Meeting Link

https://us02web.zoom.us/meeting/register/tZEqdO2sqzkuE9HYujER5EeRBYq9MRzw7ibR

ASEAN-CRN Knowledge Exchange Event and Partners Meeting

28 – 30 March 2023 | Amari Watergate Bangkok

Food and Agriculture Organization of the United Nations

german cooperation
DEUTSCHE ZUSAMMENARBEIT

giz

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Before we start …

1

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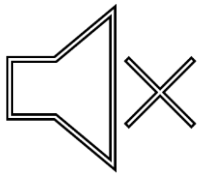

For online participants:
When not speaking, please make sure your mic is muted.

Raise your virtual hand if you wish to speak.

For onsite participants:
Please raise your hand and use the microphone when speaking.

3

For online participants, feel free to **turn on your camera.**

PTT and documents are available for download at:

https://drive.google.com/drive/folders/14tMKyk_ULOiQyfmib0dp5YEJPsLvAitF?usp=share_link

Highlights


Agricultural insurance
in the ASEAN region:
CAMBODIA
Background


Agricultural insurance
in the ASEAN region:
INDONESIA
Background


Agricultural insurance
in the ASEAN region:
LAO PDR
Background


Agricultural insurance
in the ASEAN region:
MALAYSIA
Background


Agricultural insurance
in the ASEAN region:
MYANMAR
Background


Agricultural insurance
in the ASEAN region:
PHILIPPINES
Background


Agricultural insurance
in the ASEAN region:
THAILAND
Background


Agricultural insurance
in the ASEAN region:
VIETNAM
Background

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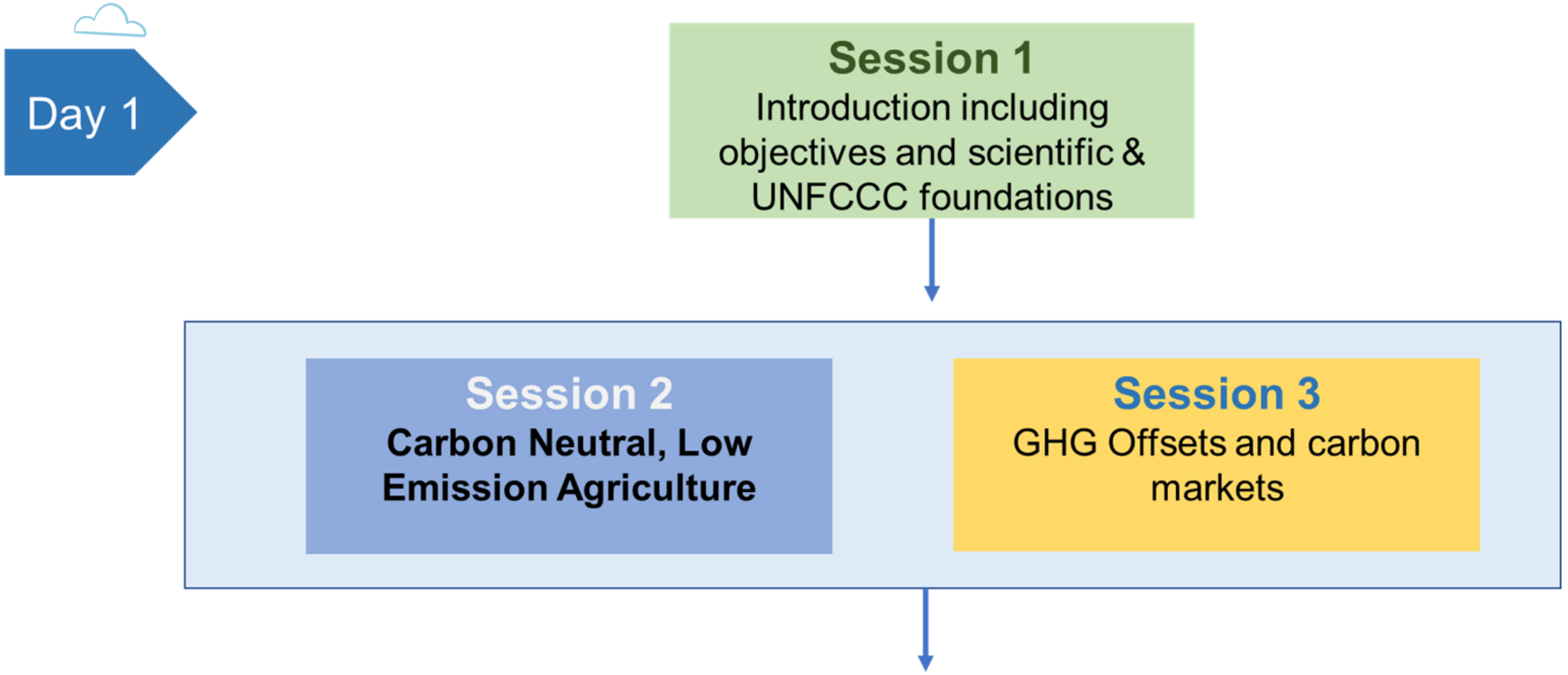
Check-in and recap of Day 1

Programme Roadmap



Programme Roadmap

Day 2

Session 4
Climate resilient agriculture including agro-met & risk management.

Session 5
Experiences with **climate finance** for agriculture including innovative approaches

Programme Roadmap

Session 6

Partnership Forum

Day 3

Session 4

Climate Resilient Agriculture: Agrometeorology and agro-insurance

Session 4: 09.15-10.30

Best Practices on Agromet and Climate Information Services:

A Regional Investment Roadmap for Agricultural Climate Services

Monica Petri
FAO Laos

Erkin Isaev
FAO-RAP

Session 4.A: A Regional Investment Roadmap for Agricultural Investment Services

09.15 – 09.30	**Presentation of Roadmap concept** • Types of agricultural climate services • Inspirations and framework
09.30 – 10.00	**Guided group discussion**: vision to expand across VC, gaps and opportunities, actions and roles • 1-2 groups on new investment proposals (Malaysia, Vietnam, Thailand) • 1 group on additional requirement in top of present investments (Philippines, Cambodia, Lao PDR)
10.00 – 10.20	**Presentation/ feedback on group discussion results**
10.20 – 10.30	**Recap and next steps**

Best Practices on Agromet and Climate Information Services: A Regional Investment Roadmap for Agricultural Climate Services

Food and Agriculture Organization of the United Nations

Food and Agriculture Organization of the United Nations

Outcomes:

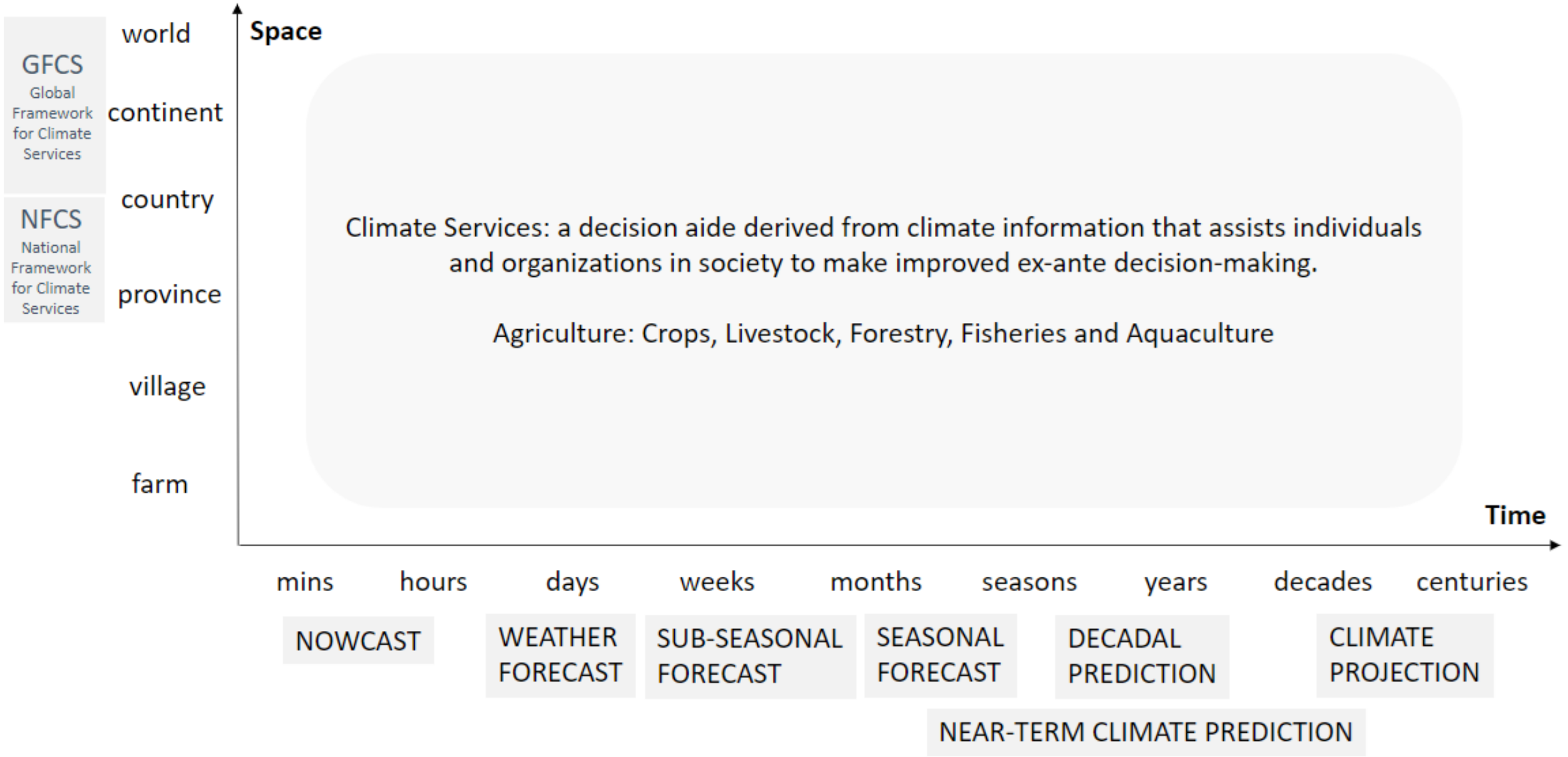
- Shared understanding and concepts of agricultural climate services in Asia and the Pacific.
- Concepts for ACS along he value chain
- Aspirations and vision for ACS
- Working groups, visions

