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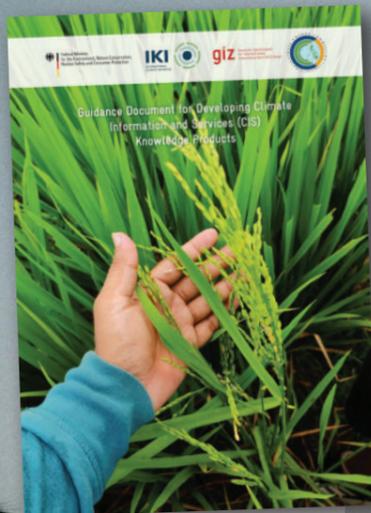


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Zusammenarbeit (GIZ) GmbH



Guidance Document for Developing Climate Information and Services (CIS) Knowledge Products





The cover photo features a person holding a blade of rice. The Philippines is a largely agricultural land, and Climate Information and Services affect this sector of society the most.

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The “Towards a South-South Collaboration on Climate Information and Services: Building a Knowledge Exchange and Learning Platform for the Philippines and the Climate Vulnerable Forum” Project (SSCIS) is the result of a collaborative effort made possible by the invaluable contributions of several organizations.

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- ▶ Mindanao Development Auth
- ▶ Department of Health (DOH)



I. Executive Summary

The purpose of this document is to provide the national governments and state universities (CIS producers) with a comprehensive plan for designing, creating, and implementing Climate Information and Services (CIS) knowledge products for the agricultural sector. CIS knowledge products cover a broad range of topics within the climate risk space, addressing issues such as understanding climate change, its regional impacts, associated risks, and mitigation and adaptation efforts specific to the Philippines. This guidance document also outlines best practices for executing and delivering educational products and modules tailored to the unique needs of each audience. The goal is to ensure that knowledge products are both scalable and adaptable to meet the distinct learning requirements of the target group.

I. Introduction

The Philippines has made significant strides in producing climate information products, ranging from global model-based climate scenarios tailored for regional and local areas to detailed data on local climate change impacts and risks. However, the diverse needs of users and the wide range of applications for climate information services highlight the necessity for a broader spectrum of knowledge products to cater to varying demands.

In the Philippines, climate information services are increasingly utilized to deepen the understanding of climate change impacts. These services empower stakeholders to make informed decisions when planning and implementing adaptation and mitigation strategies.

The South-South Collaboration on Climate Information and Services (SSCIS) project, commissioned by the International Climate Initiative (IKI) in 2017, aims to enhance the use of Climate Information and Services (CIS) for climate action in the Philippines and the Climate Vulnerable Forum (CVF) countries.

Implemented by the Climate Change Commission (CCC), the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), the University of the Philippines (UP), and in collaboration with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the SSCIS project focuses on four key areas:

- ▮ Usable Climate Information: Providing accessible and relevant climate information to decision-makers.
- ▮ Tripartite Capacity Enhancement: Building the capacity of government agencies, academic institutions, and civil society organizations.
- ▮ Science and Evidence-Based Knowledge Products: Developing high-quality knowledge products to inform policy and practice.
- ▮ CVF South-South Centre of Excellence: Fostering South-South cooperation and knowledge exchange.

Vision of the GIZ programme

The initiative aims to develop impactful, scalable knowledge products intended for use by a wide range of stakeholders, including government agencies, academic institutions, and local communities, with a particular focus on rural areas. These knowledge products are designed to be intuitive and adaptable—“plug-and-play” solutions that can be easily customized to meet the needs of different sectors, supporting capacity building and continuous learning.

By providing flexible and user-friendly resources, the initiative seeks to empower these groups with the tools necessary to understand and tackle the challenges they encounter. The ultimate goal is to foster an environment where knowledge drives positive change, enabling communities to build resilience, make informed decisions, and work towards sustainable development.

Background

According to the 2022 Southeast Asia Climate Outlook Survey, 64.3% of Filipino respondents consider climate change to be “a serious and immediate threat to the well-being of my country,” while an additional 33.3% regard it as “an important issue that deserves to be monitored.” Though the Philippines contributes minimally to global greenhouse gas emissions, it stands among the most climate-vulnerable nations in the world. Recent projections warn that this vulnerability will likely intensify, with average temperatures anticipated to rise by 0.9°C to 2.3°C over the next 20 to 30 years. These changes are expected to exacerbate the severity of tropical cyclones and other extreme weather events.

The marine ecosystem is also at significant risk. Rising ocean temperatures and decreasing pH levels threaten to degrade coral reefs and marine fisheries, critical to the Philippines’ biodiversity and livelihoods. Coral bleaching, a distressing consequence of warming seas, has already been observed in this global coral biodiversity hotspot.

Given the heightened concern among Filipinos and the country’s precarious position in the climate risk index, it is imperative to educate stakeholders across all sectors about the dangers posed by climate change. Equipping them with the knowledge and tools for

climate adaptation is not just important—it is essential for building resilience and safeguarding the future of communities across the Philippines.

Agricultural Risks in the Philippines

Over 11 million Filipinos depend on the agricultural sector, encompassing farming, fishing, and forestry, for their livelihoods. In 2023, this sector accounted for approximately 8.6% of the Philippines’ Gross Domestic Product (GDP), underscoring its vital role in the nation’s economy. However, the sector faces significant challenges, as the Philippines experiences more tropical cyclones than any other region. Annually, an average of 20 cyclones enter the Philippine Area of Responsibility, with 8 to 9 making landfall, causing substantial disruptions.

The impact of these extreme weather events on the agricultural sector is profound, affecting both livelihoods and economic stability. Strong and resilient Climate Information and Services (CIS) are critical to equipping stakeholders with the knowledge and tools to make informed decisions and take protective actions. Over the past decade, the Philippines has incurred damages amounting to PHP 463 billion from extreme weather events, with 62.7% (approximately PHP 290 billion) of these losses borne by the agriculture sector.

Coastal communities in regions like the Visayas and Mindanao, which rely heavily on fisheries and aquaculture, are particularly vulnerable to the threats posed by rising sea levels, storm surges, and saltwater intrusion. These environmental changes jeopardize aquatic resources, crucial to local livelihoods. Moreover, livestock and pasture-based livelihoods face significant risks as projected temperatures are expected to exceed 30°C by 2050, causing heat stress and other climate-related hazards. Provinces such as Apayao, Abra, Kalinga, Mountain Province, Ifugao, Benguet, and Nueva Vizcaya are among the most vulnerable.

In Luzon, areas like Isabela, Pasil, Kalinga, and Cagayan are projected to experience extended periods of rainfall, increasing the risk of destructive flooding. These climate impacts emphasize the urgent need for robust adaptation strategies and comprehensive knowledge systems to protect the agricultural sector and the communities that rely on it. Safeguarding this sector is not only about preserving livelihoods but also about ensuring the nation’s food security and economic resilience in the face of a changing climate.

The Climate Information Timeline

Imagine you're a farmer trying to decide when to plant your crops, or a fisher planning the best time to set out to sea. Your livelihood depends on making the right choices, often in the face of unpredictable weather. This is where Climate Information and Services (CIS) becomes your trusted guide. It provides critical insights that help farmers and fishers make smarter, more resilient decisions, safeguarding their futures.

We divide the climate information timeline that matters the most to communities:

Timeline	What It Covers	Why It Matters
1. Daily forecasts	Provides real-time updates that help farmers decide when to water crops or apply fertilizers and guides fishers on safe days to go out to sea. This is crucial for immediate decisions, such as when to harvest before a storm or whether it’s safe to set sail.	For agriculture and fisheries, daily weather information is vital. It impacts everything from planting and harvesting to fishing expeditions and safety at sea.
2. Sub seasonal forecasts	Sub seasonal predictions fill the gap between short-range weather forecasts and seasonal climate prediction - usually covers 10 days to three (3) months.	By receiving more precise information within this intermediate range, farmers can prepare more effectively for adverse weather conditions. This could involve adjusting planting schedules, securing crops, relocating livestock, or implementing water-saving measures.
3. Seasonal Forecasts	Seasonal Forecasts predicts weather patterns for the coming months, such as an unusually dry season or an early monsoon.	Supports medium-term planning. Farmers can decide which crops to plant based on expected rainfall, and fishers can plan around forecasted sea conditions. This reduces the risk of crop failure or lost fishing days.
4. Long-term Predictions	Predicts how climate change will impact agriculture and fisheries over the next decades.	Long-term planning is essential for sustainability. Farmers may need to adopt drought-resistant crops or new irrigation systems, while fishers might need to adjust practices based on shifting marine ecosystems.

Challenges with CIS Knowledge Product Development in the Philippines:

1. Technical Data Sources: Currently, much of the information resides as complex data or static information within various government agencies. Converting this data into actionable and useful formats for users is a challenge. It requires significant time and effort to process. Therefore, departments should budget for hiring third-party providers to convert complex information into easy-to-understand formats or leverage partner organizations' teams, such as e-learning and development resources, for support. Additionally, organizations should train their subject matter experts on the nuances of creating simplified modules and training materials.

2. Sector-Wise Requirements: The Philippines' agricultural sectors span multiple areas, including fishing, forestry, livestock, and farming. Each sector has unique needs that require detailed analysis to ensure the products meet the communities' specific demands. However, this diversity creates a challenge in developing scalable knowledge products that can impact inclusively. It also complicates the process of collecting all relevant materials for content development and curating the knowledge of subject matter experts to contribute effectively. To overcome these challenges, it is crucial to focus on sectors where the impact will be the greatest.

3. Access to Digital Tools: Rural populations in the Philippines, particularly farmers, often lack reliable internet access due to limited infrastructure or low and intermittent service quality. While scaling CIS knowledge products digitally is a promising approach, it is crucial to ensure that users can easily access this information or are provided with resources to do so. When developing these products, it is essential to fully understand the challenges related to internet access, digital literacy of users and the availability of educational platforms during the pre-product development stage. This will help ensure higher adoption rates and better accessibility, particularly in underserved communities.

Developing CIS Knowledge Products

To make climate information actionable, it is essential to simplify and present it in a way that is accessible and useful. A key distinction must be made between the two primary groups involved: producers and users.

Producers are those responsible for generating and expanding the reach of climate information, along with the training that supports its use. This group typically includes data providers such as meteorological agencies



like PAGASA and academic institutions, such as state universities, which are vital in advancing the collection and interpretation of climate data.

On the other hand, Users are the individuals or organizations that rely on this information to make informed decisions and act. These can range from local farmers and community leaders to government agencies tasked with disaster management and climate adaptation.

As secondary groups, we also consider data providers and information promoters. Data providers are the foundational sources of raw climate data. These include meteorological agencies like PAGASA, satellite organizations, research institutes, and other entities that gather and monitor climate-related data. Their role is to ensure that the data is accurate, reliable, and up to date. Information promoters, on the other hand, are responsible for raising awareness about the availability and importance of climate data. They help connect users to the information by promoting its relevance and guiding how it can be utilized in various sectors. This group can include outreach coordinators, media

agencies, or government bodies focused on climate communication.

For the purposes of this report, we will divide users and producers into the following groups:

Group	Stakeholders Examples
Users	Agricultural and Fisheries Sector, LGUs
Producers	NGAs, State Universities and Colleges

The crucial role of producers is to ensure that the climate data they provide maintains high standards of accuracy and integrity; while also ensuring it is presented in a format that is easy to understand and act upon. This effort will result to less complex technical training, offering clear, digestible information that empowers them to make timely, informed decisions.

