NGO staff/project staff can be facilitators.

Participatory scenario planning (PSP) is a process of collective sharing, learning, and interpretation of seasonal climate forecasts where multiple stakeholders, including meteorologists, community members, local government departments and local NGOs share knowledge and discuss to find ways to interpret the information into a form that is locally relevant and useful.

The Participatory scenario planning (PSP) workshop is a valuable knowledge-sharing platform through which stakeholders, including those who support the implementation of PSP (i.e., meteorological and agricultural services) and those who access and use the climate information (i.e., technical experts, and farmers) meet to discuss adaptation actions within the context of climate information. While meteorological services and local forecasters are the source of the seasonal forecast, both facilitators and participants at the workshop are sources of information for the advisories developed. The participants understand and consider forecast probabilities and uncertainties and make different seasonal climatic scenarios, as well as assess likely hazards, risks,

opportunities and impacts. Action plans will be developed towards these assessment. Through a collaborative method, the PSP designs climate and agricultural information services in user-friendly ways.

Probability refers to the chance or likelihood that a particular climate event or condition will occur in the future. For example, a 67% chance of temperature in next season will be higher than the same season last year.

Project may refer to a program or an activity of any organization.

Scenarios are different situations that might happen in the future due to forecasted climate in a season.

Uncertainty refers to a state of incomplete knowledge about the future state of the climate that can result from a lack of information or from disagreement about what is known or even knowable. Uncertainty may have many types of causes, from quantifiable errors in the data to ambiguously defined concepts or terminology, or uncertain states of future human behaviour that affect the climate (IPCC, 2013).

Village Saving and Loan Association (VSLA) is a self-managed group of 20-30 individuals who meet on a regular basis to provide its members a safe place to save their money, access loans, and obtain emergency insurance. VSLA is also a collective platform for women to discuss relevant topics such as agro-climate information, seasonal forecast, and advisories, among others.

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NOTES TO USER

The PSP approach was developed under CARE International's Adaptation Learning Programme (ALP). It was then adapted to Vietnam, Laos, and Cambodia under the Agro-Climate Information Services for women and ethnic minority farmers in South-East Asia (ACIS) project by CARE International in Vietnam and World Agroforestry Centre (ICRAF) Vietnam.

Why do we need PSP?

For many of the world's most at-risk communities, climate change is not a distant threat; it is already causing more extreme and volatile weather and climate patterns and events. For farmers especially, planning is imperative to their livelihoods, but now becoming more challenging as weather becomes unpredictable. In this regard, managing climate variabilities, change, and uncertainties must improve. PSP provides relevant climate information, which is co-produced through local and scientific information. This information is crucial for farmers and agricultural planners to conduct seasonal planning. Scenarios developed using the PSP approach enable the interpretation and management of uncertainty. In addition, the PSP workshop does more than simply giving farmers or users 'access' to seasonal climate information. It fosters a space for farmers to reflect, generate, and re-generate information and knowledge. By actively transferring weather information to farmers, information can be transformed into knowledge. Beyond encouraging farmers to challenge the information presented in a seasonal forecast, they can also highlight strengths and gaps in the information available to them whilst developing the capacity to interpret scientific and local climate information.

What are the expected outcomes of PSP?

Implementing PSP will enhance the capacity to develop and interpret climate information to meet the demand of the end-users and provide more actionable climate information service. This will lead to available, accessible, timely, understandable, and useful information to the end-users, enabling them to manage climate uncertainty, risks, and opportunities. It strengthens the stakeholders' capacity to adapt to future seasonal climatic possibilities.

Who is this guide for?

This guide is developed for stakeholders who can facilitate the workshops/meetings to generate relevant climate information, which contributes in developing seasonal agricultural or agroforestry plans. The facilitators must be knowledgeable on climate variabilities, changes, and adaptation. They often can be government officers (extension, agricultural planners), meteorological office staff, civil society organization (farmer association staff), champions of community-based groups (farmer interest groups, women groups, Village Saving Loan Association), and NGO staff.

What are the purposes of this guide?

This guide provides simple and short instructions to facilitate PSP based on experiences from the ACIS project in Ha Tinh and Dien Bien provinces. This can be modified and adapted to other context-specific areas and different targeted groups of farmers.