Food and Agriculture Organization of the United Nations

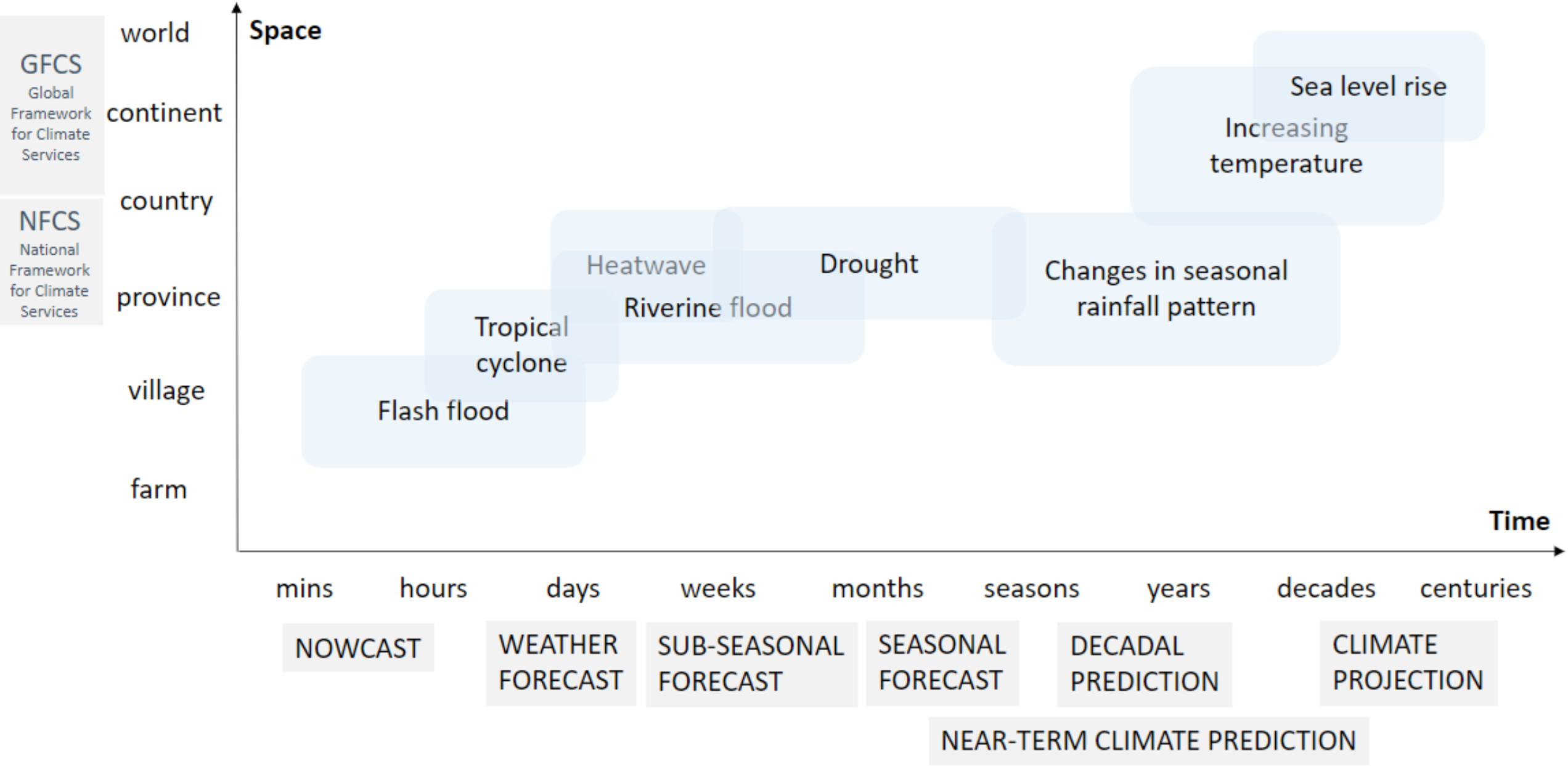
Best Practices on Agromet and Climate Information Services: A Regional Investment Roadmap for Agricultural Climate Services

Shared understanding *for transformational agricultural climate services*

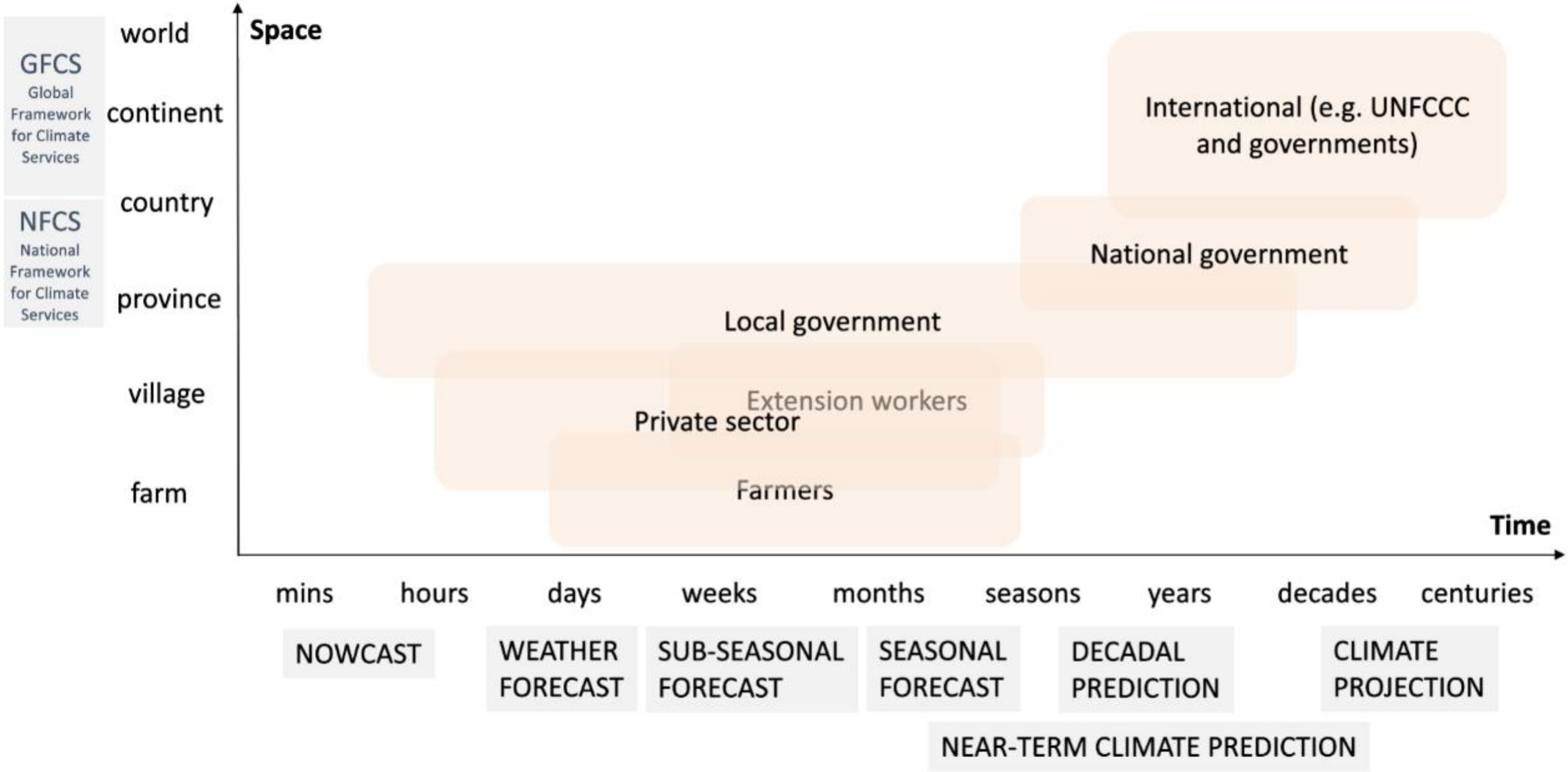
Agricultural Climate Services – Temporal and Spatial Scales



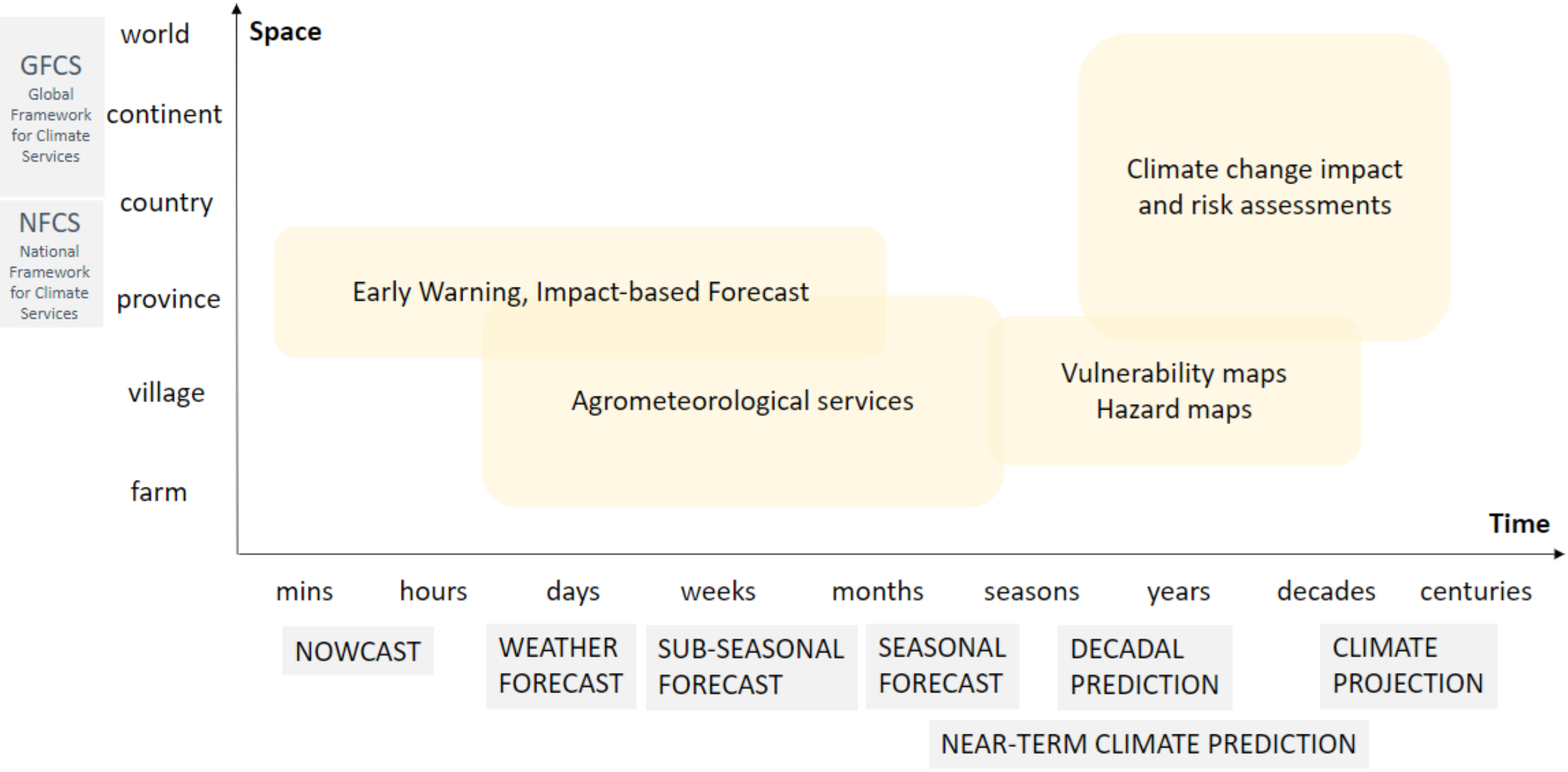
Agricultural Climate Services – Climatic Hazards