In the end, the success of a Climate Information System depends on its ability to bridge the gap between sophisticated data and practical, real-world application.

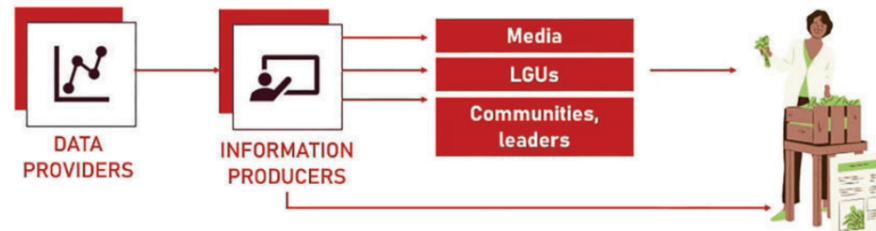
Developing knowledge-based products for Climate Information and Services (CIS) requires a high degree of collaboration between stakeholders and, more importantly, conducting user feedback and surveys to ensure product-market fit. It's essential that producers clearly understand the needs of users. It's also important to avoid reinventing the wheel, which means assessing all existing products currently available, both in terms of content and format, and leveraging them instead of creating things from scratch.

In partnership with local stakeholders, GIZ conducted a comprehensive focus group discussion on November 11-12, 2024. The team organized a workshop and focus group discussion (FGD) in General Santos City for this purpose. With over 50 participants in attendance from government, academia, local communities, and cooperatives, the team was able to facilitate discussions on several topics. These ranged from a Media and Design Workshop to the Localization of CIS knowledge products. More importantly, the event captured the voices of the participants who, in many cases, are the end users of these knowledge-based products.

The Flow of Information

The Flow of Information should follow a structured process to ensure timely and effective awareness, response, and preparedness.

The diagram illustrates how disaster-related information moves from data providers to end-users like communities and individuals.

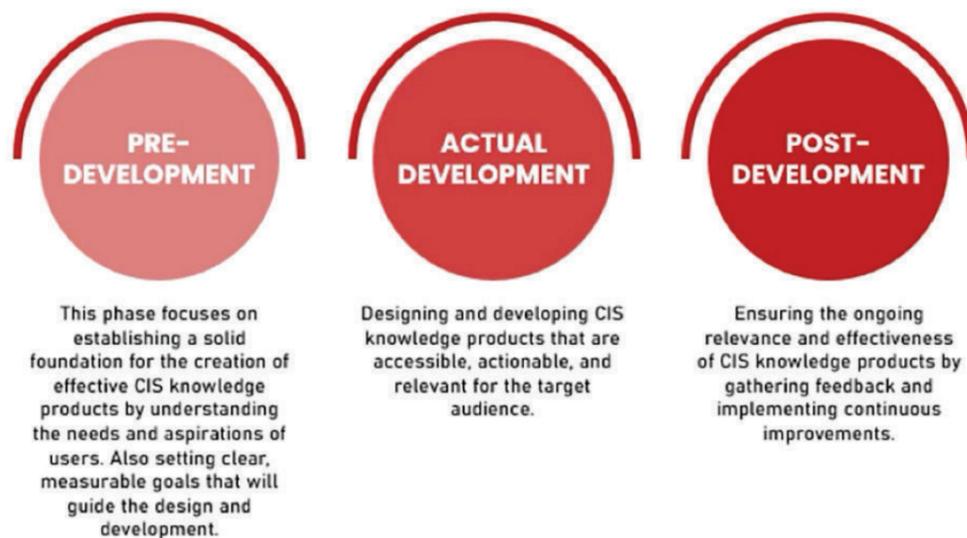


Data providers, such as PAGASA, PHIVOLCS, MGB, play a critical role in collecting and analysing raw data to predict, monitor, and assess risks. These agencies provide meteorological forecasts, earthquake, and tsunami monitoring, geohazard assessments, and environmental risk evaluations that form the foundation of disaster preparedness efforts. However, raw scientific data alone is not enough—it needs to be translated into actionable information that decision-makers and communities can use. They are, in many instances, CIS producers, as well.

NDRRMC, during crises, issues alerts and advisories to prepare both national and local governments and communities. LGUs, in turn, serve as intermediaries between national agencies and communities, ensuring that local warnings, evacuation protocols, and mitigation strategies are effectively implemented. Media outlets—such as television, radio, social media, and SMS alerts—disseminate warnings and advisories, ensuring fast and widespread communication. Meanwhile, barangay officials, cooperatives, and civic groups mobilize local responses, conduct awareness campaigns, and ensure that information reaches even the most marginalized groups.

At the end of this chain are the end-users, including farmers, fisherfolk, small businesses, and residents, who rely on this information to make crucial decisions. Whether securing crops, reinforcing homes, or evacuating, their actions are directly influenced by the effectiveness of the information flow.

CIS knowledge product development can be broken down into three (3) distinct phases



Phase	Objective
Pre-Development	<p>Laying the groundwork for effective CIS products by understanding user needs and defining clear goals.</p> <p>Establishing a solid foundation for the creation of effective CIS knowledge products by thoroughly understanding the needs and aspirations of users. This phase focuses on fostering deep empathy with the target audience, identifying their unique challenges, and setting clear, measurable goals that will guide the design and development of impactful products.</p> <p>This phase includes crucial steps to be completed before actual product development begins. This phase involves conducting needs assessments through surveys and focus group discussions, defining Key Performance Indicators (KPIs), outlining the project scope, and creating a structure to ensure clearly defined steps. It also focuses on aligning all stakeholders on the flow, format, and execution components. Working with experienced content development experts or consultants during this phase can help structure the process more effectively, ensuring that the right questions are asked and valuable insights are captured.</p>
Actual development	<p>Designing and developing CIS products that are accessible, actionable, and relevant for the target audience.</p> <p>Designing and crafting CIS products that are not only accessible but also actionable, practical, and highly relevant to the target audience. This stage ensures the creation of user-centred solutions, developed with an understanding of local contexts, and tailored to empower users to manage their climate-related risks effectively.</p> <p><i>This phase encompasses the creation of the product and content. This stage includes everything from the pilot phase to content review, testing, and product launch. It's crucial to keep all stakeholders informed during this stage to ensure clear feedback and thorough content reviews. A key aspect of this phase is piloting and testing the product with actual users, allowing for iterative improvements to meet the project's needs and learning outcomes. This approach helps ensure that the final product aligns with user requirements and project goals.</i></p>
Post-Development	<p>Ensuring the ongoing effectiveness and relevance of CIS products by gathering feedback and making continuous improvements.</p> <p>Securing the sustained effectiveness and adaptability of CIS products by continuously collecting user feedback and insights. This phase is dedicated to refining and evolving the products in response to changing needs, ensuring their ongoing relevance and maximizing their impact over time.</p> <p><i>This phase begins as the project is brought to market and scaled to users. This stage includes creating a user feedback loop mechanism to gather ongoing insights and establishing a process for annual content review to maintain relevance. Regular updates based on user feedback and market changes are essential during this phase. Most importantly, this stage involves measuring the learning outcomes of users by tracking the KPIs defined in the first phase. This final step is crucial for assessing the product's effectiveness and identifying areas for future improvement.</i></p>

Consider these before the development process begins...

1. Internal buy-in: Foster strong leadership and cross-departmental support for the product's success. A successful CIS knowledge product doesn't just need backing from the leadership or management team—it requires buy-in from stakeholders across key areas like climate science, data science, communication, and user experience. Without clear visibility and committed support from the top, a project is at risk of encountering roadblocks, insufficient resources, or stalled progress. Cultivating internal advocacy for the product early on creates alignment between the organization's overarching goals and the development of the CIS product. This alignment is vital to securing the necessary funding, resources, and collaboration across departments.

2. Partnerships and collaboration: Engage the right partners to bring expertise and support to the table. Building a successful CIS product requires collaboration with external partners who bring complementary expertise, data, and access to local communities. Key partnerships and collaborators should include:

- **Meteorological Agencies:** These agencies are critical for providing high-quality, reliable climate data such as weather forecasts, historical climate trends, and localized patterns—key ingredients for any effective CIS product.
- **Other National Agencies:** Departments such as the Department of Agriculture, Department of Health, and other relevant government bodies play a critical role in integrating CIS into their national frameworks and into their information dissemination efforts. It allows climate information to address sector-specific needs.
- **Local Government Units:** LGUs are instrumental in the localized implementation of CIS products. They provide on-the-ground support, facilitate community engagement, and ensure that the solutions are tailored to local contexts.
- **Local Communities and NGOs:** These stakeholders serve as crucial connectors to the end users, ensuring that the voices of the target communities are integrated into the product development process. They help with user engagement, feedback, testing, and community-based dissemination strategies, ensuring that the product is tailored to the actual needs and experiences of its users.

3. Budget: Secure a comprehensive and well-planned budget to fuel the knowledge product's development. Crafting a robust budget is essential to ensuring that every stage of the CIS product's development (research,



design, revisions), has the necessary resources to succeed. Once you've reviewed the toolkit and identified key activities, break down the resources and cost, considering expenses for critical elements such as data acquisition (whether from satellite data, ground-based observations, or partnerships), user research, knowledge product development (from design to development), dissemination efforts, and ongoing needs.

4. Building in house or contracting a third party: Creating knowledge products based on customer needs and the complexity of requirements can be done either in-house by the agency or through a third-party contractor with the necessary skills and expertise. If developed in-house, the team must ensure they have

a group of experts with both the bandwidth and the required training to produce effective projects. If outsourcing, it is crucial to select agencies with prior experience in rural product development and training, as well as expertise in local and cultural nuances. While both options have trade-offs, the decision ultimately depends on the executing agency's assessment of requirements and available resources.

How to use this guidance document

Each section begins with an overview of the knowledge product development phase, followed by a summary of the recommended tools, key activities, and

expected outcomes for that phase. It is essential to share this guidance with all relevant stakeholders to ensure alignment on development phases and, more importantly, to assign dedicated teams and program owners to each phase. While teams can tailor the execution structure based on their organization's needs, having single-threaded owners ensures clear accountability, structured execution, and effective communication. Additionally, appointing a program manager to oversee the entire project is highly recommended, as it enhances visibility and coordination across different phases. A program manager plays a crucial role in connecting teams, holding them accountable for execution, and proactively identifying potential blockers that could slow progress.

Part 1: Pre-Development Phase for CIS Knowledge Product

In this section, the most important questions to ask yourself:

Who are my customers? Where are my customers?

What do my customers want to know?

How do they want to be informed?

When do they need to know about it?

What actions do I want them to take with this information ?

How do I measure success?





Part 1: Pre-Development Phase for Climate Insurance Solutions (CIS)

This phase focuses on establishing a solid foundation for the creation of effective CIS knowledge products by thoroughly understanding the needs and aspirations of users. This involves fostering deep empathy with the target audience, identifying their unique challenges, and setting clear, measurable goals that will guide the design and development of impactful products.

1. User Research & Needs Assessment

- **Target Groups:** Conduct in-depth research with both farmers and fisherfolks. This could include:
 - **Persona development:** Reimagining your users or creating fictional representations of your ideal customers help humanize your users by embodying their characteristics, motivations, and behaviours.
 - **Interviews and surveys:** One-on-one interviews to understand their livelihoods, challenges, and aspirations.
 - **Focus Groups Discussions:** Group discussions to capture shared experiences and perspectives. Gather quantitative data on their risk perceptions, insurance needs, and access to information.
 - Understand the users' projections to understand the specific climate risks faced by farmers and fishers in the region.
 - Identify the social, economic, and environmental factors that make farmers and fishers vulnerable to climate-related shocks.