How to use this guide?

The guide contains five phases (Figure 1). Each phase explains the purposes, potential facilitators, participants, and key actions, as well as guiding questions to reach specific objectives. Phase 1 (engagement and design) may take several months; Phase 2 (preparation for the PSP workshop) may take 1-3 weeks; Phase 3 (PSP workshop) takes 1-2 days; Phase 4 (communication) and phase 5 (monitoring, evaluation and feedback) are considered throughout the whole process.

In each stages and steps, facilitators must ensure that all participants have common understandings of uncertainty, probability, downscaling, and scenarios. These terms can be translated in the simple languages that farmers can understand and use widely.

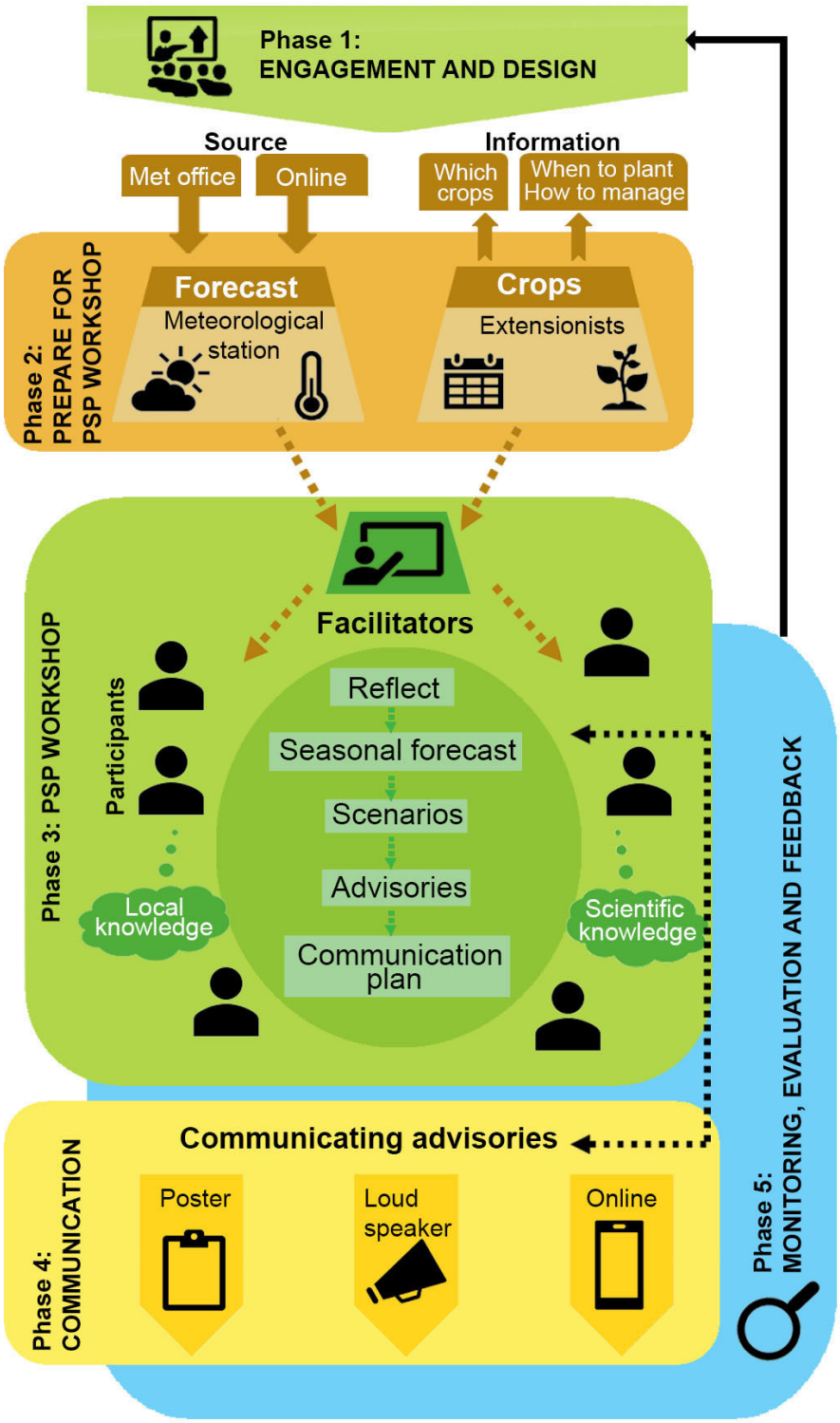


Figure 1: *A Participatory Scenario Planning (PSP) approach in Vietnam (adapted from CARE, 2017)*