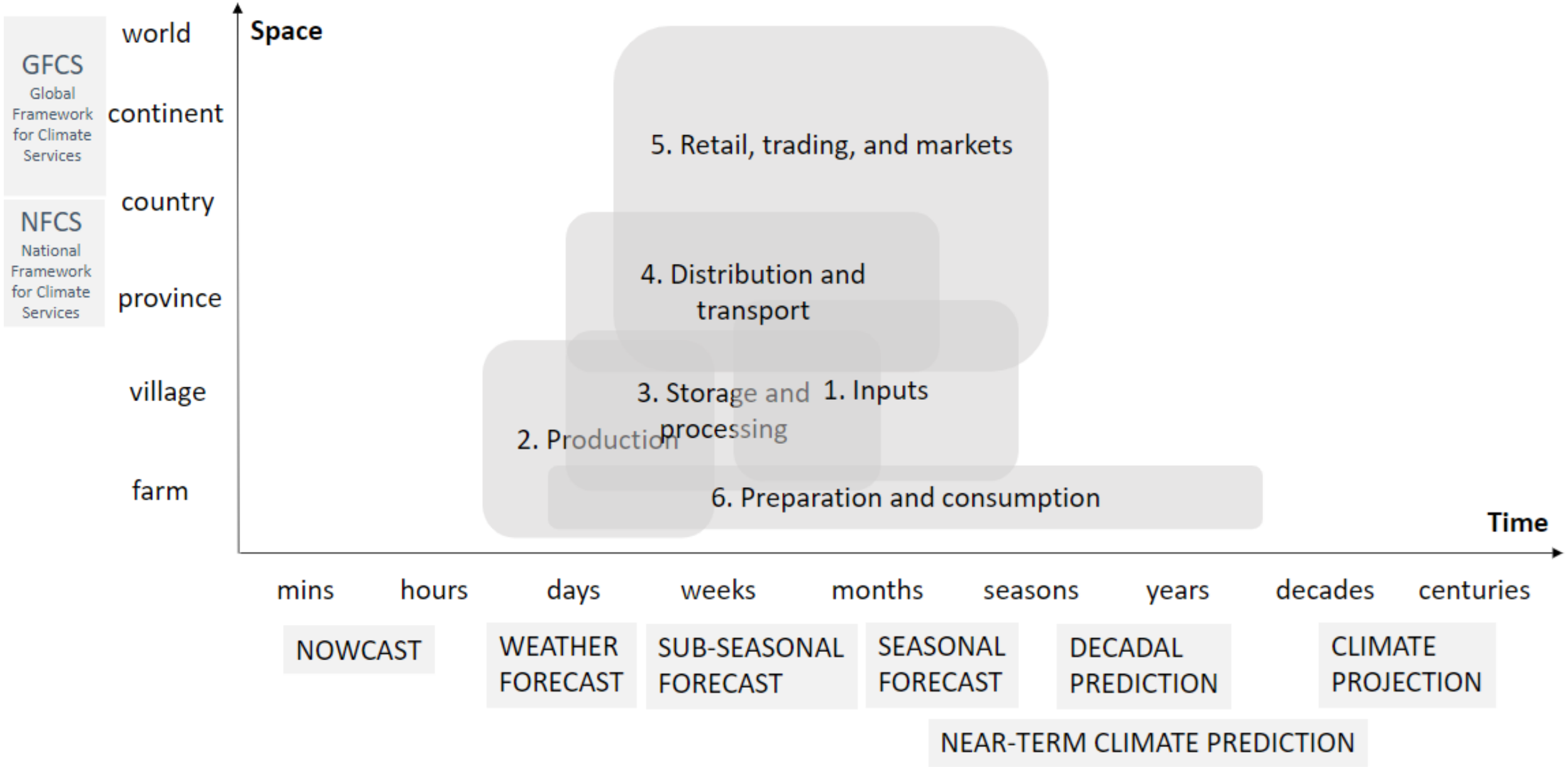
Agricultural Climate Services – Users



Agricultural Climate Services – Types of Services



Agricultural Climate Services – Value Chain



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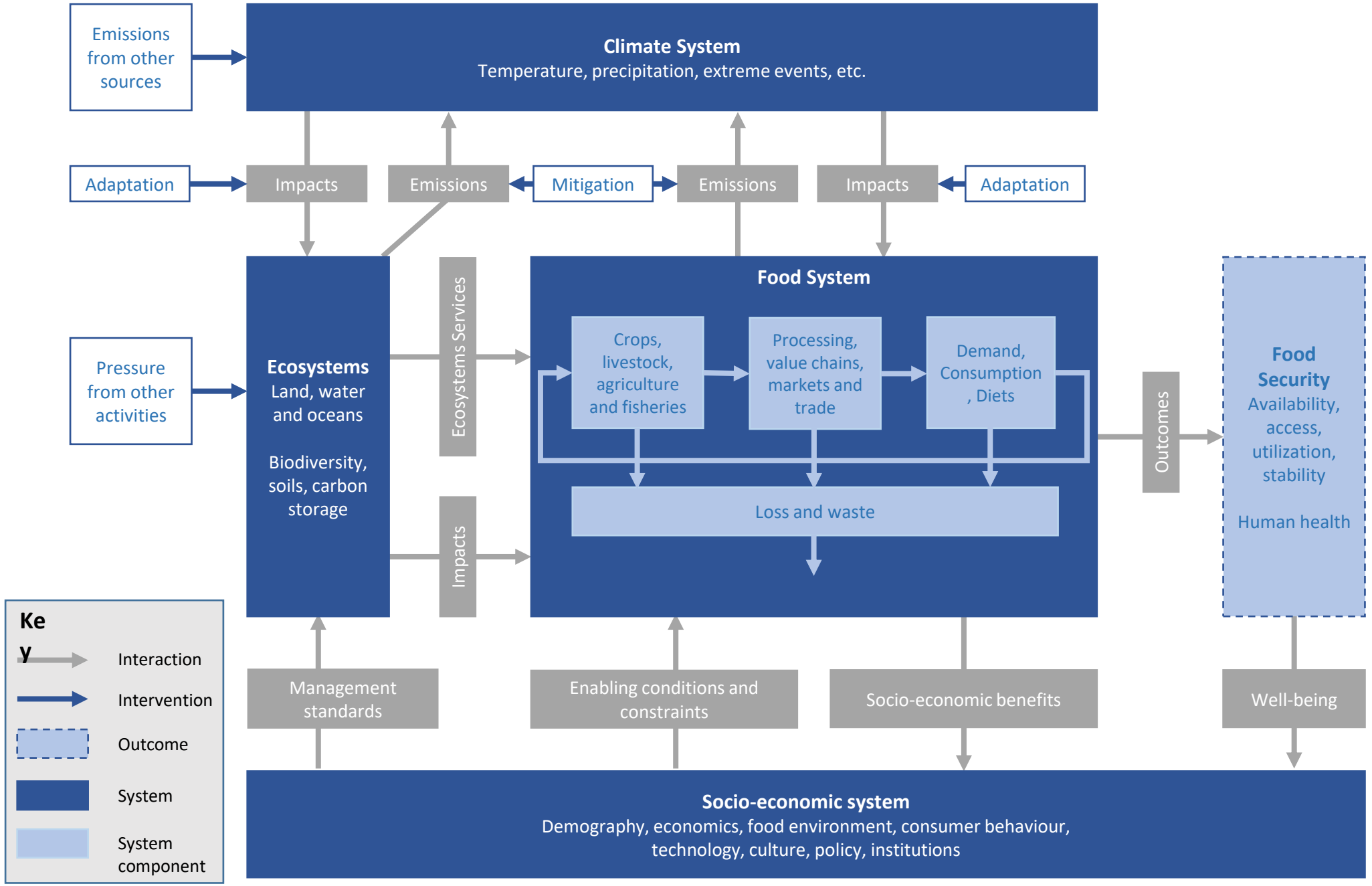
Best Practices on Agromet and Climate Information Services: A Regional Investment Roadmap for Agricultural Climate Services

Concepts *for transformational agricultural climate services*

Climate-services needs in agrifood systems

- Climate change results in a range of shocks to agrifood systems that will differ in frequency and extremity over space and time
- Climate resilient agrifood systems address these risks by encouraging action to:
  - 1) Anticipate, absorb and accommodate shocks resulting from climate variability and change; and
  - 2) Minimize future risks through measures that can deliver adaptation and mitigation co-benefits
- Challenges to action relate to uncertainty and complexity in anticipating impacts

Unpacking the agrifood system and its relationship to climate



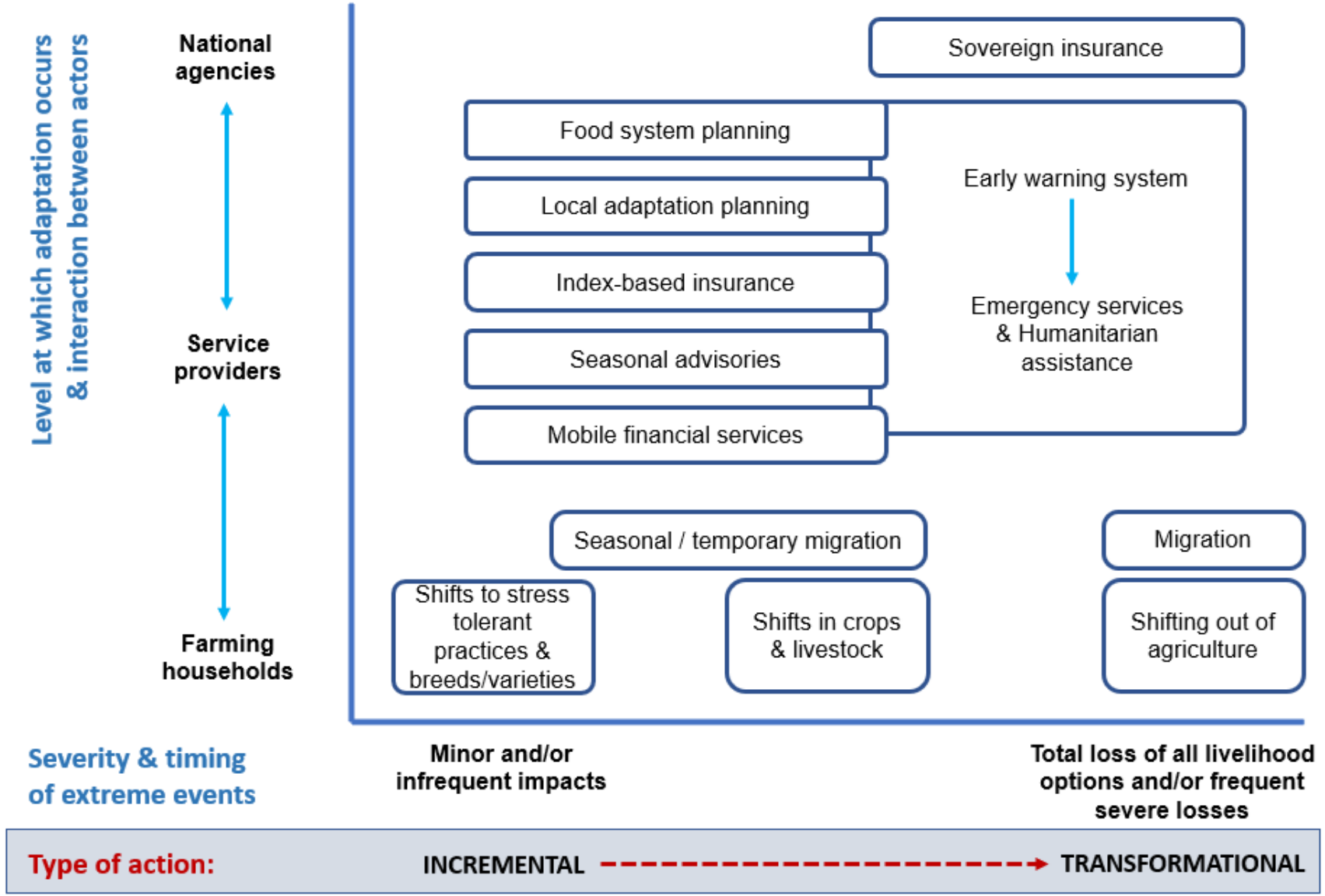
Source: Adapted from IPCC, 2019

Approximate time horizons of decision-making in the agrifood system

* Note - Approximate logarithmic time scale

Source: Nissan et al , 2018

Conceptual elements of climate-resilient agrifood systems



Source: Adapted from Loboguerrero et al, 2018

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Example rationale for investment in ACS - GCF