2. CIS Knowledge Product Vision & Setting Key Performance Indicators (KPIs)

- **Define the Knowledge Product's Vision:** Create a shared understanding of the desired impact of the CIS product. For example, "To empower farmers and fishers in [Region] to build resilience to climate change by providing affordable and accessible insurance solutions that meet their specific needs."
- **Set SMART Goals:** Establish specific, measurable, achievable, relevant, and time-bound goals for the CIS product. Examples:
 - Increase the number of farmers with access to climate insurance by X% within Y years.
 - Reduce the financial losses due to climate-related events by Y% for Z number of beneficiaries.
 - Improve the understanding of climate risks and insurance options among X% of target beneficiaries.
 - Identify the social, economic, and environmental factors that make farmers and fishers vulnerable to climate-related shocks.

Section 1: User Research & Needs Assessment

1. Developing Personas for Farmers and Fisherfolks: Creating personas is a valuable technique for better understanding your target audience. These fictional representations of your ideal customers help humanize your users by embodying their characteristics, motivations, and behaviours. For a CIS knowledge product, developing personas for farmers and fisherfolks ensures that the service truly addresses their needs and challenges. **Step by Step Guide on developing personas:**

Step 1: Research & Data Collection: Creating accurate and relevant user personas begins with collecting both quantitative and qualitative data. A comprehensive understanding of your target users ensures that CIS products are tailored to their needs and challenges.

- a. Quantitative Data:** Gather objective, statistical information to establish a clear demographic and environmental profile:
- **Census Data:** Analyze demographic factors such as age, gender, education level, income, and land ownership.
 - **Market Research:** Assess the size of farming and fishing communities, market trends, and local economic conditions.
 - **Climate Data:** Examine historical and projected climate trends that impact the target audience's region.

- b. Qualitative Data:** Gain deeper insights into user experiences, behaviours, and preferences through direct engagement:

Interviews: Conduct one-on-one conversations with farmers and fisherfolk to understand:

- Their daily routines, challenges, and aspirations.
- The climate-related risks they face (e.g., droughts, floods, storms).
- How they access and trust information sources.
- Their technology usage and communication preferences.

- **Focus Groups:** Facilitate discussions to explore shared experiences, common concerns, and diverse perspectives.

- **Observations:** Visit farms and fishing areas to see first-hand how decisions are made and how environmental conditions affect their work.

- c. Guiding Design Decisions:** Ensure that every phase of CIS product development aligns with the personas' real-world needs and challenges:

- **Empathize with Users:** Step into their shoes to understand their experiences, frustrations, and goals.
- **Test and Iterate:** Use personas as a reference point when evaluating product features and communication strategies. Gather user feedback regularly and refine both the personas and





Step 2: Create Fictional Characters: Each persona should be a well-rounded character, with distinct features that reflect your target audience.

- a. **Demographics:** Define the basic facts - age, gender, location, family size, education, and income level.
- b. **Psychographics:** Dive deeper into their values, lifestyle, goals, and challenges:
 - **Values:** What do they prioritize most in life? (e.g., family, community, sustainability)
 - **Lifestyle:** What are their daily activities and interests?
 - **Goals:** What are their aspirations - both short- and long-term? (e.g., improving income, food security)
 - **Challenges:** Identify obstacles they face related to climate change and their livelihoods.
 - **Technology Usage:** How do they engage with technology (if at all)? Which communication methods work best for them?
 - **Risk Perception:** How do they view climate risks? What is their tolerance for uncertainty?
- c. **Develop Quotes:** Make your personas relatable by including quotes that capture their thoughts and motivations. For example:
 - **Farmer Persona:** "I worry about the unpredictable rains. Sometimes it floods my fields, and sometimes there's not enough water."
 - **Fisherfolk Persona:** "The sea is getting unpredictable. We need to know when it's safe to go out fishing and when to stay ashore."

Step 3: Persona Visualization: A visual representation helps make the personas more tangible and memorable. Consider using:

- a. **Images or Photos:** Show visuals that reflect their daily lives.
- b. **Name and Title:** Each persona should have a name and a relevant title (e.g., "Linda, the Coconut Farmer" or "Pedro, the Coastal Fisherman").

Example Personas:

Linda, the Coconut Farmer: 45-year-old woman, married with three children, lives in a rural village. With limited education, she depends heavily on rain-fed agriculture and is concerned about unpredictable rainfall. She has minimal access to technology.

Pedro, the Coastal Fisherman: 50-year-old man, lives in a coastal community. His income comes from fishing, and he is concerned about strong winds and unpredictable tides. He uses a basic mobile phone for communication.

Section 2: Conducting Focus Group Discussions:

Focus group discussions (FGDs) with both users and producers are one of the most cost-effective and impactful ways to gather insights, feedback, and identify pain points. They provide an opportunity to collect large-scale data in both qualitative and quantitative formats, while also testing pre-existing assumptions or hypotheses. When conducting FGDs with ABC communities, it is crucial to consider the following key aspects to ensure their effectiveness:



Defining the FGD Scope: A clear set of guidelines should be established and aligned with all stakeholders before the FGD. This ensures everyone is on the same page regarding the desired outcomes. Preparing a structured set of questions is highly recommended, as it helps keep the discussion focused and aligned with the agreed objectives, promoting transparency and minimizing the risk of disagreements or surprises.



Preparing the Audience: Prior to the discussion, the participants should be briefed on the topic and their expected contributions. Providing a one-pager or a list of questions ahead of time allows attendees to prepare or conduct any necessary research. This preparation ensures that all viewpoints are considered, maximizing the quality of feedback and optimizing the discussion time.



Engaging and Fun Experience: For complex topics such as CIS, it's crucial to present information in an engaging and easily digestible format. Visual aids should replace dense bullet points, and content should be tailored to the audience's needs. Stakeholder feedback should be incorporated to ensure a high-quality event. Collaborating with UX experts can help create content that resonates with the participants.



Ask Open-Ended Questions: Wherever possible, use open-ended questions instead of closed-ended ones. Open-ended questions allow you to capture qualitative data and insights from participants by encouraging them to share their thoughts freely, leading to unbiased opinions and detailed responses. These questions promote critical thinking, engage participants more effectively, and uncover new insights that may not have been anticipated. They also foster a deeper understanding of participants' perspectives, enhancing the overall quality of the discussion.



Ensuring Inclusivity: In communities where CIS may be a new concept or there are language barriers, it's vital to deliver the FGD in an inclusive manner. This includes addressing specific needs based on gender, disability, language, or other factors to ensure broad participation. All participants should feel comfortable and empowered to contribute.



Experienced Presenters: It's essential to have experienced presenters who can effectively engage the audience and simplify complex concepts. Technical experts may not always be the best communicators, so it's recommended to either train subject matter experts in public speaking or have skilled communicators present the material in a way that is accessible and understandable to local communities.





Focused Group Discussion (FGD) Guide

1. Introduction and Icebreaker

- ▶ Objective: Set the context, establish rapport, and make participants comfortable.
- ▶ Question: "Can you tell us a bit about your daily routine and how weather affects your activities?"

2. Understanding Current Climate Information Usage

- ▶ Objective: Learn how participants currently access and use climate information.
- ▶ Question: "Where do you currently get information about the weather or climate? How reliable do you find this information?"
- ▶ Question: "Can you describe a time when climate information helped you make a decision about your work?"

3. Identifying Information Gaps and Challenges

- ▶ Objective: Identify what information is lacking and what challenges participants face with current CIS.
- ▶ Question: "What challenges do you face in accessing or understanding climate information?"
- ▶ Question: "Is there any information you wish you had to make better decisions related to climate or weather?"

4. Preferences for Information Channels

- ▶ Objective: Discover preferred channels for receiving CIS.
- ▶ Question: "What are the best ways for you to receive weather and climate information? (e.g., radio, SMS, Facebook, community meetings)"
- ▶ Question: "How often would you like to receive updates, and at what times of the day?"

5. Language and Communication Preferences

- ▶ Objective: Understand language preferences and the most effective ways to communicate information.
- ▶ Question: "In what language or format would you prefer to receive information? (e.g., local language, visual aids, audio messages)"
- ▶ Question: "Are there any ways that information could be presented to make it easier for you to understand and use?"

6. Perception of Climate Risks

- ▶ Objective: Gauge participants' understanding and perception of climate risks.
- ▶ Question: "What are the biggest climate-related risks you face in your farming or fishing activities?"
- ▶ Question: "How do you currently prepare for or respond to these risks?"

7. Technology and Access

- ▶ Objective: Assess the access to and comfort with technology for receiving CIS.
- ▶ Question: "What kinds of technology do you use regularly? (e.g., mobile phones, internet, radio)"
- ▶ Question: "Do you find it easy or difficult to use these technologies to get information?"

8. Feedback on CIS Features

- ▶ Objective: Gather input on desirable features for a CIS product.
- ▶ Question: "What features would you find most helpful in a climate information service? (e.g., alerts, forecasts, advice)"
- ▶ Question: "Is there anything that would make a CIS product more useful or easier to use for you?"

9. Inclusivity and Accessibility

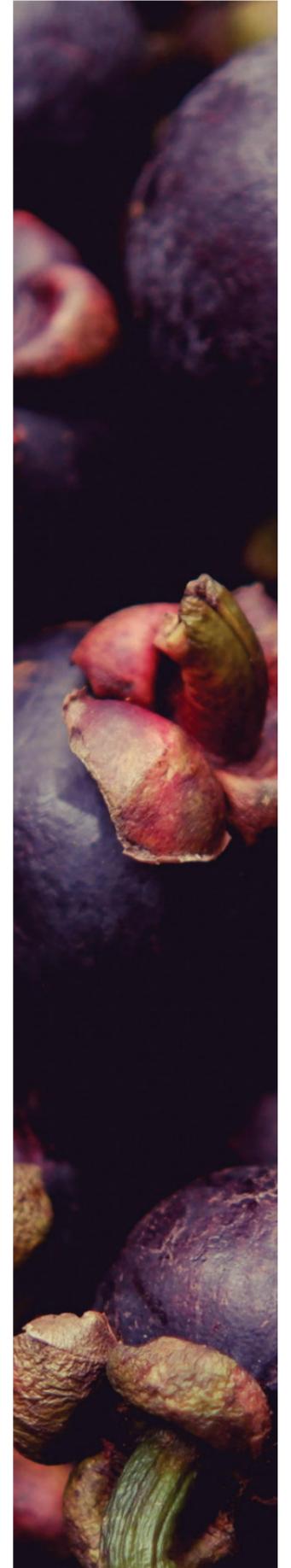
- ▶ Objective: Ensure inclusivity by addressing specific needs based on gender, disability, or other factors.
- ▶ Question: "Are there any specific needs you have that should be considered to make climate information more accessible to you?"
- ▶ Question: "How can we ensure that everyone in your community can access and understand climate information?"

10. Closing and Additional Suggestions

- ▶ Objective: Gather final thoughts and suggestions for improvement.
- ▶ Question: "Is there anything else you would like to share about how climate information can better support your work?"
- ▶ Question: "Do you have any suggestions for how we can improve the way we provide climate information?"