In Phase 1, the PSP approach is designed based on understandings of local contexts and stakeholders. Agro-climate information obtained during the preparations (phase 2) is communicated in the workshop (phase 3) by the facilitators. During the workshop, the participants will consolidate and act upon this information in combination with local knowledge and technical/scientific information to produce agro-advisories. Agro-advisories will be communicated amongst the local community through various channels (phase 4). In phase 5, PSP participants may provide feedbacks during the reflection session of the next workshop (session 1) or through interviews and focus group discussions conducted by facilitators.

PHASE 1

ENGAGEMENT AND DESIGN

Purpose: Design an approach to participatory scenario planning (PSP) that is relevant to the local community. This requires building partnerships with key stakeholders and gaining an understanding of the local context and needs of the community related to climate information. This phase needs to only be carried out once, but can be adjusted depending on the insights and reflection from ground work. The design of PSP will also shape the workshops in phase 3.

Methods: interview, workshop, focus group discussion

Participants: Meteorological office staff, agricultural planners, crop protection officer, extension, civil society organization (CSOs), NGOs, farmers, private sectors related to agriculture and climatic information

Actions:

- Select representatives from potential stakeholders to participate in the interviews/ meetings/ workshops;
- Analyse local context: Gather local perspectives on seasonal climate to understand local climatic conditions, risks, and impacts, identify gaps and challenges to farmers' livelihood, and determine the current availability and access of climate information services;
- Analyse stakeholders: Identify stakeholders that will produce, communicate, and use climate information and agro-advisories;
- Introduce PSP to the participants;
- Identify capacity building needs of stakeholders to implement PSP process;
- Plan for the entire PSP process.

KEY QUESTIONS

- What are the main crops/trees/ livestock and farming practices in the area?
- What challenges do farmers face to maintain/improve agricultural production?
- Are there any extreme weather events in the area? When and how do they affect agriculture and farmers' livelihood?
- What is the climate information available in the area? What is the current agro-climate information flow? Are there any gaps? What can be improved to make climate information services more meaningful in the area (producing, translation, transfer and use/application)?
- Should we add or exclude any stakeholders in the current stakeholder meeting?
- Do we need to form a technical working group when implementing PSP?
- What can different stakeholders contribute?
- What capacity do stakeholders need to accomplish their tasks?
- When/how often will PSP happen and where?
- What are the possible costs to implement PSP?

PHASE 2

PREPARING FOR
PSP WORKSHOP

Purpose: Identifying climate information needs for the coming season, preparing stakeholders who will participate in the PSP workshop, obtaining the information needed for the workshop, ensuring all facilitators and stakeholders involved understand what will happen in the PSP workshop and the facilitation required

Methods: workshop/meeting, focus group discussion

Participants: key stakeholders who will be involved in/ facilitate PSP workshop (technical working group) identified in Phase 1, farmers in the targeted area.

Actions:
Check if there is a need to invite additional stakeholders to the workshop in phase 3.Collect and identify relevant information (climate indicators) to be presented/discussed in the workshop, e.g. seasonal forecast from the meteorological office or online sources, and status of climate and farming systems before the workshop.Develop an agenda and agree on task distribution with stakeholders for the workshop (preparing logistics, facilitating workshop, synthesizing workshop results and workshop products, communicating workshop products, monitoring and evaluating PSP approach). Prepare logistics: date, invitation letters, venue, and materials, among others.