Paradigm shifting pathway	Transformational plannign & programming	Catalyzing climate innovation	Mobilizing finance at scale	Coalitions & knowledge to scale-up success
Facilitating climate informed advisory & risk management services	- Understanding needs & identifying gaps for information, advisory & extension systems - Co-designing delivery systems to meet users' needs	- Developing & testing new business models for insurance & social safety nets - Leveraging digital technologies for scale - Supporting incubation & acceleration of start-ups	- Engaging private sector ICT providers for PPPs - Blended finance - Technical assistance - Mobilizing funds through capital markets	- Regional & global platforms to promote learning - Replicating successful models - Promoting public awareness - M&E

Potential ACS investment packages

Investment package	Menu of investment actions
1.Inter-ministerial coordination	· Hardware (AWS, server management, cloud computing, etc.) · Institutions (data sharing agreements, standard operating procedures, technical working groups, etc.) · Innovative/improved agrometeo forecast methodologies 
2.Co-production of tailored agrometeorological advisories	 · Improved forecast production and uptake for farmers climate-resilient decision-making · Co-development of tool for off-farm actors along the value chain (input providers, market actors, insurances)
3.Reaching the last mile and participatory engagement	· Delivery mechanisms – apps, TV, social media, loudspeakers · Communication mechanism impact assessment, feedback from users, benchmarking · Anticipatory actions 
4.Climate-informed planning and risk assessment	 · Identify risks, needs, and networks for development plans · Investment opportunities, climate-informed innovation, socio-territorial assessments and impact studies · Applied development research (crop varieties, seed system development, livestock health planning) · Foresight assessment
5.Climate-informed long-term actions	· Planning and policy preparation · Institution development (data sharing agreements, standard operating procedures, etc.) · Long term strategies and national investments · Foresight assessment · Regional learning 

Concept for an agricultural services investment roadmap

- Broaden scope of ACS to include agrifood systems
- Acknowledge the important role that ACS plays in informing and facilitating policy
- Work with partnerships and coalitions at national and regional levels to deliver results for wide range of beneficiaries
- Develop business models to draw in investment from multiple sources and navigating the frameworks of multiple implementation options
- Create standardized, tailorable investment packages which can fulfill the needs of numerous users, at multiple scales and time frames

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Best Practices on Agromet and Climate Information Services: A Regional Investment Roadmap for Agricultural Climate Services

Inspirations *for transformational agricultural climate services*

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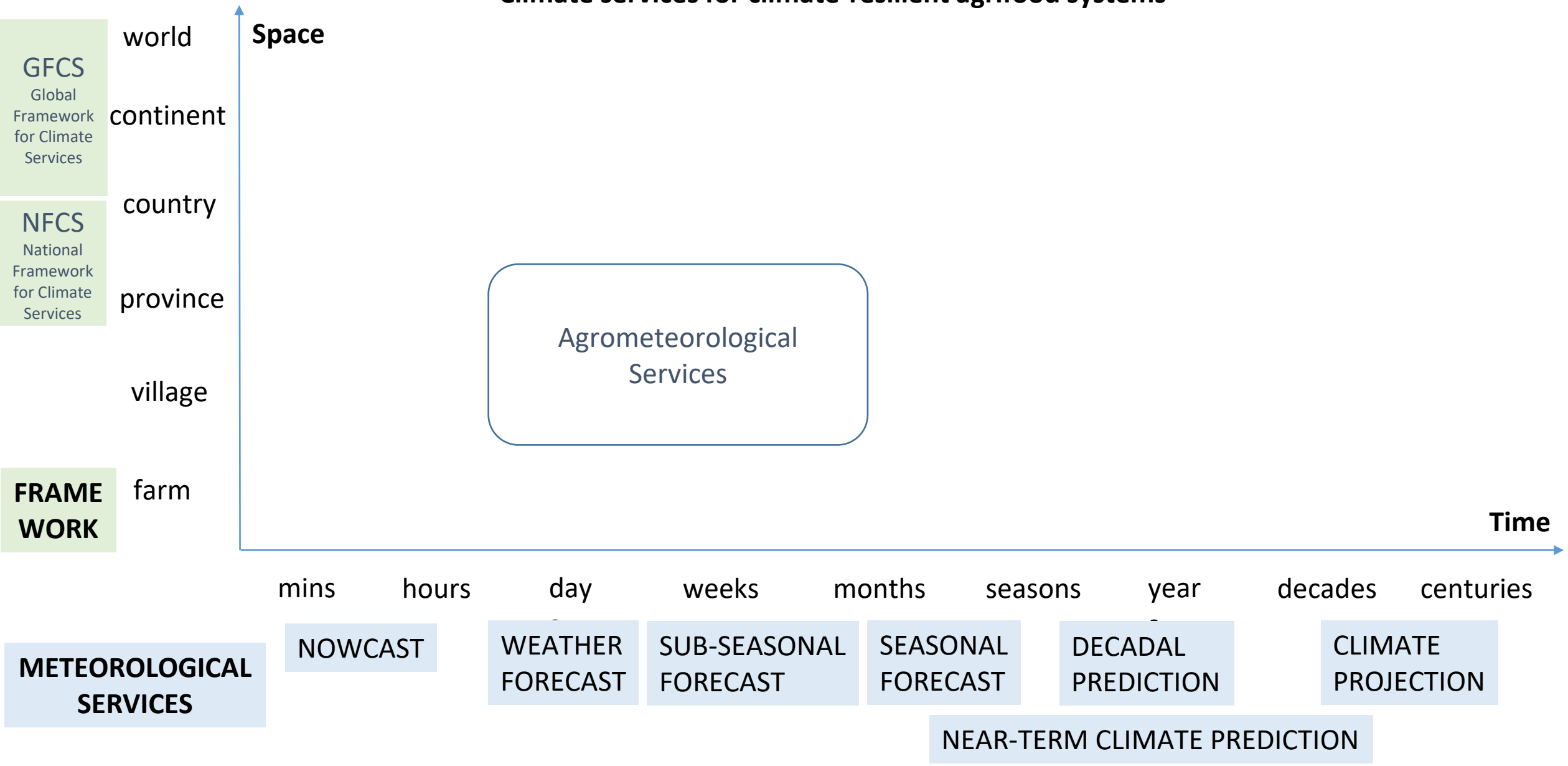
LaCSA, crop variety planning and P&D (Laos)
Storymaps (Laos)
Climate risk mapping (expert based) (Laos and Vietnam)
Communal use of pastural resources (various countries)
Animal Health (Mongolia)
Modelling carbon offsetting

Inspirations for transformational agricultural climate services

Climate services for climate-resilient agrifood systems



Laos Climate Services for Agriculture (LaCSA)

A transformational national data system

Real time weather and agronomical data collection

Automatic system for bulletin production

Distribution of information through multiple methods

> 100.000 beneficiaries in the first 3 years

Daily tactical decision
Weekly bulletin - district

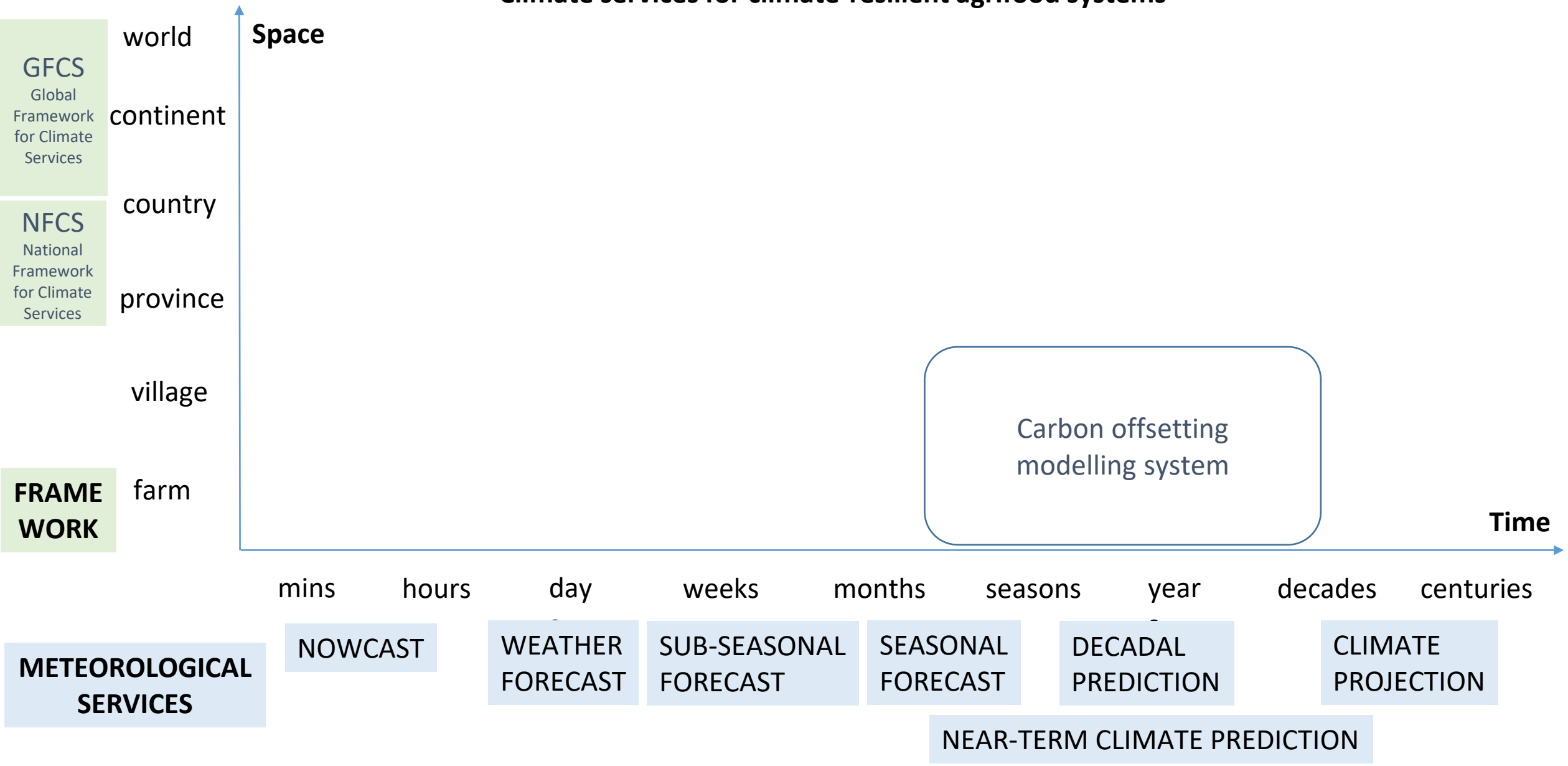
Seasonal strategic decisions
Monthly bulletin - province