Tips for Facilitators:

- Ensure that all participants, including those with different needs or languages, can engage fully.
- Use visual aids and interactive methods to make the session engaging and relatable.
- Encourage open discussion and reassure participants that their input is valuable.





Section 3: Product KPIs – how to go about it?

Based on the needs and gaps that were identified, we can determine the vision, the goals and the KPIs. These are fundamental components of any successful Climate Information Services (CIS) strategy. They provide a clear roadmap for achieving specific goals and a means to measure progress, ensuring that efforts are both purposeful and effective.

Key Performance Indicators (KPIs): CIS knowledge product development is one aspect of program needs, while the other critical component is the measurement of learning outcomes. In the context of farming and rural communities in the Philippines, measuring learning outcomes requires a clear structure and the necessary resources to effectively assess impact. As knowledge products are developed and launched, it is essential to have a well-defined process in place to measure learning outcomes. These outcomes can be assessed either through group evaluations at the end of the training or by hiring third-party evaluation firms to ensure objectivity and accuracy. To facilitate this, program owners can follow the approach outlined below for measuring learning outcomes:

1. Clearly Define learning objectives: The key to measuring learning outcomes for knowledge-based products is defining success metrics for each stage of development. This ensures clear metrics and accountability for stakeholders, supporting long-term success and justifying future investment in such programs. All stakeholders should align on these metrics through a formal agreement, ensuring shared understanding and agreement on the desired outcomes. Below are the key metrics for measuring learning outcomes for knowledge-based products:

2. Target Learners Assessment: Measuring learning outcomes begins with understanding the target learners. This can be done through surveys, field observations, focus group discussions (FGDs), or small group interviews. Not only does this help establish a baseline and gauge learners' readiness, but it can also reveal knowledge gaps that may exist at the outset.

3. Create Measurement Resources: Having ready-to-use tools to measure learner progress is crucial. These tools can include surveys (online or paper-based) and should be designed to measure both quantitative and qualitative progress. For online programs, surveys or interactive queries can be embedded in the learning format, such as videos or e-games. For offline programs, annual surveys with farmers can be used to measure progress and outcomes.

4. Post-Program Evaluation: At the end of the learning program, conducting an in-depth assessment of the learners is essential. This helps evaluate knowledge retention and the application of learned skills. Comparing this post-program evaluation with the baseline data will provide a clear before-and-after comparison of learners' progress, as well as the effectiveness of the knowledge product.

5. Feedback Loop: An annual review process should be implemented to capture detailed learner feedback, which can be incorporated into future learning opportunities. This not only provides valuable insights about the program's effectiveness but also helps build trust with the communities, ensuring that the program remains relevant and responsive to their needs.

Samples of KPIs

- ▶ **User-centred design:** CIS knowledge products that were designed based on user profiles and needs.
- ▶ **Product Reach and Distribution:** Number of CIS knowledge products distributed to target users (e.g., farmers, fisherfolks, LGUs).
- ▶ **User Satisfaction:** Percentage of users who report satisfaction with the CIS knowledge products (via surveys or feedback forms).
- ▶ **Accessibility and Inclusivity:** Percentage of products made available in local languages or accessible formats.
- ▶ **Capacity Development:** Number of training sessions or workshops conducted on using CIS knowledge products.
- ▶ **Impact on Decision-Making:** Percentage of users who report using CIS knowledge products to make informed decisions (e.g., in agriculture, business, policy).
- ▶ **Collaboration and Partnerships:** Number of partnerships established with local organizations, government agencies, or educational institutions to co-develop or disseminate CIS products.

Phase	Goal	Sample Goals	KPIs
Daily Forecasts	Empower farmers and fishers with real-time weather updates to make informed daily decisions, enhancing productivity and safety.	<ol style="list-style-type: none"> 1. Increased awareness by ensuring 90% of farmers and fishers receive daily weather alerts via SMS or radio within the first year. 2. Achieve a 75% reduction in weather-related disruptions. 3. Increase user engagement by 50% through feedback mechanisms. 	<ol style="list-style-type: none"> 1. Number of daily weather updates delivered. 2. Percentage of farmers and fishers acting on weather advice. 3. Reduction in weather-related losses reported.
Sub seasonal Forecasts	Provide farmers and fishers with sub-seasonal forecasts to bridge the gap between short-term weather predictions and long-term seasonal forecasts, enhancing their ability to make informed decisions.	<ol style="list-style-type: none"> 1. Ensure 85% of farmers and fishers receive sub-seasonal forecast updates within the first year. 2. Reduce the impact of mid-term weather anomalies by 50%. 3. Increase proactive measures taken by 40% based on sub-seasonal forecasts. 	<ol style="list-style-type: none"> 1. Number of sub-seasonal forecast updates delivered. 2. Percentage of farmers and fishers acting on sub-seasonal forecast advice. 3. Reduction in mid-term weather-related losses reported.
Seasonal Forecasts	Enable medium-term planning for farmers and fishers through seasonal forecasts, reducing risks and enhancing resilience.	<ol style="list-style-type: none"> 1. Reach 80% of the target community with seasonal forecast updates before the growing or fishing season. 2. Reduce instances of crop failure by 40%. 3. Conduct workshops attended by 70% of the target community. 	<ol style="list-style-type: none"> 1. Number of workshops held and attendance rates. 2. Feedback scores on the usefulness of seasonal forecasts. 3. Reduction in seasonal planning disruptions.
Long-term Predictions	Prepare farmers and fishers for long-term climate change impacts by promoting sustainable practices and adaptive measures.	<ol style="list-style-type: none"> 1. Increase the adoption of climate-resilient practices by 60% within five years. 2. Conduct future scenario workshops for at least 50% of the target population. 3. Measure a 30% increase in sustainable practices. 	<ol style="list-style-type: none"> 1. Number of participants in future scenario workshops. 2. Increase in adoption of climate-resilient crops or practices. 3. Reports of reduced long-term climate impact.

Part 2: Actual Development of CIS Knowledge Product





Part 2: Actual Development Phase

Objective: The objective is to design and develop CIS knowledge products that are accessible, actionable, and relevant to the target audience. This involves creating user-centred knowledge products that address specific climate-related challenges while enhancing users' ability to interpret and apply climate information effectively. Continuous collaboration with key stakeholders ensures alignment with user needs and organizational goals, fostering a more impactful approach. Additionally, pilot testing plays a crucial role in refining these products, incorporating user feedback to enhance their practicality and effectiveness.

Activities:

- 1. Content Development:** Content development is the foundation of any Climate Information Services (CIS) initiative. It involves creating accurate, relevant, and user-friendly knowledge products (KPs) that address the specific needs and challenges of the target audience. Effective content development ensures that the information provided is useful and actionable. Key points:
 - Curate and develop content that simplifies complex climate information into actionable insights for users.
 - Integrate localized data, case studies, and practical applications to make the content more relatable and useful.

- 2. Incorporating Story Telling:** Storytelling is an effective way to communicate complex and statistical information and should be incorporated into the development phase. This approach ensures that content is designed in a way that is easy to understand and memorable for the audience. Storytelling is also learner-centric and has a higher recall value compared to simply presenting key points on a poster, especially for rural audiences.
- 3. Ensure Consistency in Messaging:** As the product is developed, it is crucial to ensure that all content, whether posters, videos, social media posts, or presentations, maintains consistency in terms of structure, colours, branding, and overall design. This consistency not only enhances recall but also ensures uniformity across all communication channels, helping to build familiarity. Over time, this creates a cohesive identity that people can easily recognize and trust.
- 4. Identification of Knowledge Sharing Platform:** It is crucial to evaluate the most effective ways to share and curate knowledge products to maximize reach and impact. Platforms can range from virtual solutions like YouTube and Facebook to in-person classroom-style learning, or a blended approach combining both. Selecting the right platform ensures that content is tailored to fit the format, making it more accessible, engaging, and effective for the target audience. Proper platform selection also enhances scalability and ensures knowledge is delivered in the most efficient way possible.

Section 1: Content Development

1. User-Centricity in Climate Information Services (CIS) Development:

In designing key performance indicators (KPIs) for CIS products, discussions with communities, local government units (LGUs), and agencies have highlighted six essential principles for effective development. A user-centric approach ensures that CIS products are designed with end-users in mind, addressing their specific needs, preferences, and challenges. Engaging users throughout the development process guarantees that the products remain relevant, practical, and impactful.

✂ Why User-Centricity Matters

- Relevance:** Users are more likely to adopt and utilize products that directly address their needs and provide real value.
- User Satisfaction:** Tailored products enhance user satisfaction and trust, ensuring consistent usage and long-term engagement.
- Efficiency:** Understanding user needs allows for the creation of streamlined solutions that effectively address specific problems without unnecessary complexity.

■ Key Impacts

- Higher Adoption Rates:** Products designed with users in mind are more likely to be integrated into their daily decision-making.
- Improved Decision-Making:** User-centric CIS products provide actionable insights, enabling informed and data-driven decisions.
- Increased Engagement:** Active involvement of users in the development process fosters stronger commitment, leading to sustained product usage and trust.

2. Clarity and Conciseness in Climate Information Services (CIS):

Effective communication in CIS products relies on clarity and conciseness, ensuring that information is straightforward, easy to understand, and free from unnecessary complexity.

✂ Why It Matters

- Enhanced Comprehension:** Users can quickly grasp key messages, which is especially critical during emergencies and time-sensitive situations.
- Improved Accuracy:** Clear information reduces the risk of misunderstandings and misinterpretations, leading to more precise and informed actions.
- Increased Efficiency:** Concise communication saves time, enabling users to process and act on information more effectively.

■ Key Impacts

- Seamless User Experience:** Well-structured and clear information enhances usability, making CIS products more accessible and intuitive.
- Faster Response Times:** When information is easy to interpret, users can make quicker decisions, reducing potential risks.
- Minimized Errors:** Simplifying complex data decreases the chances of misinterpretation, ensuring more accurate decision-making and action.

3. Actionability: CIS products must provide insights that users can act upon, delivering practical and relevant information that guides informed decision-making.

✂ Why It Matters:

- Practicality:** Users need actionable data that directly applies to their situations, rather than theoretical or irrelevant information.
- Proactive Measures:** Actionable insights empower users to take preventive actions, reducing climate-related risks.
- Goal-Oriented:** Information should lead to clear, measurable actions that contribute to the overall objectives of the CIS initiative.

■ Key Impacts:

- Increased Preparedness:** Helps users anticipate and respond effectively to climate events, minimizing potential damage.
- Enhanced Resilience:** Clear action steps strengthen users' ability to adapt to climate variability and change.
- Positive Behavioural Change:** Encourages proactive behaviours that mitigate risks and improve sustainability.

4. Relevance and Reliability: CIS products must be both relevant and reliable, ensuring that users receive accurate, trustworthy information tailored to their needs.

✂ Why It Matters:

- User Trust:** Reliable data fosters trust, increasing the likelihood that users will act on the information.
- Effectiveness:** Relevant information is more useful and impactful, making CIS products more effective.
- Consistency:** Consistently delivering high-quality data establishes CIS products as dependable resources.

■ Key Impacts:

- Higher Usage Rates:** Users are more likely to engage with CIS products they trust.
- Accurate Decision-Making:** Reliable data supports informed, effective decision-making.

► **Sustained Engagement:** Users remain engaged with CIS products that consistently provide valuable insights.

5. **Accessibility:** CIS products should be available and usable for all intended users, considering diverse formats, languages, and distribution channels.