KEY QUESTIONS

- What are the needs for climate information amongst stakeholders/farmers for the next cropping season?-What climate information is forecasted for the next cropping season (from scientific forecaster/websites)? -What is the status of cropping season before the PSP workshop?
- What farmer groups exist in the community?
- Who will be involved in the workshop and in what way (technical working group, local leaders, and farmers)?-Who is responsible for recording information in PSP and creating the final agro-advisories?
- What needs to be monitored in the PSP process? What indicators will be used in monitoring? Who will do this?
- What logistical preparations are required for the PSP workshop? Who will be responsible to do the preparations?

PHASE 3

PSP WORKSHOP

Purpose: Facilitate a multi-stakeholder or participatory forum where farmer and scientific knowledge will be shared with stakeholders to co-develop locally relevant climate information and agro-advisories.

Participants: representatives of farmers and farmer groups and stakeholders/technical working group members identified in phase 2 such as meteorological officer, agricultural planners, crop protection officer, extension, and CSOs (Farmer Association)

Method: workshop

Actions: The workshop is divided into five sessions and encourages farmers to i) review and reflect the previous season and climate forecasts available to them, and assess accessibility and usefulness; ii) react to forecasts by presenting and co-generating scenario plans to mitigate on-farm risks and identify opportunities; iii) develop accessible, useful, and timely advisories to be communicated to the farming community; iv) communicate workshop products and information to a wider community; and v) participate in monitoring, evaluating, and providing feedbacks on the impacts of PSP approach and information that farmers used

FIVE SESSIONS:

- Review and Reflect
- React: Downscaled seasonal forecast
- Relate: Scenario planning for action
- Develop agro-advisories
- Develop communication plan

Figure 2: *Participatory Scenario Planning (PSP) workshop*

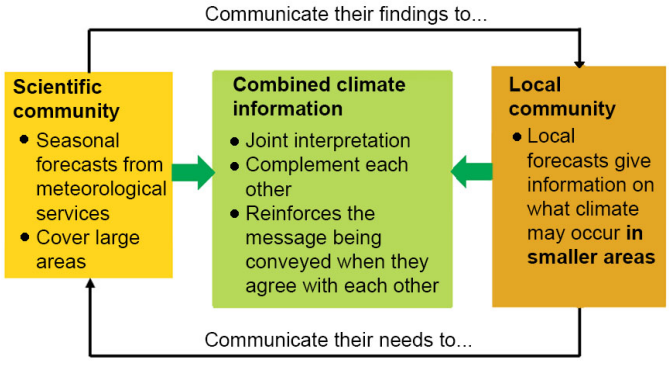


Figure 3: *Combined seasonal climate forecast (adapted from CARE, 2017)*

PARTICIPATORY SCENARIO PLANNING (PSP) WORKSHOP

Session 1

REVIEW AND REFLECT

Content:
- Share information and experiences of the previous season.
- Reflect on how the crops were influenced by the information that farmers used.
- Gain understanding of the farmers' experiences of climate services, advisories, and respective communication channels to provide a baseline for workshop discussions.

In depth:
-Evaluate the previous seasonal forecast by farmers, scientific information and combined one; compare predicted weather to actual experiences.
-How did farmers get updates on seasonal or weather forecast; from which source; Is it accurate?
-How do the crops perform compared to the same season in the previous year? Why? Any problems and solutions?
-What do farmers use seasonal forecast/weather forecast for?
-Are there any improvements to be made regarding content, format, language, and layout of agro-advisories, as well as communication?

Key notes:
The very first workshop will be focusing on climate information and agro-advisories available prior to the PSP.
Future workshops will reflect on agro-climate information generated through the workshops. Logbooks for farmers and facilitators (Le et al, 2018a and Le et al, 2018b) can be a valuable tool to this session whereby farmers record any issues or questions as they arise in the field and bring them the workshop to discuss. A separate focus group discussion with men- and women-only groups can also be a method to evaluate agro-advisories and their usefulness (Duong et al, 2017, section II)

Session 2

REACT: DOWNSCALED SEASONAL FORECAST

Content:
- Stakeholders present, understand, and interpret local and meteorological seasonal forecasts obtained in the preparation phase.
- Allow participants to familiarize themselves with technical terminologies and understand the limitations of forecasting.
- Discuss to co-generate downscaled seasonal scenarios before responding with action plans in session 3.