Behavior change (CIAT study)

85 %	Change/adjust farm practices
76 %	Use of improved crop varieties
65 %	Shifts in planting date
40 %	Change in water management

Vision: better prediction through machine learning

Climate services for climate-resilient agrifood systems



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Pioneering grassland carbon monitoring

Climate services for monitoring carbon offsetting, Kenya

Cost-efficient monitoring system, does not require visit

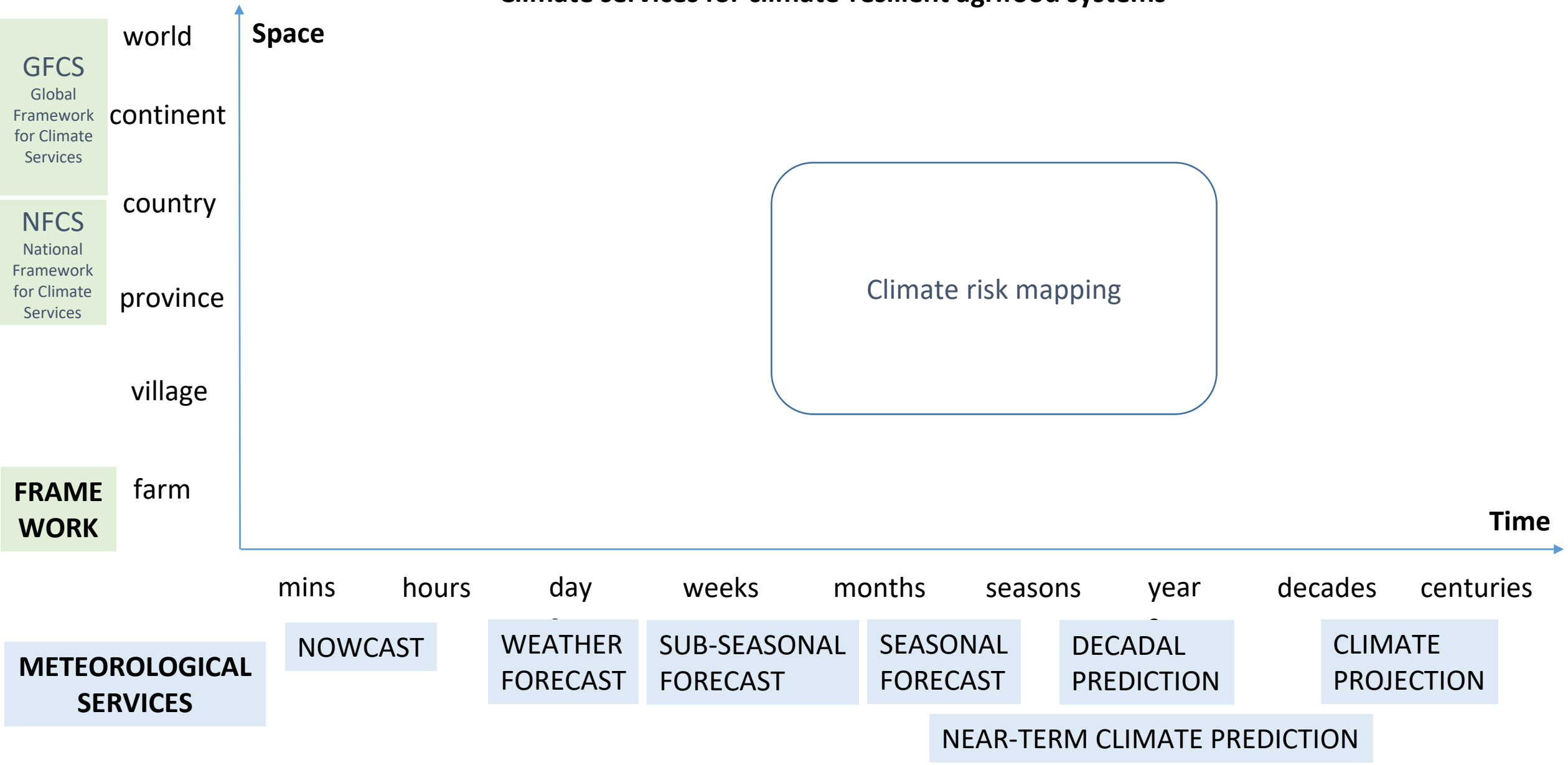
Combat global warming providing income to local populations

Higher pasture quality, prevents livestock losses

Better transhumance management, less conflicts

Vision: Forward looking business model

Climate services for climate-resilient agrifood systems



Seasonal risk mapping
Analysis of the present and past, actions for the future

Vision:
Seasonal planning based on risk
Coordinated preparatory actions

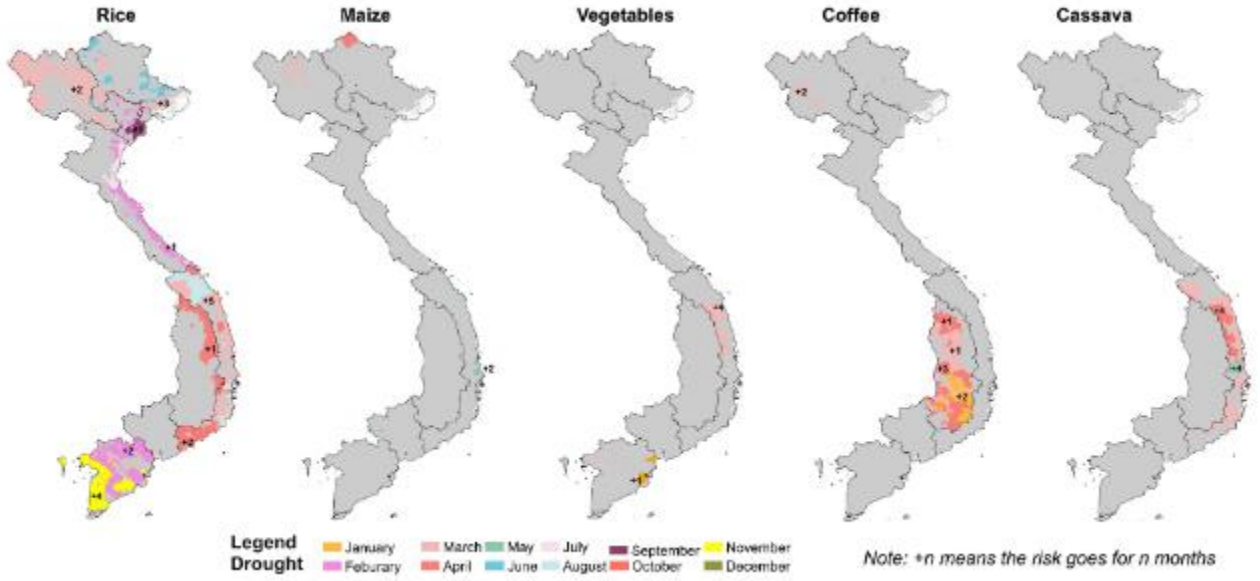
Detailed description of the risk

Assessment of farmer vulnerability and capacity to cope

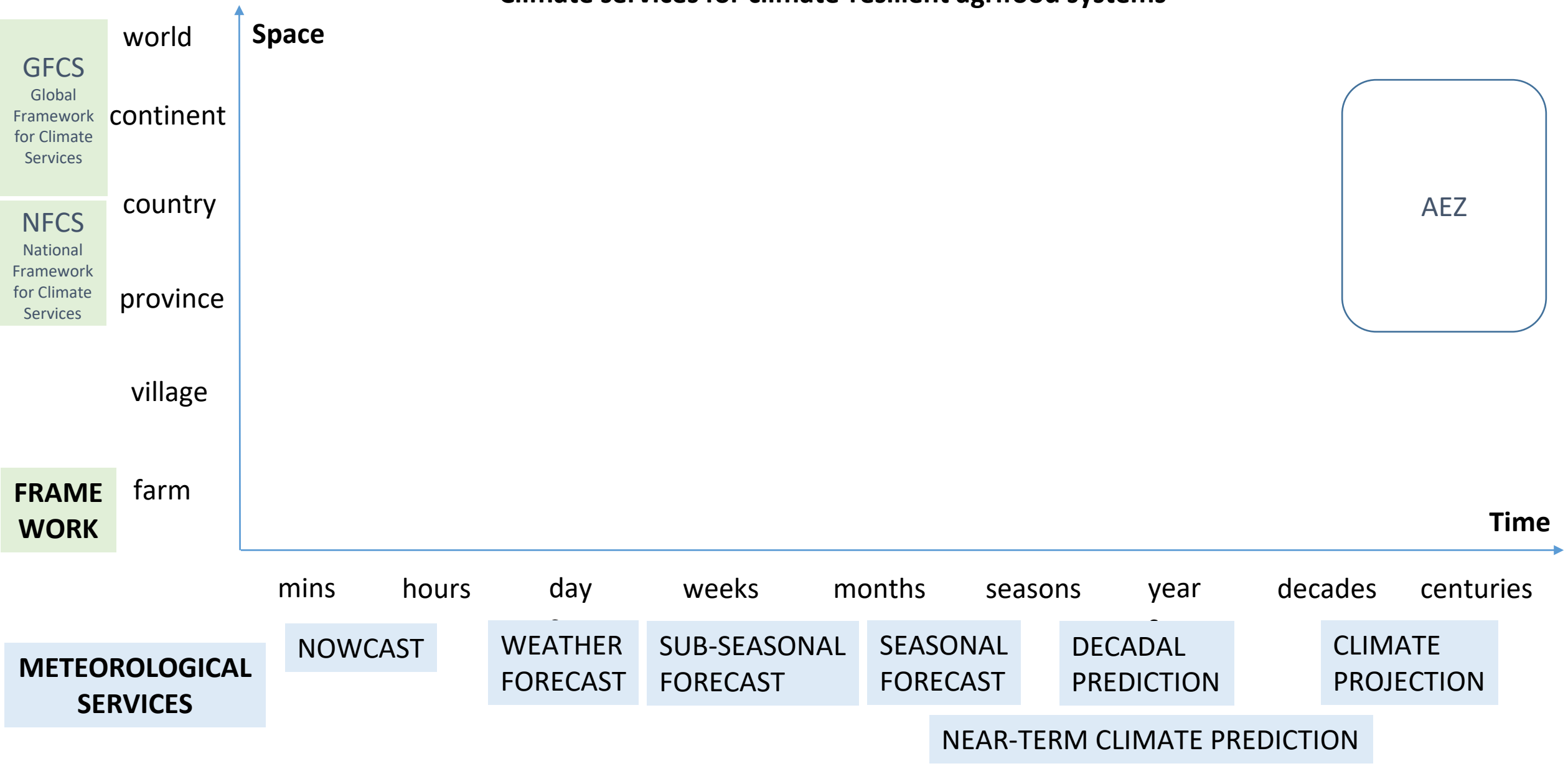
Multi-scale, can be country, province, village… and

expert based, does not need too much data

Allow informed planning



Climate services for climate-resilient agrifood systems



Future informed policy and decision-makers

Open access adaptive resilient plans

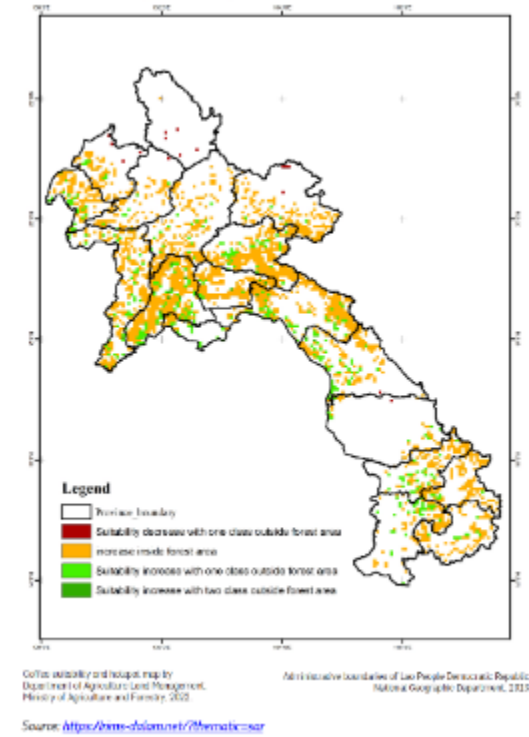
AEZ allows to study multiple production future (i.e. Changing of suitability) → thousands of maps

Understanding the meaning of future crop scenarios can be cumbersome.