✂ **Why It Matters:**

- **Inclusivity:** Ensures that all users, including marginalized groups, can access critical climate information.
- **Wider Reach:** Multiple formats and channels expand the audience, increasing the impact of CIS products.
- **Usability:** Easy-to-use products improve adoption and engagement rates.

■ **Key Impacts:**

- **Increased Adoption:** Broader accessibility leads to higher adoption rates.
- **Enhanced Equity:** Promotes social equity by ensuring that everyone has equal access to vital climate information.
- **Better Outcomes:** Helps all users make informed decisions, improving overall community resilience.

6. **Engagement and Interactivity:** Maintaining user interest and participation requires CIS products to be engaging, interactive, and informative.

✂ **Why It Matters:**

- **User Retention:** Engaging content keeps users interested and encourages repeated use.
- **Active Participation:** Interactive elements promote better understanding and knowledge retention.
- **Feedback and Improvement:** Engaged users provide valuable feedback that can refine and enhance CIS products.

■ **Key Impacts:**

- **Higher Engagement:** Well-designed interactive features drive increased user participation.
- **Improved Learning:** Interactive content enhances knowledge retention, making information more impactful.
- **Continuous Improvement:** Regular user feedback helps optimize CIS products to better serve their audience.

7. **Testing Before Launching:** During the content development stage, it is essential to test draft versions of the products with target audiences and partner agencies. The content does not need to be fully developed; instead, sample examples or MVPs (Minimum Viable Products) should be showcased through at least 2–3 pilot tests with target users. This ensures that the content is not only understandable for learners but also practical for producers.

✂ **Why It Matters:**

- Enables early testing and feedback, allowing valuable insights to be gathered as the product is developed.
- Supports an iterative approach, incorporating learnings and new ideas into the content.

■ **Key Impacts:**

- Leads to better learning outcomes by ensuring the product is developed with learners in mind.
- Minimizes major changes at later stages, reducing budget and timeline risks.

Example of a content development plan:

The recommendations are designed with user-centricity at the core, ensuring that the Climate Information Services (CIS) are accessible, relevant, and actionable for farmers and fishers.

CIS Timeline	Virtual	Rationale (Online)	Face-to-Face	Rationale (Face-to-Face)
Daily Forecasts	Platforms: SMS, Facebook, Radio, Mobile Apps Content: Short videos, infographics, interactive banners Best Practices: Concise, timely updates; localized language; real-time feedback (polls).	Quick dissemination of real-time data to large audiences, ensuring immediate access even in remote areas with mobile connectivity.	Format: Community meetings, live demos, printed bulletins Best Practices: Regular briefings, visual aids, practical demos, involvement of local leaders.	Builds trust, allows clarification of urgent information, and reaches those with limited tech access through personal interactions.
Sub-Seasonal Forecasts	Platforms: Email newsletters, YouTube, WhatsApp groups Content: Long-form videos, detailed infographics, webinars Best Practices: Interactive Q&A, data interpretation tutorials, influencer advocacy.	Enables detailed explanations, fosters interactive learning, and maintains continuous updates with minimal logistical challenges.	Format: Workshops, focus groups, training sessions Best Practices: Practical exercises, case studies, peer-to-peer learning activities.	Encourages active participation, hands-on practice, and peer learning, ensuring better understanding of complex forecast data.
Seasonal Forecasts	Platforms: Dedicated websites, online forums, webinars Content: Interactive maps, seasonal reports, video series Best Practices: Expert live sessions, historical trend comparisons, feedback loops via social media.	Supports broad dissemination of seasonal trends, allowing access to expert insights and historical comparisons anytime, anywhere.	Format: Seminars, hands-on demos, printed guides Best Practices: Pre-season planning workshops, hands-on activities, group discussions on adapting practices.	Facilitates community planning sessions, real-time feedback, and collaborative adaptation strategies based on forecasts.
Long-Term Predictions	Platforms: E-learning courses, VR simulations, online forums Content: Interactive courses, scenario tools, expert panels Best Practices: VR for climate scenarios, comprehensive e-modules, community of practice via online discussions.	Provides immersive learning experiences (e.g., VR) and continuous engagement through long-term online communities and resources.	Format: Training programs, field visits, interactive seminars Best Practices: Field demos of successful practices, scenario planning exercises, mentorship programs for peer learning.	Allows real-world observation of sustainable practices, hands-on application, and stronger behavioural change through direct mentorship.

Section 2: Incorporating storytelling in the content.

Storytelling enhances content development by making complex information engaging, memorable, and learner centric. First, a clear narrative structure with a beginning, middle, and end helps present information in an easy-to-follow format. Second, relatable characters and cultural relevance ensure that the content resonates with the audience, particularly in rural settings. Finally, emotional connection and interactive formats improve recall and engagement, making learning more impactful than static presentations.

Several well-known storytelling templates can be incorporated when creating CIS products. The most notable is the Hero's Journey, which follows three key stages: departure (leaving the old life), initiation (facing challenges and learning), and return (coming back with new knowledge). This framework is highly versatile, allowing content to be structured around a relatable character overcoming obstacles and achieving growth. It works well across various formats, including blog posts, videos, and product descriptions, as it mirrors the universal human experience of struggle and transformation. Other effective storytelling formats include:

- ▶ The Customer Story: Highlights a real customer's positive experience with a product or service, building trust and credibility.
- ▶ The Before-and-After Story: Showcases transformation by comparing a situation before and after using a product or service.
- ▶ The David and Goliath Story: Features an underdog overcoming a significant challenge, making it compelling and inspiring for audiences.

Example of incorporating a Heroes Journey for CIS products:

Kar Lyle's Journey: From Loss to Resilience

● Departure: The Struggle of an Unprotected Farmer

Kar Lyle, a 50-year-old farmer in Isabela, had spent his entire life tending to his coconut farm in a coastal community. It was not just his livelihood; it was his legacy. But every few years, powerful typhoons would tear through his land, uprooting trees, washing away his hard work, and leaving him with nothing. Each time, he had to start over, borrowing money, replanting, and hoping the next storm wouldn't come too soon. With no safety net, every typhoon pushed him deeper into financial uncertainty.

● Initiation: The Turning Point

One day, after yet another devastating storm wiped out his farm, Kar Lyle attended a community meeting



where he first heard about crop insurance through an employee from the Department of Agriculture. Sceptical at first, he wondered if it was just another expense he couldn't afford. But after speaking to farmers who had benefited from it, he realized it could be his shield against future disasters. With determination, he took a leap of faith and enrolled in a crop insurance program. Months later, another typhoon struck, but this time, he was prepared. His farm suffered losses, but financial support arrived swiftly, helping him rebuild without falling into debt.

● Return: A Champion for Change

Empowered by his experience, Kar Lyle became a strong advocate for crop insurance in his village. He shared his story with fellow farmers, urging them to protect their livelihoods. Slowly, more and more farmers enrolled, and soon, the entire community became resilient against the relentless storms. Kar Lyle had transformed not just his own future, but that of his neighbours. No longer just a farmer, he had become a leader, ensuring that no one in his village would face the same hardships he once did alone.

Example of incorporating the David and Goliath template for CIS products:

Kar Lyle vs. the Typhoons: A Farmer's Fight for Survival

For years, Kar Lyle, a 50-year-old coconut farmer in Isabela, faced an unstoppable giant-nature itself. Living in a coastal community, he watched helplessly as typhoons destroyed his farm every few years, wiping out his crops and his only source of income. Each storm left him struggling to rebuild, forcing him into debt, while the powerful forces of nature continued their relentless assault.

But Kar Lyle refused to back down. Determined to find a way to protect his farm, he discovered crop insurance (his slingshot against the giants). At first, many farmers in his village doubted its effectiveness, but Kar Lyle took the leap. When the next typhoon struck, he was ready. While others faced financial ruin, he received the support he needed to recover quickly and replant without falling into debt.

Now, Kar Lyle stands as a champion in his village, proving that even small farmers can fight back against the forces that once seemed unbeatable. He shares his story with fellow farmers, inspiring them to arm themselves with the same protection. Thanks to his perseverance, his community no longer sees typhoons as an inevitable disaster, but as challenges they are prepared to overcome.

Section 3: Ensure Consistency in Messaging

Each department and agency involved in creating CIS products should ensure alignment in key elements such as colour schemes, logos, font sizes, and overall format across all media channels. The teams should create standardized templates that can be easily used without major modifications, ensuring consistency in videos, slides, posters, etc. This approach guarantees that as content is developed, it maintains the same look and feel, allowing learners to easily recognize and recall the material, which helps build trust and familiarity with the brand. Using templates also reduces the time spent curating new content and allows for easy scaling, as templates can be shared across multiple agencies or partner groups.

Key Elements to Maintain Consistency:

- ▶ **Colours:** Stick to a neutral colour palette that aligns with the agency's identity.
- ▶ **Visuals:** Prioritize created visuals and infographics over excessive tables and charts.
- ▶ **Fonts:** Use consistent fonts for headings, body text, and captions to maintain readability and uniformity.
- ▶ **Tone & Voice:** Ensure the same tone and language style is used across all content, whether it's formal, conversational, or instructional.
- ▶ **Logos & Branding:** Place logos consistently across all materials, maintaining appropriate sizes and placement.

- ▶ **Layout & Spacing:** Use uniform margins, padding, and text alignments to create a clean, structured look across all formats.
- ▶ **Imagery & Iconography:** Choose images and icons that align with the content's purpose and appeal to the target audience and keep them consistent in style.
- ▶ **Headings & Subheadings:** Ensure consistent formatting for headings and subheadings across all materials to maintain a logical flow of information.

Best practices for creating consistent and engaging educational content:

For Videos:

- ▶ **Clarify Learning Objectives:** Start with clear objectives to ensure the video addresses specific learning goals.
- ▶ **Keep It Short and Focused:** Limit video length to 3-5 minutes to maintain audience engagement and retention.
- ▶ **Engage with a Hook:** Begin with an attention-grabbing introduction to draw viewers in quickly.
- ▶ **Use Visuals and Animations:** Support concepts with visuals, animations, or graphics to simplify complex topics and increase retention.
- ▶ **Narrate Clearly:** Ensure clear, concise narration with a conversational tone to improve understanding.
- ▶ **Incorporate Interactive Elements:** Use quizzes or prompts to encourage engagement and test learning.
- ▶ **Add Captions/Subtitles:** Include captions for accessibility, especially for learners who may watch without sound.
- ▶ **Call to Action:** End with a clear call to action, directing viewers to the next step in their learning or resources.

For social media:

- ▶ **Include a Clear Call to Action (CTA):** Encourage engagement with actions like "comment," "share," or "click for more."
- ▶ **Use Hashtags Strategically:** Use a mix of relevant and branded hashtags without overdoing it.
- ▶ **Make It Interactive:** Incorporate polls, quizzes, or user-generated content to encourage engagement.
- ▶ **Post at Optimal Times:** Schedule posts based on audience activity and maintain a consistent posting schedule.
- ▶ **Engage with Comments:** Respond to comments quickly to foster community and keep engagement going.
- ▶ **Monitor and Adapt:** Track performance and adjust content based on analytics and audience preferences.

For Posters:

- ▶ **Clear and Concise Messaging:** Keep text minimal with a strong, focused message that's easy to understand at a glance.
- ▶ **Engaging Visuals:** Use high-quality, relevant visuals or illustrations that support the educational content.