In depth:
- What forecasts are provided by local farmers? What indicators have been observed? What do the indicators suggest for the climate in the coming season?
- What forecasts are provided by the meteorological officer, and how do farmers perceive them?
- Are there any technical terms that could be simplified?
- What are most important weather information farmers need for the coming season/months?
- How do farmers and meteorological officers interpret forecasts?

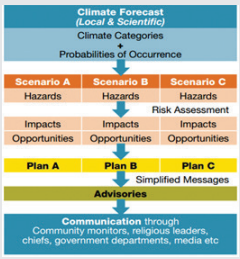
Ensure the use of simple language and design and information to meet the needs of end-users (Figure 3)

Key notes:
This session does more than simply giving farmers 'access' to seasonal climate information; it builds farmers' trust in it by improving their understanding of the data's origins and how it is collected. After reflecting, co-generating, and regenerating information using the farmers' own local and experiential knowledge, this can then be consolidated by farmers to interpret weather information in session 3. The facilitator should also seek to invite meteorological officers to join the discussions in this session. This can strengthen relations between users of climate services and producers of the data.

Session 3

RELATE: SCENARIO PLANNING FOR ACTION

Content:
- Participants develop contingency plans for what-if scenarios based on the forecasts and scenarios discussed in session 2.
- Farmers form groups and discuss possible actions and important decisions concerning crops, varieties, planting times, and livestock management. To avoid loss and mitigate risks, 'no regret' strategies are prioritized.



In depth:
- What climatic scenarios can be generated based on the seasonal forecast information provided?
- What are the hazards, risks, opportunities, and impacts to farmer livelihoods in each climatic scenario?
- What are the possible interventions for different seasonal climate scenarios?

Key notes:
This session encourages an understanding of how uncertainty can be managed, and to inform adaptation decisions and mitigate risk. Learning collectively means farmers gain understanding of other farmers' experiences of using seasonal climate forecasts to adapt and manage risks on their farms.
Make sure that advisories suit the local contexts.

PARTICIPATORY SCENARIO PLANNING WORKSHOP

Session 4

REACT: DEVELOPING ADVISORIES

Content:
- Participants present group results and create agro-advisories for the upcoming season based on meteorological data, local knowledge, scenarios, and actions discussed in session 3.
- Participants consider possible impacts of different climate scenarios to identify actionable farming advice.
- Co-create options for farmers rather than giving 'instructions', and develop a plan based on their livelihood priorities for the coming season.

In depth:
-What is the best or most appropriate combination of actions to take in response to the given forecasts for the coming season?

Key notes:
This session creates a space for knowledge exchange, and thus the facilitator should enable opportunities for farmers' to identify and share their own experiences of using successful practices and technologies on their farms, as well as to present to their fellow farmers the challenges that they wish to be resolved

Session 5

DEVELOP COMMUNICATION PLAN

Content:
- Identify the preferred language and style to communicate the advisories.
- Determine the 'who, what, when, and how' that will shape the communication of information designed in session 4.

In depth:
- Who will be the audiences?
- Who will communicate?
- What to communicate?
- How to communicate?
- When to communicate?
- Where to communicate?

Key notes:
This step ensures that advisories are communicated rather than simply disseminated. The PSP treats communication as a two-way process, allowing farmers to not just listen to information but feel confident in questioning it. Hence, Session 1 gives participants the chance to voice suggestions to improve the communication process.

It is important to understand the users' behavior in receiving and sharing information, as well as the communication infrastructure, to identify the most appropriate communication channels. This will vary significantly from this location to another (e.g: DVD player, farmer group's meeting, village meeting, loudspeaker, zalo, Facebook, village board, website...). Agro-advisory bulletin can be presented in paper format, SMS, voice, and icons.

PHASE 4

COMMUNICATION

Purpose:
To reach a wider and targeted audience who needs the seasonal climate information and agro-advisories

Methods: different channels can be used, depending on the context of specific area: farmer-to farmer, farmer group's meeting, community meetings, loudspeaker, SMS, social networking sites (Zalo, Facebook), village news board, and website, among others.