Storymaps are in-depth analysis of the current state of maize, cassava, coffee and banana production, as well as projections of future developments of the agricultural system. The policy recommendations and advised actions in the document can help policy makers to establish a resilient future-proof production system

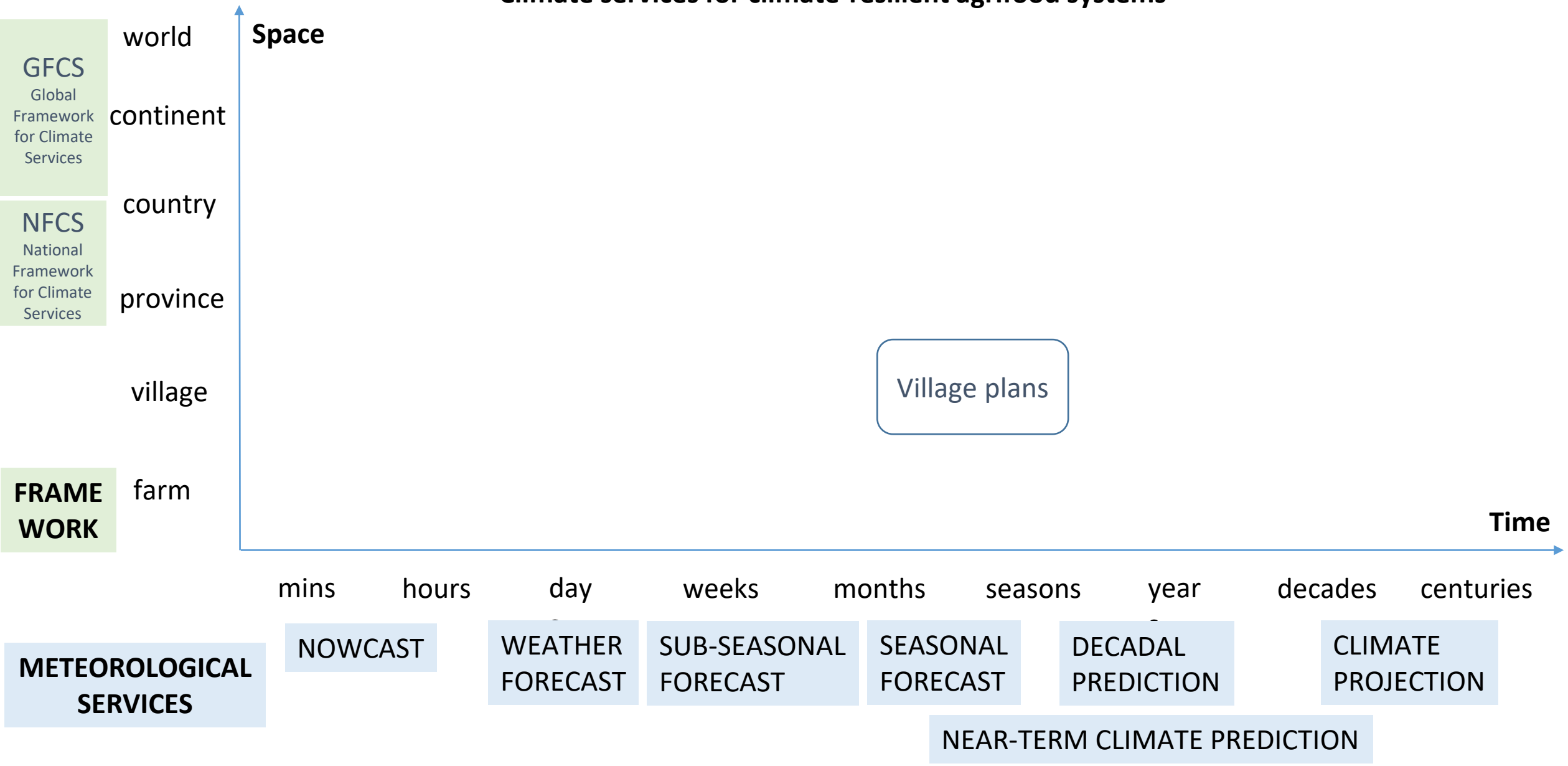
The example of Laos

- **scanning the horizon for CC related productivity changes**
- **analysing food and cropping systems trends**
- **developing multiple plausible scenarios**
- **reveal and discuss useful ideas about the future**
- **provide a narrative to decision-makers**



Vision: future informed policies

Climate services for climate-resilient agrifood systems



Prioritize the vulnerable

From the local to the national level, Nepal

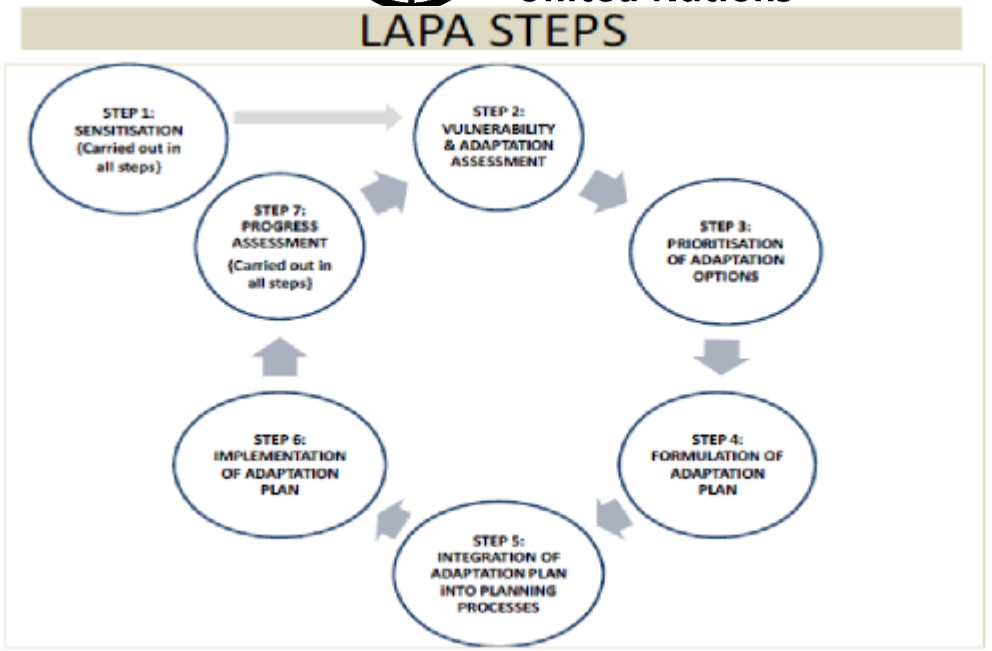
Food and Agriculture Organization of the United Nations

Easy to use, village level participatory plans

Detailed understanding of local vulnerability

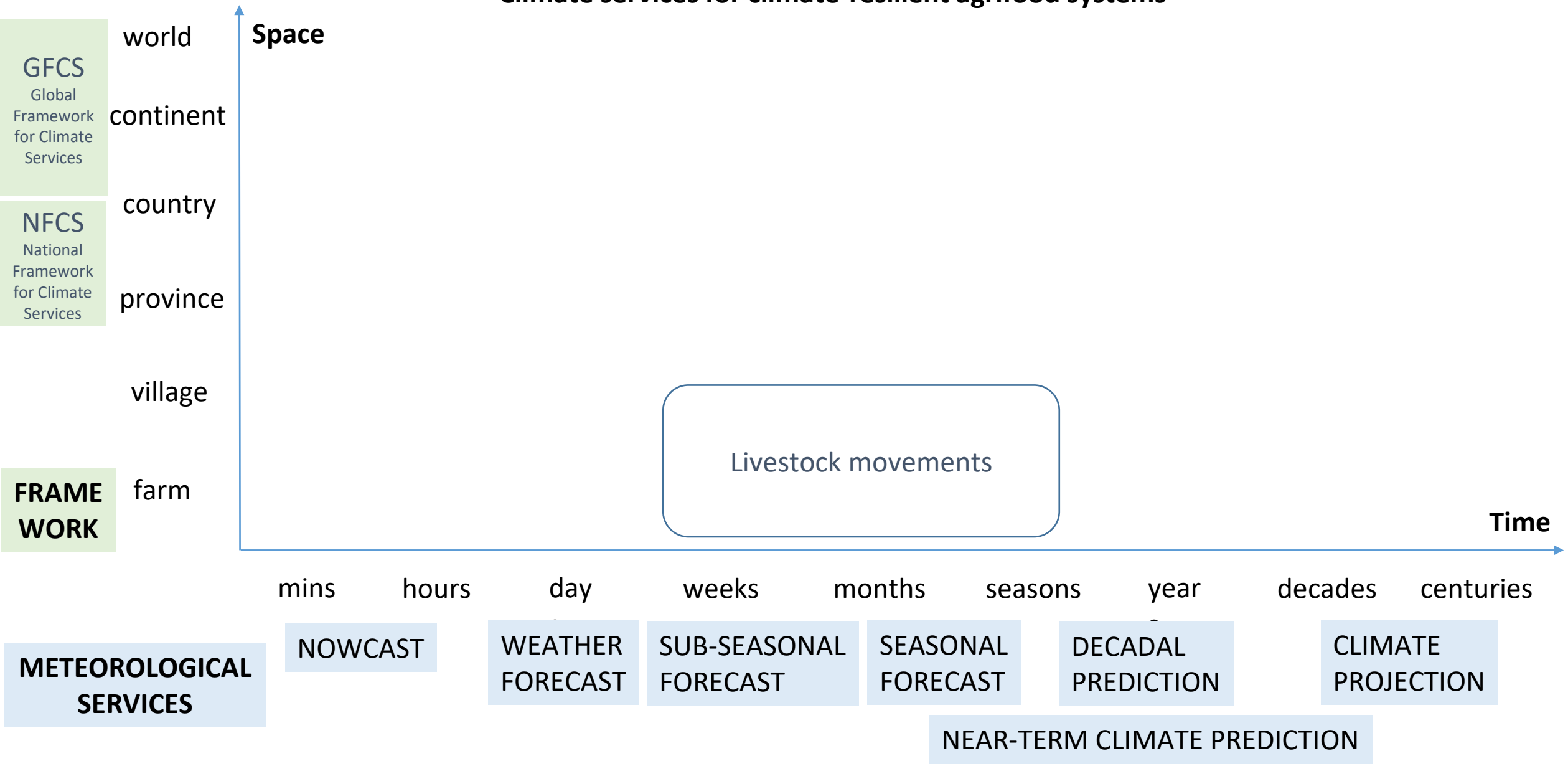
Strategic long term vision for the village, and reduction of conflicts