- ▶ **Visual Hierarchy:** Highlight key information using size, colour, and placement to guide the viewer's attention.
- ▶ **Legible Fonts:** Use large, readable fonts and ensure there's a contrast between text and background.
- ▶ **Bullet Points and Short Sentences:** Present information in digestible chunks using bullet points or short phrases.
- ▶ **Simple Layout:** Keep the layout clean with enough white space to make it easy to read and follow.
- ▶ **Actionable Information:** Ensure the poster provides clear next steps or actions for the audience.
- ▶ **Feedback and Testing:** Test the poster with a sample audience to ensure clarity and

Section 4: Identification of Knowledge Sharing Platform

In the Philippines, scaling knowledge products for agricultural communities requires utilizing multiple platforms that align with the preferences and accessibility of the target audiences. A combination of digital tools and in-person training can be effective in reaching various groups. Based on the feedback from focus group discussions and global consultant insights, the following channels are identified as ideal platforms for scaling knowledge products:

1. Facebook Groups

- ▶ **Popularity and Accessibility:** With over 70% of the population in the Philippines using Facebook, Facebook Groups are one of the most effective platforms for sharing knowledge. Facebook is familiar to most people, and its ease of use makes it an ideal platform for engagement and community-based learning.
- ▶ **Key Uses:** Facebook Groups can be used for distributing training materials, fostering discussions, and engaging with learners. The platform's interactive features, such as live sessions, polls, and comments, allow for real-time feedback and deeper engagement with the community. Additionally, the ability to track user interactions, such as clicks and responses, offers valuable analytics to measure the effectiveness of learning outcomes.
- ▶ **Best Practices:** Create dedicated groups for specific farming sectors or geographical areas to encourage localized discussions and knowledge sharing. Use Facebook's live features for interactive training sessions and Q&A.

2. TikTok

- ▶ **Engagement with Younger Audiences:** TikTok's short-form video format and highly engaging content make it an excellent tool for reaching younger generations of farmers and community members. TikTok is widely used in the Philippines and is known for its ability to keep users engaged with creative, bite-sized content.



- ▶ **Key Uses:** TikTok can be used to create visually engaging, quick educational content on Climate Information and Services (CIS) and other agricultural topics. The platform's algorithm promotes content effectively using hashtags and viral trends, making it an excellent tool for reaching a broader audience, including those not typically engaged with traditional learning formats.
- ▶ **Best Practices:** Leverage influencers in the agricultural space to promote CIS knowledge. Use TikTok's creative features to develop visually appealing infographics or quick tips that can direct users to other learning platforms for more detailed content.

3. YouTube

- ▶ **Long-Form Learning:** YouTube is ideal for curating long-form, structured educational content, allowing learners to study at their own pace. As a widely used platform, YouTube supports various learning formats, including tutorials, explainer videos, and recorded webinars.
- ▶ **Key Uses:** Knowledge creators can upload videos on CIS, farming techniques, or climate resilience strategies, with the ability to add subtitles and annotations to improve accessibility. YouTube's comment section allows learners to ask questions, share insights, and interact with educators. Videos can also be embedded in other platforms like Facebook to reach a broader audience.
- ▶ **Best Practices:** Create a YouTube channel dedicated to agricultural education, organize videos into playlists

for easy navigation, and ensure content is accessible by using subtitles and multilingual options. Leverage YouTube's offline viewing feature to cater to areas with poor internet access.

4. In-Person Training

- ▶ **Community-Based Learning:** While digital platforms are powerful, in-person training remains essential for rural communities where digital literacy may be low or internet access is limited. In-person sessions provide hands-on learning opportunities and a chance to engage with trainers directly.
- ▶ **Key Uses:** In-person training sessions can be conducted in collaboration with cooperatives or local government units to reach a large number of participants. These sessions should focus on practical, interactive learning using visual aids such as PowerPoint presentations, printed materials, and demonstrations.
- ▶ **Best Practices:** Ensure that trainers are experienced and capable of conveying information in a simple, engaging manner. Focus on visual and interactive teaching methods to cater to different learning styles. Collaborate with cooperatives to bring together large groups of farmers from neighbouring communities to maximize outreach.

5. Combination of Digital and In-Person Training

- ▶ **Integrated Approach:** Combining digital tools with in-person training can maximize reach and impact. Digital platforms like Facebook, YouTube, and TikTok can be



used to complement in-person sessions by offering follow-up materials, reminders, and access to additional learning resources.

► **Key Uses:** For example, in-person workshops can be followed by online video tutorials for reinforcement or continued learning. Additionally, feedback collected through Facebook or TikTok can be used to improve future in-person training sessions, ensuring the program evolves based on community needs.

► **Best Practices:** Use digital platforms to share pre-training materials or follow-up quizzes, while in-person sessions focus on hands-on demonstrations and addressing specific community challenges. This blended approach allows for a continuous learning cycle and greater engagement.

In developing knowledge products for agricultural communities in the Philippines, it is essential to choose the right platforms based on the target audience's familiarity and access to technology. Facebook groups, TikTok, YouTube, and in-person training can all be leveraged effectively, either independently or in combination, to enhance learning, engagement, and the scalability of Climate Information and Services (CIS) and agricultural knowledge.

Key points when using social media:

► **Use verified social media accounts** to enhance credibility, ensuring audiences trust the information as accurate and legitimate.

► **Implement rigorous fact-checking** to prevent misinformation, ensuring all shared content is reliable and trustworthy.



Part 3: Post-Development Phase for CIS Knowledge Product



Part 3: Post-Development Phase

Objective: The primary objective of the post-development phase is to ensure the ongoing relevance and effectiveness of Climate Information Services (CIS) knowledge products by gathering feedback and implementing continuous improvements. This phase is crucial for maintaining the utility of CIS products and enhancing user engagement and satisfaction.

Outcomes:

1. Sustained Relevance and User Impact:

- ▮ Knowledge products are continually updated to reflect the latest climate data and insights, maintaining their usefulness and relevance.
- ▮ Users are empowered to make informed decisions based on up-to-date climate information.

2. Enhanced User Engagement and Learning:

- ▮ Users show increased understanding and proactive use of climate information, contributing to better climate resilience outcomes.

3. Continuous Improvement Based on Feedback:

- ▮ Iterative revisions to knowledge products are informed by user feedback and impact assessments.

Activities:

1. Launch and Promotion: Ensure there is a clear plan to promote the information to the target audience and partner agencies. This could include in-person or online promotional campaigns, identifying effective communication channels, securing buy-in from partner agencies to share content on their social media handles, and collaborating with non-profits and grassroots organizations to broaden outreach and maximize visibility. Effective dissemination ensures that the information reaches those who need it and is communicated in a way that is easily understood and actionable. This phase is critical for maximizing the impact of the CIS initiative.

2. Monitoring and Evaluation: Emphasizes the importance of continuously monitoring and evaluating the performance of CIS products. It involves collecting feedback from users to understand how the products are being utilized, their effectiveness, and areas for improvement. Establishing a robust feedback mechanism is crucial for gathering insights from users. This can include surveys, interviews, focus group discussions, and user analytics.

- ▮ Implement a feedback mechanism to capture user experiences and challenges in using the knowledge products.



- ▮ Monitor the impact of the knowledge products by tracking defined KPIs, such as user engagement rates and decision-making improvements.

3. Iteration and Revision: This focuses on the ongoing process of refining and improving CIS products based on the feedback and data collected during the monitoring and evaluation phase. Iteration and revision ensure that CIS products remain relevant, accurate, and user-friendly. Making necessary updates to both the content and format of CIS products ensures they continue to meet user needs and preferences. This can include revising the information provided, improving the user interface, and incorporating new data.

- ▮ Use insights from monitoring and evaluation to make necessary updates to the content and format of the knowledge products.

- ▮ Schedule regular reviews to ensure the information remains accurate, relevant, and aligned with the latest climate research and user needs.

4. Capacity Development: Capacity development (CapDev) plays a crucial role in the successful implementation and utilization of Climate Information Services (CIS) products. It involves enhancing the knowledge, skills, and abilities of stakeholders to effectively interpret and act upon climate information.

Section 1: Launch and promotion.

A launch and promotion plan are crucial in ensuring that climate information effectively reaches its intended audience and prompts meaningful action. By carefully crafting this plan, organizations can maximize the impact of their messages, especially in critical situations like impending severe weather events. A well-thought-

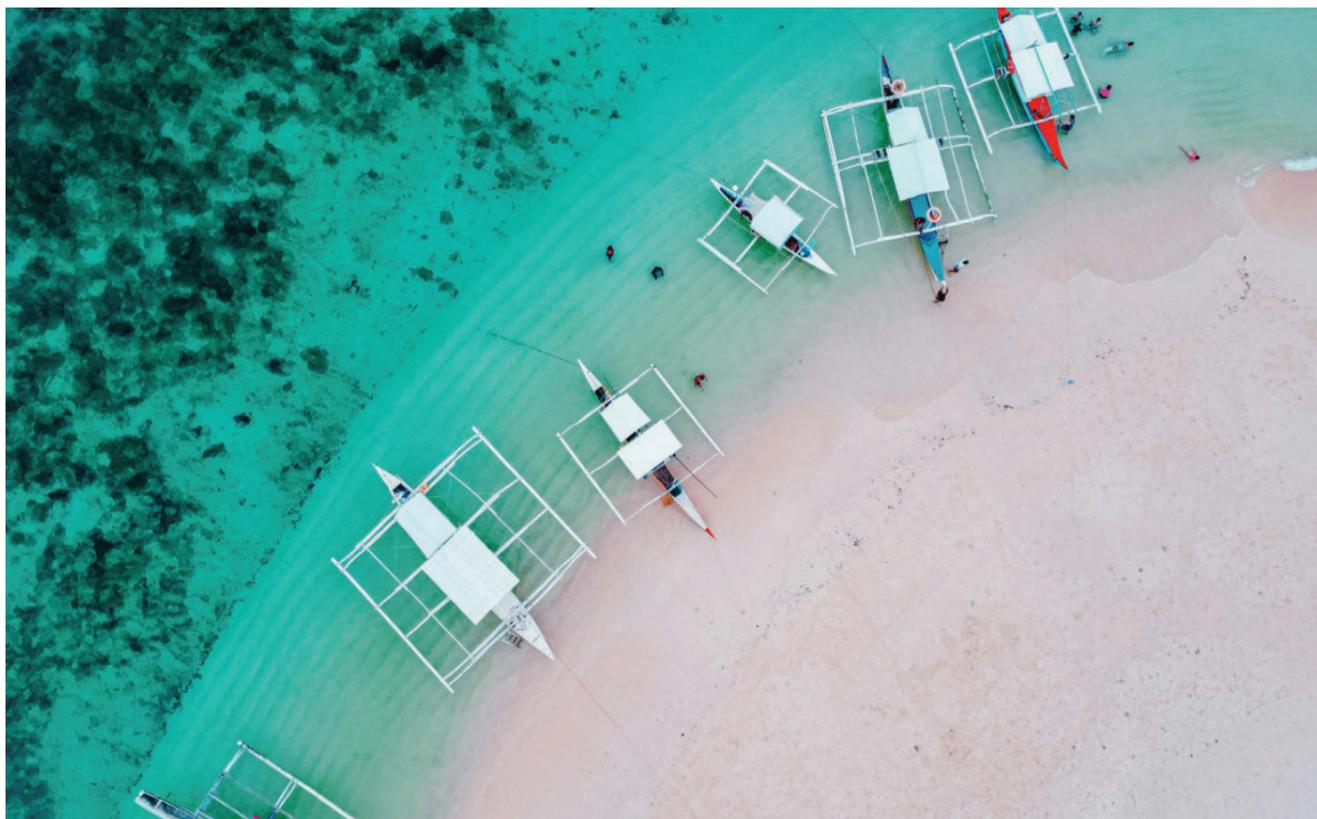
out design and dissemination plan is essential for effective communication, especially in the context of climate information services:

- It bridges the gap between mere data and actionable knowledge.
- Ensures messages are received, understood, and acted upon by the target audience.
- Enhances resilience by enabling communities to prepare and respond to climate-related events proactively.
- Maximizes impact through strategic use of platforms, collaborations, and continuous evaluation.