Actions:

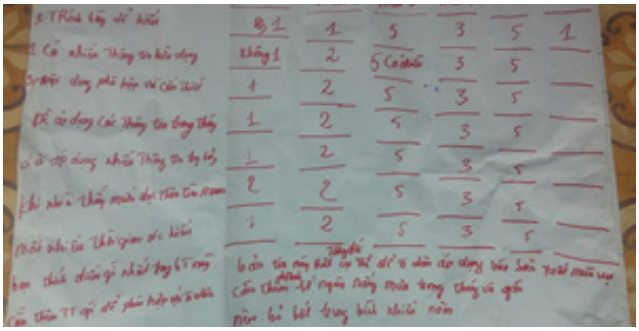
- Facilitators and technical working groups must follow up the communication plan made during the PSP workshop (session 5)
- Farmers can be provided with or instructed to update the weather forecast update scenario planning in seasonal agro-advisories. Updates are short-term forecasts covering 1 to 10 days or a month. These updates inform operational decisions such as time for planting, weeding, applying fertilizer, pesticides, pruning, and irrigation.

KEY QUESTIONS

- What communication channels have been used as planned? What have not been used? Why?
- Who have communicated seasonal forecast information and agro-advisories? Who have not? Why?
- What other target audience groups and communication channels were reached?
- Are there any feedback from end-users when receiving and using the provided information that communicators observed?

PHASE 5

MONITORING, EVALUATION AND FEEDBACK



Purpose:
To enable continuous, iterative, and shared learning and improving the PSP process;
To let meteorological officers and agricultural services know who is using which information in which ways and what new information needs to be disseminated;
To monitor the results, impacts, and outcomes of the PSP process on the livelihoods of farmers

Methods: PSP workshop (session 1), focus group discussion, feedback workshop with local government, stakeholder interview, facilitators' field observation (field note and logbook), farmers' logbook

Actions:
Monitoring, evaluation and getting feedbacks from users can be collected in session 1 (review and reflect) of PSP workshop (phase 3) for core group members . See logbook (Le et al, 2018b) for some relevant information to be collected;
Conduct focus group discussions and key informant interviews with wider audiences (Duong et al, 2017 for ranking exercise on evaluating seasonal forecast) and (Simelton et al, 2018 for impact assessment of Agroclimate information and agro-advisories to farmers' livelihoods)

KEY QUESTIONS

- Are our agro-advisories products actionable?
- Availability: Are forecasts/agro-advisories publicly available in more diverse formats (websites, posters, sms)
- Accessibility: Are farmers able to access information through local agencies or online?
- Timeliness: Do farmers receive what they need before making decisions?
- Understandability: Are the designs, icons, contents, and language being tested to female and male farmers? Do farmers contribute in improving the agro-advisories to meet their needs?
- Usefulness: Does the information provided contribute to reducing yield variability/ avoiding loss or improving resource use efficiency (inputs, labour, timeliness)? Are they more appropriate to farmers' needs (resolution, crops)? Did they change the farmers' behaviour, etc.

A Case Story from My Loi CSV

Phase 1:

- Main crops/trees/livestock: rice, peanut, beans, maize, sweet potato, cassava, pepper, acacia, fruit trees (orange, local mandarine, pomelo, jackfruit), tea, poultry, pig, cattle (Baseline survey, CARE & ICRAF, 2016)
- Climate events: Hot spells, dry wind, drought in summer, storm/heavy rain/ strong wind (causes flash flood, landside) in autumn, cold spells in winter (Baseline survey, CARE & ICRAF, 2016)
- Gaps in climate services: Not detailed enough, available for few crops, too late, difficult to understand (too technical), not useful (Simelton et al, 2018a)
- Technical working group identified and established: representatives of
  - The Department of Agriculture and Rural Development (DARD) - Extension, Department of Agriculture and Crop Protection (DACP), Forestry Department
  - The Department of Planning and Investment (DPI)
  - The Department of Natural Resources and Environment (DONRE), provincial hydro-meteorological station
  - Farmers' association and extension from commune, district, and provincial levels in Ha Tinh Province
  - Farmers' representative (village leader)
  - NGO staff (field project staff)
- Trainings need: ARIMA software for provincial meteorological officer to develop seasonal forecasts, PSP process to technical working group, especially farmer association, and extension staff
- Identified PSP process: Multi-stakeholder meeting, five stages as above
- When and how often did the PSP workshop happen? 3 times per season (Figure 4 PSP in Vietnam)
- Where was the PSP organized? In village meeting house