Climate political integration process can help scaling up



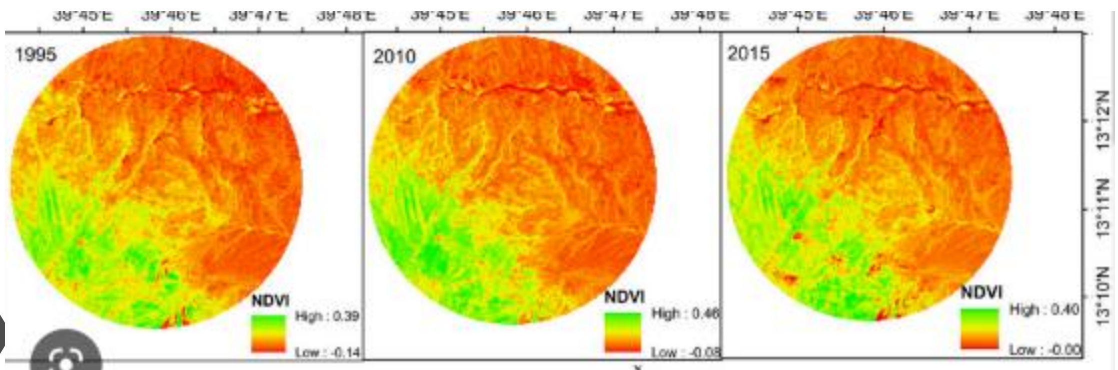
Vision: expert based local decision bottom up influence

Climate services for climate-resilient agrifood systems

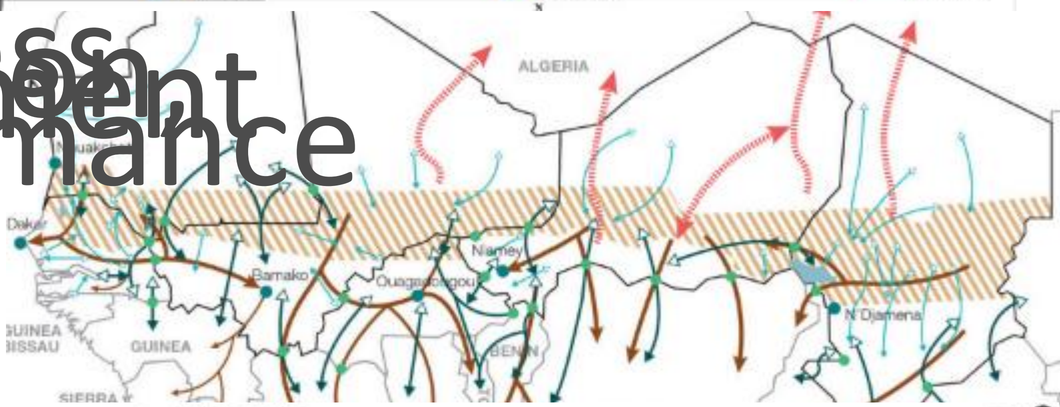


Animal feeding and transhumance pattern

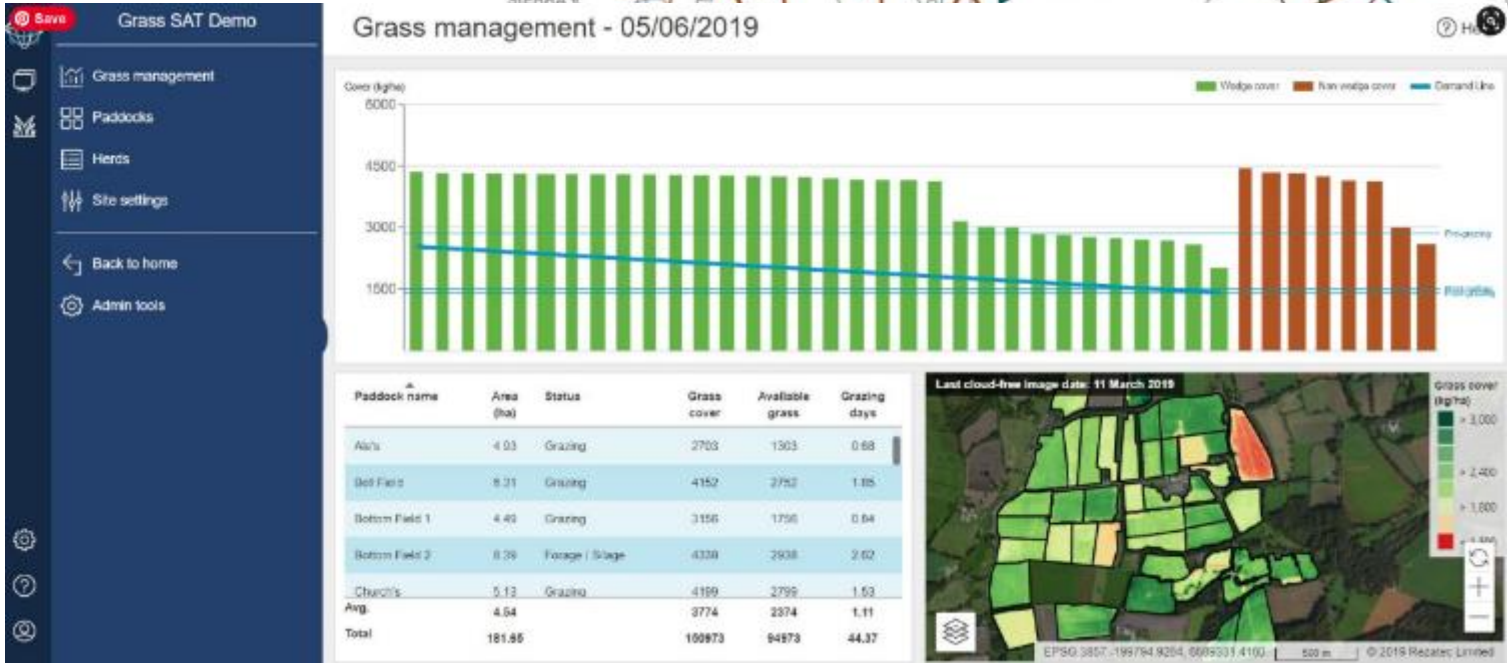
Satellite driven grazing



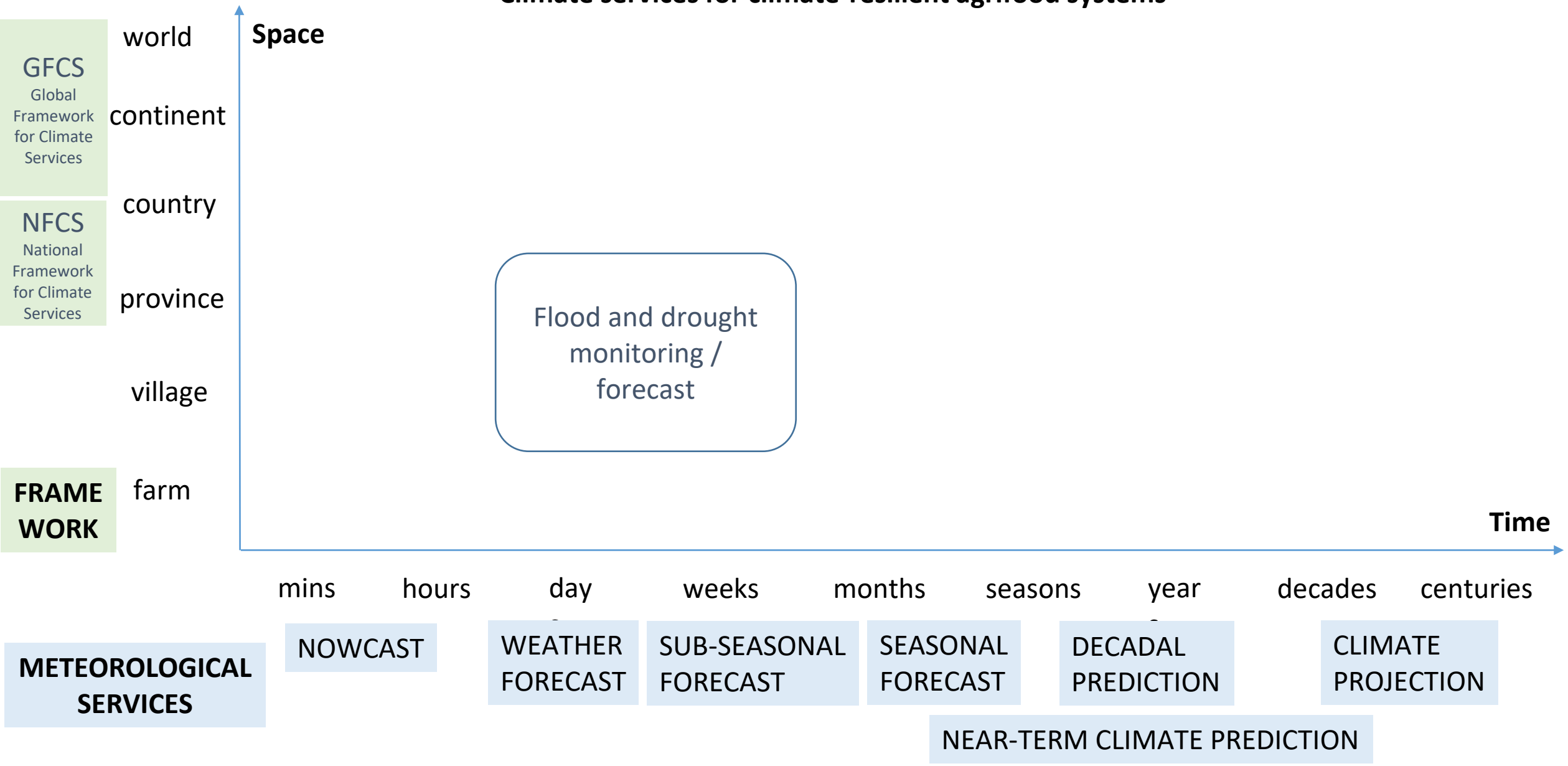
No need to go out to ex…
Better pasture quality, less
… plan transhumance
movements
Reduction of conflicts
Better business decision



Vision:
Sustaining marginalized population in transhumance as a driving force for social change