Example of a dissemination plan:

Date	Target Audience	Objectives	Platform	Content	Format	Hashtags	Collaborators	KPIs	Notes
10/01/2025	All farmers	Inform about upcoming heavy rains and preparation tips.	Facebook	<p>Visual/Image: A map highlighting regions expecting heavy rainfall, overlaid with safety icons (emergency kits, evacuation routes). Ensure color-coding standard is utilized.</p> <p>Text: Inaasahang malalakas na ulan ngayong linggo. Maghanda para sa posibleng pagbaha. Manatiling ligtas at sundin ang mga lokal na alituntunin para sa emerhensiya</p> <p>Action steps: Suriin ang babala ng panahon at maghanda ng mga emergency kit. Suriin ang mga lokal na emergency contact na ibinigay. Pumunta sa evacuation center.</p>	Image + Text	#WeatherAlert	Local Weather Bureau, Emergency Management Office	- Engagement rate (likes, comments, shares) - Reach/ impressions	Include contact information for local emergency services.
01/02/2025	Rice farmers	Provide seasonal forecast information.	Facebook Groups	<p>Visual/Image: A seasonal calendar with key dates for above-average rainfall, accompanied by icons for planting and harvesting.</p> <p>Text: Inaasahang mas mataas sa karaniwan ang pag-ulan sa Agosto. Magplano nang naaayon upang mapakinabangan ang ani! Kapag may advisory ng bagyo, anihin agad ang palay kapag hindi bababa sa 85-90% ng mga butil ay nasa gintong dilaw na kulay gamit ang: Manwal na pag-aani o gamit ang Mechanical Harvesting (Gamit ng Combine Harvester). "Magtayo ng mga kanal upang maiwasan ang pag-iipon ng tubig sa taniman at mapabuti ang drainage system."</p>	Image (seasonal calendar)	Hashtags #SeasonalForecast	Agricultural Extension Office, Farmer Associations	- Number of shares in farmer groups - Feedback from farmers	Share the information with relevant farmer groups.

Above are examples of a plan and this can be expanded as needed by the CIS producer.



Section 2: Monitoring and Evaluation

In the first section, we have recommended that KPIs are set during the planning stage. KPIs help define clear goals for climate information services (CIS), ensuring that all activities (e.g., product design, distribution, training) contribute to measurable outcomes.

The following are recommended action steps:

1. Identify Key Monitoring Areas

At this point, we are familiar with all critical stages in the development, dissemination, and use of climate information services (CIS). Ensure that the monitoring framework covers the entire lifecycle, from data generation to end-user adoption. Key monitoring areas should align with the different types of climate forecasts and their intended impact.

2. Prioritize Key Focus Areas

From the full list of monitoring areas that were identified in the design and dissemination plan, select priority areas based on their impact and feasibility. Considering the limited resources that agencies might have, prioritizing is important. Define:

Measurement Approach

- Identify the most suitable methodologies (e.g., surveys, user engagement tracking, impact assessments).
- Determine data sources (e.g., user reports, system analytics, government records).

- Define target participants (e.g., farmers, fisherfolk, LGUs, climate information providers).

Measurement Frequency

- Establish how often data should be collected (e.g., daily for weather updates, quarterly for user engagement).
- Align measurement timelines with forecast phases (e.g., before and after seasonal forecasts, annually for long-term adoption of climate-resilient practices).

3. Integrate Data Collection

Ensure smooth data collection and monitoring by embedding tracking mechanisms into the CIS system. Key steps include:

- **Collaboration with Technical Experts:** Work with climate data specialists, IT teams, and local partners to develop real-time tracking systems.
- **User Engagement Tracking:** Implement digital and offline methods such as SMS feedback, mobile app analytics, and on-the-ground surveys.
- **Capacity-Building Integration:** Align data collection with training programs to assess the effectiveness of knowledge dissemination.
- **Policy and Partnership Monitoring:** Work with government agencies and institutions to track CIS adoption and institutional integration.

Below is an example of the M&E Plan that can be adapted:

KPIs	Channels	Methods for Data Collection
Number of daily weather updates delivered	Internal Business Intelligence Systems	Data analytics from weather service platforms, system logs tracking SMS or app notification delivery
	Phone and SMS Surveys	Automated surveys measuring frequency and delivery of weather updates via SMS
	Focus Group Discussions with Farmers and Fishers	Structured group meetings to understand the reach and frequency of weather updates received by farmers and fishers
Percentage of farmers and fishers acting on weather advice	Interviews with Agricultural Extension Officers and Local Agencies	Key informant interviews and semi-structured interviews to assess whether farmers/fishers followed weather advice
	User Registration and Engagement Data	Analytics tracking engagement on platforms that provide weather advice (e.g., app logins, content accessed)
	Field Visits and Community Assessments	Direct observations in the field assessing the actions taken by farmers and fishers in response to weather advice
Reduction in weather-related losses reported	Internal Business Intelligence Systems	Analysis of loss data from weather-related claims, crop yields, and damage reports integrated with weather update systems
	Integration into Climate Information Platforms and Digital Services	Platform analytics tracking how advice correlates with actions taken to reduce losses (e.g., change in farming practices or crop insurance uptake)
	Collaboration with Cooperatives and Farmer Organizations	Data from partner organizations on weather-related crop loss reductions, particularly after implementing climate-smart practices based on weather advice

The following are the different channels and methods that can be used:

Channels	Methods for Data Collection
Internal Business Intelligence Systems	System logs, user reports
Phone and SMS Surveys	Automated surveys, calls, SMS polls
Focus Group Discussions	In-person meetings, group discussions
Interviews with Agricultural Extension Officers	Structured interviews, key informant interviews
User Registration and Engagement Data	Tracking system usage, logins, sign-ups
Integration into Climate Platforms	User feedback, platform analytics
Social Media and Online Feedback	Sentiment analysis, engagement metrics (likes, shares)
Field Visits and Community Assessments	Direct observations, farmer feedback
Collaboration with Cooperatives	Reports, meeting minutes, shared data
Other Emerging Methods	AI, remote sensing

Section 3: Iteration and Revision

If you're a Climate Information Service (CIS) producer looking to change how your service looks, feels, and is delivered, an iterative process should focus on gradual improvements based on stakeholder feedback, performance data, and evolving needs.

1. Based on the M&E results, clearly articulate the goals of the change. Are you aiming to improve usability, expand reach, or enhance accuracy? Define what success looks like in terms of user engagement, impact, or service delivery.

- Work with stakeholders (farmers, local agencies, etc.) to identify their needs and pain points.
- Establish clear success metrics (e.g., user satisfaction, engagement rates, improved climate-related decision-making).

2. Develop CIS that addresses the identified areas for change. This could involve visual redesign, new channels of delivery, or enhanced product features (e.g., mobile app, SMS, or localized language options). It's helpful to be practical and focus on one or two key features, like ease of access or visual clarity of climate data.

Iterating and designing are critical to creating effective and responsive products or services, especially in fields like Climate Information Services (CIS), where the needs and circumstances of users can change over time. The design and dissemination template that was introduced in section 1 can be used but if the agency wants to document lessons learned and the processes, this template can be used:

CIS Iteration Template in table format:

Section	Details
Iteration Overview	
Iteration Number	[e.g., Iteration 1, Iteration 2, etc.]
Date	[Insert Date]
Duration	[Insert start and end dates for this iteration]
Objective	[What are you aiming to achieve in this iteration?] Example: Improve user interface, enhance weather prediction accuracy, integrate new data sources.
Stakeholder Involvement	
Stakeholders Engaged	[List key stakeholders: farmers, agricultural extension officers, local agencies, etc.]
Stakeholder Feedback Methods	[e.g., surveys, interviews, focus groups, social media analysis]
Feedback Summary	[Summarize the key insights and concerns raised by stakeholders]
Changes Requested by Stakeholders	[List any specific requests or recommendations from stakeholders]
Key Changes / Updates	
Changes to Service/Product	[Detail the changes made in this iteration based on feedback or new insights. Example: Simplified SMS alerts, updated weather prediction model, added localized climate data.]
New Features Added	[List any new features introduced in this iteration. Example: New push notification system for climate alerts, enhanced map features for weather tracking.]
Testing & Feedback	
Testing Methodology	[Describe how changes were tested before implementation (e.g., pilot testing, A/B testing, usability testing)]
Testing Results	[Summarize the outcomes of testing (did the changes improve the service? Any issues identified?)]
Additional Stakeholder Feedback	[After the changes were made, did stakeholders provide further feedback? If so, summarize]

Section	Details
Data and Performance Monitoring	
Data Sources	[What data sources were used in this iteration (e.g., satellite data, weather stations, local reports)?]
Key Metrics for Success	[List the key performance indicators (KPIs) being tracked (e.g., user engagement, accuracy of climate predictions, usability)]
Results of Data Monitoring	[Provide insights on the product's performance based on the data collected during this iteration]
Challenges Encountered	
Challenges	[List any challenges faced during this iteration (e.g., data gaps, technical difficulties, resistance to new features)]
Solutions Implemented	[Describe how challenges were addressed, including any workaround or decisions made]
Next Steps	
Planned Improvements	[Outline what changes are planned for the next iteration based on stakeholder feedback, performance data, and challenges encountered]
New Goals for Next Iteration	[Set clear objectives for the next iteration, e.g., improve forecast accuracy, test new features with more users]
Documentation and Communication	
Update Documentation	[Ensure that all changes, features, and feedback are documented in your project management system, user manuals, or internal documents]
Stakeholder Communication	[Ensure transparency and clear communication of updates to all relevant stakeholders. Example: Update the website, email stakeholders about new features.]
Lessons Learned	
What Worked Well	[Summarize what went well during the iteration (e.g., stakeholder engagement, new feature adoption)]
Areas for Improvement	[Identify areas that could be improved in the next iteration (e.g., more thorough testing, better communication with stakeholders)]
Iteration Summary	
Iteration Summary	[Provide a brief summary of what was accomplished in this iteration and how it moves the service/product forward. Example: Simplified user interface, improved engagement.]

Section 4: Capacity Development

Capacity development plays a crucial role in ensuring that the owning agency, along with its partner agencies, can sustain the impact of their knowledge products while maintaining high awareness and engagement with partner and promoter agencies. For CIS products, it's essential that all stakeholders have the necessary information and training to support scaling activities.

Key points include:

1. Training the Trainers:

To enable a scalable and continuous learning approach, two types of knowledge products are needed: one for training trainers and another for training users. This ensures a sustainable process for maximizing reach. It's important to define the target number of trainees and research the trainer-to-learner ratio for each stakeholder group. Trainers will not only enable scale but also act as a valuable source of feedback for improving the modules and measuring learning outcomes.