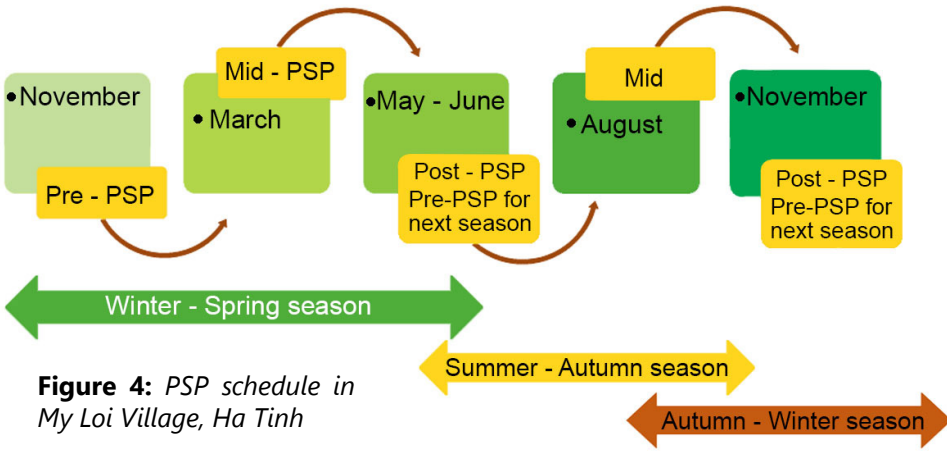


Figure 4: *PSP schedule in My Loi Village, Ha Tinh*

Phase 2:

- Climate indicator needs:
  - Temperature (average, max and min),
  - Number of hot spell days
  - Number of cold spell days
  - Cold spell days period
  - Rainfall, number of rainy days
  - Measurement of heavy rain (> 50mm),
  - Number of storms
  - Humidity

- Stakeholders directly involved in PSP workshop:
  - Farmers: farmer champions in the identified area such as village leaders, CSA interest groups in My Loi CSV (Le et al, 2018c), representatives of VSLA groups for agriculture, women's union, youth union
  - Technical working group members: representatives of extension, Department of Agriculture and Crop Protection, hydro-meteorological station, and farmer association are the key actors who provided insights and could facilitate PSP workshop in phase 3 together with project staff
  - Local government: Commune's people's committee
  - NGOs: ICRAF, CARE
- Facilitators: Project staff, farmer association, extension
- Who will synthesize agro-advisories after the PSP workshop: farmer association (with comments from meteorological officer, extension workers, DACP, and project staff)
- Who will communicate agro-advisories: all participants; they will need to discuss with farmers in the PSP workshop on the detailed plan (farmer association responses to facilitate the participants' communication plans)
- Monitoring, feedback and evaluation: The farmer association and project staff are in charge of designing tools and methods; local government and CSOs will support in data collection. For indicators, see references in phase 5.
- Workshop logistics preparation: farmer association

Phase 3:

- Session 1 (review and reflect session): Use group book for facilitator (Le et al, 2018b) and farmers' log books (Le et al, 2018a) to facilitate discussion and get the farmers' feedback, if any;
  Status of climate compared with last year or normal year: Is it hotter? Are there more rain or less rain? Cold spells? Are our previous seasonal forecast correct (ask this question from the second PSP workshop)?;
  How many people update/watch weather forecast? From where?;
  Status of previous cropping season: appearance of pests and diseases, and crop quality and quantity (harvested), among others;
  Check if the language, layout, and content of agro-advisories are relevant to farmers. How to improve them?
- Session 2: Obtain farmers' knowledge on climate for the next season first then meet the meteorological officer to gather relevant information. Afterwards, develop a combined knowledge set.
- Session 3: Seasonal climate scenarios:
  Winter-Spring season: scenarios made based on the possibility of cold spells at the beginning of the season and hot dry wind during season;
  Summer-Autumn season: scenarios made based on the possibility of drought at the beginning of the season and storms and heavy rains at the end of season.
- Session 4: Generating agro-advisories
  - Designed by farmers and considered gender (Duong et al, 2017),
  - Combined with Climate-smart Agriculture (CSA) recommendations: introduce and provide technical support to implement CSA practices (Duong et al, 2018, Le et al, 2017; Le et al, 2018d; Le et al, 2018e), general agricultural poster (Le et al, 2018f)
  - Poster of general recommendations from farmers and local governmental staff was made to reduce the texts for the seasonal agro-advisories (Le et al, 2018g)
- Session 5: communication plan (see phase 4 for actual implementation)