2. Stakeholder Resources:

Producers should ensure that sufficient content and materials are available for partners to fully equip

themselves with the necessary resources. These materials should be easily accessible and include content, training manuals, branding and promotional materials, guidelines, helpful reports, and promotional plans. Creating shared folders can help ensure the resources are easily accessible and shared across different agencies.

3. Community of Practice:

To manage stakeholders effectively and capture insights from all parties, a Community of Practice on Climate Information and Services composed of transdisciplinary experts should be established. This group, composed of subject matter specialists, industry leaders, faculty, and learning management experts, will not only contribute to product development but also serve as champions within their organizations and communities to promote learning. This committee will help accelerate product development and ensure it is relevant and impactful. Below are recommended activities that agencies may implement:

Audience	Activity	Objective	Rationale	Sub-Activities
LGUs	Training Workshops	Equip LGU staff with knowledge and skills to use CIS products effectively	Workshops provide direct, interactive learning experiences, allowing LGU staff to ask questions, engage with trainers, and practice skills in a supportive environment.	<ul style="list-style-type: none"> - Conduct workshops on interpreting climate data and using knowledge products - Provide hands-on training sessions - Facilitate exercises on creating local climate adaptation plans
	Simulation Exercises	Prepare LGU staff for real-life application of climate information in disaster response	Simulation exercises offer practical, hands-on experience in applying CIS data during emergencies, improving preparedness and response capabilities.	<ul style="list-style-type: none"> - Organize mock drills and simulations - Use CIS products to plan and execute simulations - Debriefing sessions to discuss learnings and improvements
	Technical Assistance and Support	Ensure continuous support and guidance	Ongoing technical assistance ensures that LGU staff can continuously improve their skills and address any challenges they encounter while using CIS products.	<ul style="list-style-type: none"> - Set up a helpline or support desk - Offer one-on-one mentoring or coaching - Provide regular updates and refresher courses

Audience	Activity	Objective	Rationale	Sub-Activities
Other Agencies	Inter-Agency Collaboration Workshops	Foster collaboration and knowledge sharing among different agencies	Collaboration workshops enhance inter-agency cooperation, allowing for the pooling of resources, knowledge, and strategies to address climate challenges more effectively.	<ul style="list-style-type: none"> - Organize workshops bringing together various agencies - Facilitate joint exercises - Encourage sharing of best practices and successful case studies
	Sector-Specific Training Sessions	Tailor training to the specific needs of different agencies (e.g., agriculture, fishing, health, etc.)	Sector-specific training ensures that each agency receives relevant, targeted information and tools that address their unique climate-related challenges.	<ul style="list-style-type: none"> - Conduct specialized training sessions focused on sector-specific impacts - Provide tools and resources specific to each agency's needs - Develop sector-specific case studies and scenarios
	Data Integration and Management Training	Enhance capacity to manage and integrate climate data across agencies	Effective data management training helps agencies make better use of climate data, ensuring it is accurate, accessible, and integrated into decision-making processes.	<ul style="list-style-type: none"> - Offer training on data management - Teach methods for integrating climate data with existing systems - Provide tools and templates for effective data management and reporting
Communities	Community-Based Training Programs	Build community capacity to understand and act on climate information	Community-based training empowers local populations by providing accessible, relatable information in familiar languages and formats, fostering a better understanding and application of CIS products.	<ul style="list-style-type: none"> - Organize training sessions in local languages - Provide printed materials and visual aids - Facilitate group discussions and peer-learning activities
	Awareness Campaigns	Increase awareness and understanding of climate information and its importance	Awareness campaigns raise the visibility of climate information, ensuring that more community members understand its importance and know how to access and use it.	<ul style="list-style-type: none"> - Run awareness campaigns through local media and social media - Distribute informational brochures and pamphlets - Use local influencers and community leaders to spread key messages

Audience	Activity	Objective	Rationale	Sub-Activities
	Hands-On Workshops and Demonstrations	Provide practical experience in using CIS products	Hands-on workshops and demonstrations offer practical learning experiences, helping community members understand how to apply climate information in real-life situations.	<ul style="list-style-type: none"> - Conduct workshops on specific topics (e.g., disaster preparedness, water management) - Arrange demonstrations of CIS tools and techniques - Encourage community members to participate in hands-on activities
	Feedback Mechanisms and Community Dialogues	Gather feedback and ensure community needs are addressed	Feedback mechanisms ensure that CIS products remain relevant and effective by incorporating community input and addressing their specific needs and concerns.	<ul style="list-style-type: none"> - Set up regular community dialogues and meetings - Use surveys and feedback forms to collect input - Establish a feedback loop to improve CIS products and services
State Universities and Colleges (SUCs)	Training Workshops	Equip SUCs staff and students with knowledge and skills to use CIS products effectively	Workshops provide direct, interactive learning experiences, allowing SUCs staff and students to ask questions, engage with trainers, and practice skills in a supportive environment.	<ul style="list-style-type: none"> - Conduct workshops on climate science, data handling, and modelling - Provide training on GIS and remote sensing - Facilitate exercises on applying climate data in agricultural contexts

This table outlines various capacity development activities aimed at strengthening the ability of LGUs, other agencies, and communities to effectively use and benefit from Climate Information Services products. Each activity is designed to build the necessary skills and knowledge for interpreting and acting on climate information, ultimately enhancing resilience and preparedness.



The following are topics that are needed by the various audience based on the study of Isabela State University:

Training Topics for SUCs:

- ▶ **Climate Science:** Basics, impacts on agriculture, and modelling.
- ▶ **Data and Tools:** Data handling, GIS, and remote sensing.

Training Topics for NGAs:

- ▶ **Communication:** Simplifying technical data and effective outreach.
- ▶ **Adaptation and Policy:** Climate-smart practices and policy development.
- ▶ **Climate Science:** Basics, impacts, and mitigation/adaptation strategies.
- ▶ **CIS for Decision-Making:** Producing, interpreting, and utilizing data for decision-making.
- ▶ **Capacity Building:** Engaging LGUs and communities to foster resilience.

Training Topics for LGUs:

- ▶ **Awareness and Adaptation:** Basics of climate change, mitigation/adaptation strategies, impact of public health.
- ▶ **Health:** Health risks associated with climate change (e.g., heat stress, vector-borne diseases, malnutrition).
- ▶ **Agriculture and Fisheries:** Sustainable agricultural practices and climate-smart agriculture, Agroforestry, Early warning systems for climate risks in agriculture and fisheries and Climate-resilient fishing practices and alternative livelihoods..
- ▶ **Assessment and Planning:** Mapping, GHG Inventory, CDRA, and strategies for climate-resilient agriculture.
- ▶ **Data Analysis and Forecasting:** Interpreting climate/weather data and forecasting techniques.
- ▶ **Communication and Engagement:** Developing communication materials, web development, and community resilience training.

Part 4: Recommendations for the Philippines Context for CIS Knowledge Product Development

1. Policy Relevance: Program owners should review existing policies, such as the National Climate Change Action Plan, the Philippine Development Plan, and other relevant regulations, to identify support opportunities for CIS product development in the Philippines. The current administration has emphasized the need for a focus on climate action, so leveraging ongoing initiatives and programs could help secure support and funding for knowledge products related to CIS.

2. Partnerships with State Universities and Cooperatives:

Both types of organizations offer several benefits in enabling the creation and scaling of CIS. Universities provide not only the academic and scientific rigor needed for development but also serve as ideal platforms for grassroots engagement. They often have integrated programs dedicated to agricultural development and resilience, making them highly valuable partners. Similarly, cooperatives offer significant advantages, including funding support, access to larger farming communities, and technical expertise in disseminating information at scale. Cooperatives also have access to valuable farmer data, such as location and regional spread, and will be vital partners, particularly in the Philippines. A partnership between both types of organizations is recommended for scaling CIS knowledge products effectively.

3. Promotions through Government Agencies: Agencies like PAGASA have a significant online presence and social media platforms that can be leveraged to promote key CIS-related information. Similarly, agencies like the Department of Agriculture have platforms that can reach larger farming communities and localize actions effectively. Due to their reach and available resources, partnering with these agencies can help spread the use of CIS knowledge to a wider audience and serve as a cost-effective way for information sharing.

4. Creating Incentives and Dedicated Teams: Due to the complexity and technical nature of CIS information, there is often limited incentive or bandwidth for agencies and individuals to spend time converting this knowledge into a more accessible format for a wider audience. Some of this may stem from resource constraints. To drive action, it is important to create the right incentives, such as department-specific metrics for knowledge development or recognizing the efforts of agencies that successfully simplify and share this information. Additionally, agencies and organizations can leverage existing learning management teams or create new ones dedicated to converting complex topics



into easy-to-understand formats for mass consumption.

5. Creating a three (3)-year training plan: Knowledge products must continuously evolve and require sustainable budgets to support their ongoing development, especially as new tools and formats emerge with technological advancements (learning applications, virtual/mixed reality, etc.). Furthermore, learning initiatives, particularly in rural communities, require at least one year to effectively measure learning outcomes. Therefore, program teams should design knowledge products with a three-year plan in mind to ensure continuity and to enable efficient measurement of the right outcomes.



Part 5: Additional recommendations for scaling CIS knowledge products

1. Use of Digital Assessment Tools: To ensure capturing the right level of data in a scalable mechanism, it is important to create a hybrid approach, i.e., use of in-person and digital tools to standardize and capture learning progress across each stakeholder group. This includes the use of online surveys, knowledge tests, certifications downloaded, and attendance tracking. Wherever possible, the aim should be capturing this in a digital format to ensure data collection is standardized and easy to analyse. To enable this, one of the recommendations is to create a centralized CIS learning hub or learning management system (LMS) that can be easily used by all stakeholders. This learning system can have two versions: one that is open source, allowing broader training to be shared with anyone, and another requiring login access, which can be provided to specific stakeholders and customized to their needs. We can also work with our stakeholders to identify existing LMS systems they are using, which can be leveraged and used to scale learning for others, so we are not building things from scratch.

2. Credible Certifications: To enable higher incentives to learn, certifications could be required from reputed agencies. This not only adds a higher level of credibility for learners but will also allow tracking of learning outcomes, which can be recorded by the number of certificates issued. For example, the Climate Change Commission can partner with a reputed agency to certify a training program, which adds credibility to the program, thus enabling a higher incentive to complete it.

Additionally, certificates will enable learners to advance career opportunities and pivot to new careers in the climate space, which helps overall initiatives in the region.

Conclusion

The agricultural sector in the Philippines includes 11.3 million farmers, spanning farming, fishing, livestock, and dairy. When considering additional community members, government stakeholders, and universities, this represents a significant market for CIS products. Even if just 1% of this population engages with the product, it would still reach over 100,000 users. There is already robust climate and agricultural data available from agencies, institutions, and government bodies that can greatly benefit these agricultural workers. With the increasing frequency of climate events, converting this wealth of information into scalable knowledge products will have a tremendous impact on capacity development, equipping agricultural workers with the knowledge to protect themselves and raise awareness. Producers are strongly encouraged to dedicate resources, potentially creating dedicated teams to curate and convert this data into impactful knowledge products. These products can significantly improve the livelihoods of farming communities in the Philippines. By utilizing the toolkits and resources outlined in this report, producers can apply best practices to create scalable knowledge products that help prepare, protect, and preserve agricultural communities.

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