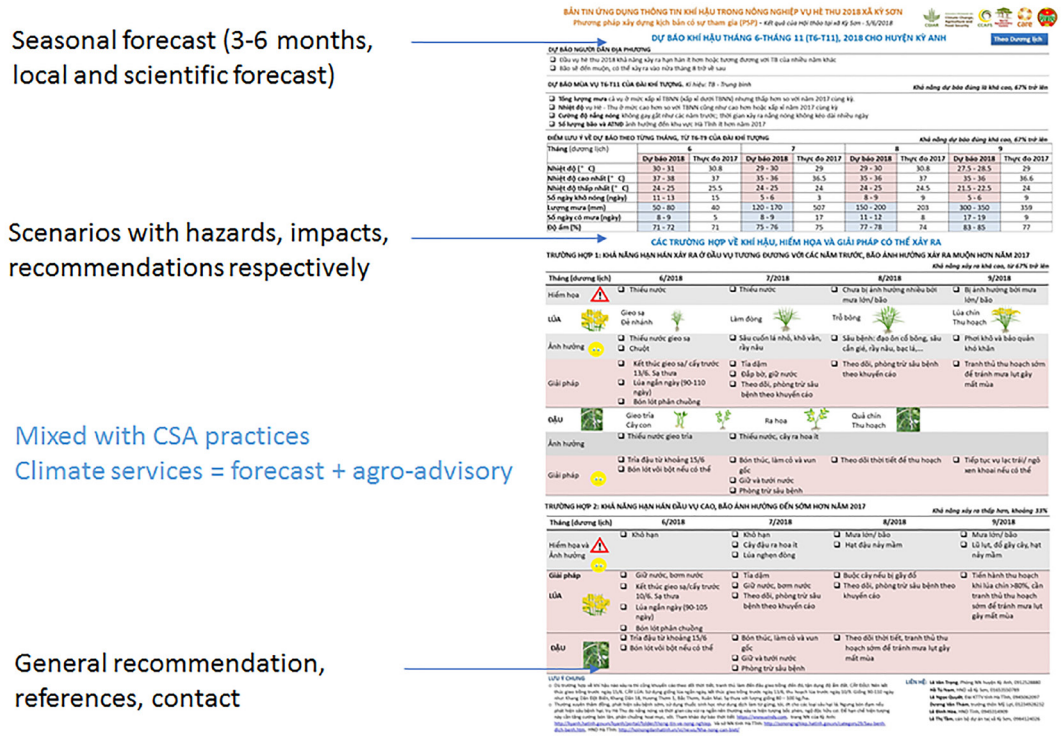


Figure 5: *Example of agro-advisory bulletin in Ha Tinh*

Phase 4

Communication channels

- Farmer-to- farmer
- Loudspeaker
- Website
- Facebook, Zalo
- Farmer groups
- Meetings of local government,
- Meetings of farmer association,
- Women's union, youth union

Phase 5

Monitoring, evaluation, and feedback

- Compare weather forecast (Roy et al, 2017)
- Logbook by farmers (Le et al, 2018a)
- Group logbook for facilitator (Le et al, 2018b)
- Focus group discussion on evaluating agro-advisory bulletin (Duong et al, 2017)
- Impact assessment of ACIS (Simelton et al, 2018b)
- Household interview to collect data on crop yield, fertilizer, and pesticide used

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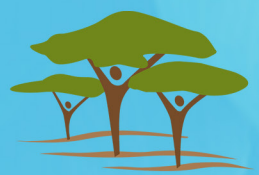

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