Climate services for climate-resilient agrifood systems



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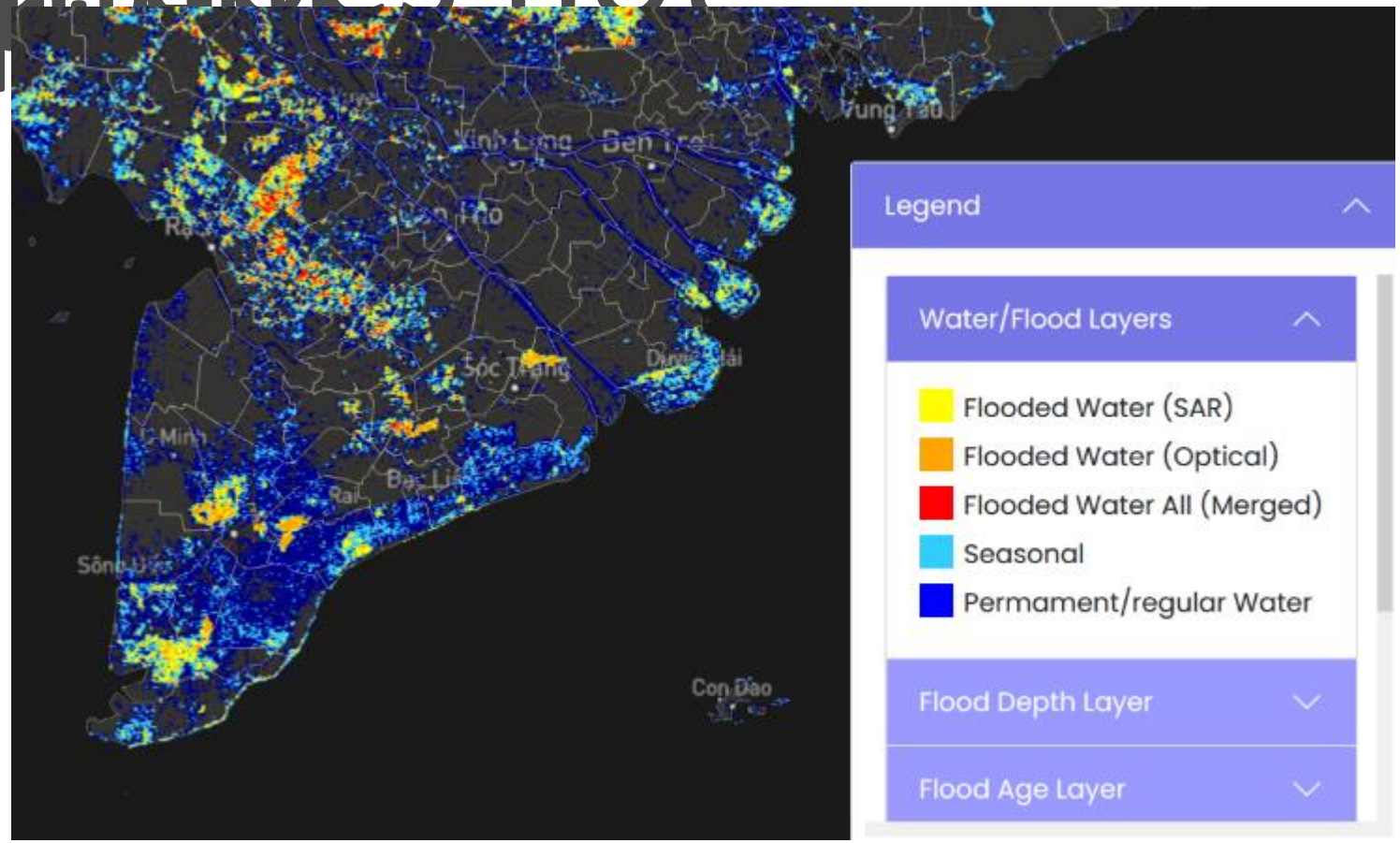
Mekong scale flood monitoring system

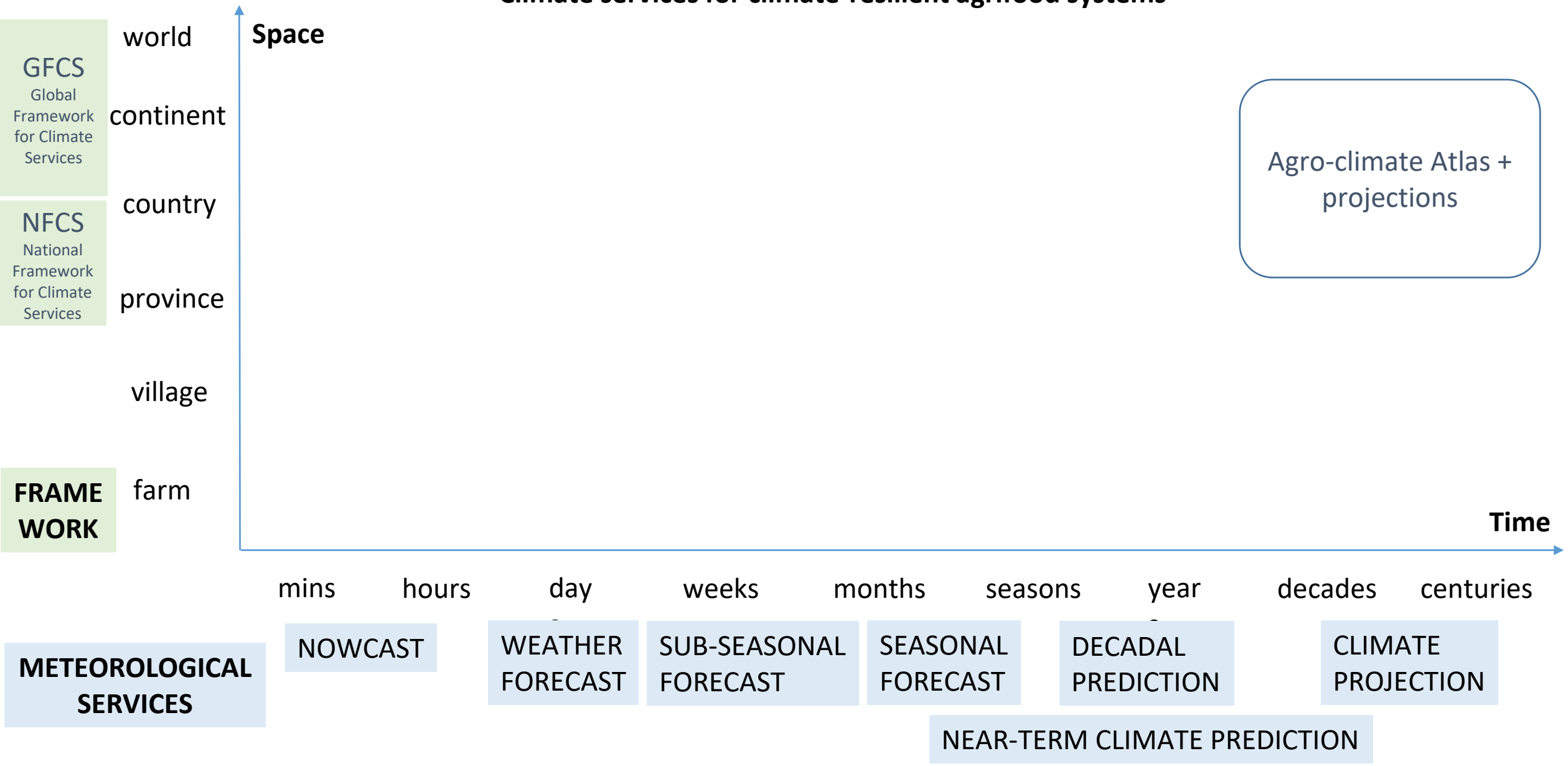
AI enabled information system

Publicly available web-based flood information at the Mekong scale does not support cooperation

Vision:
Better cooperation at the Mekong scale



Climate services for climate-resilient agrifood systems



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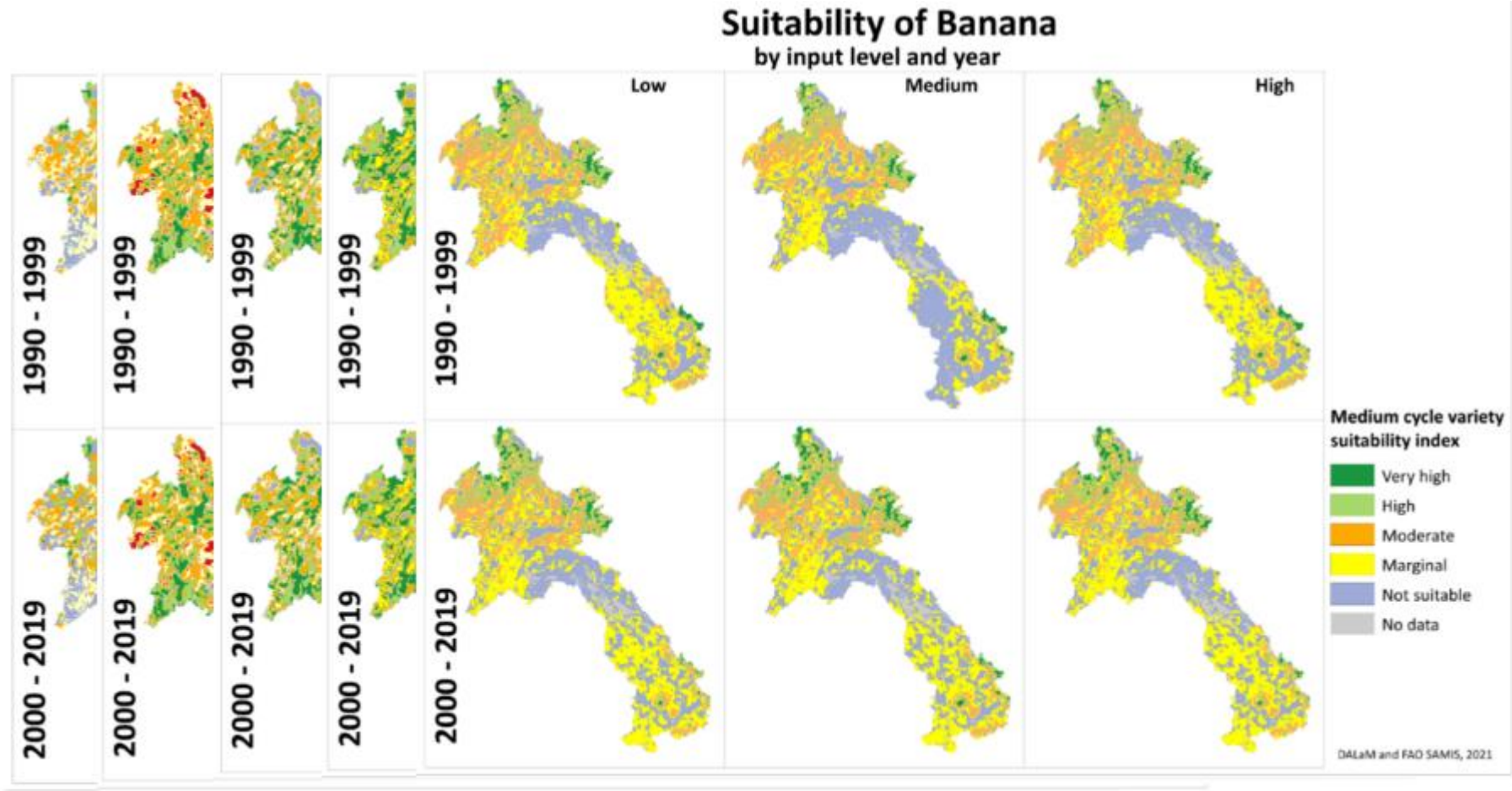
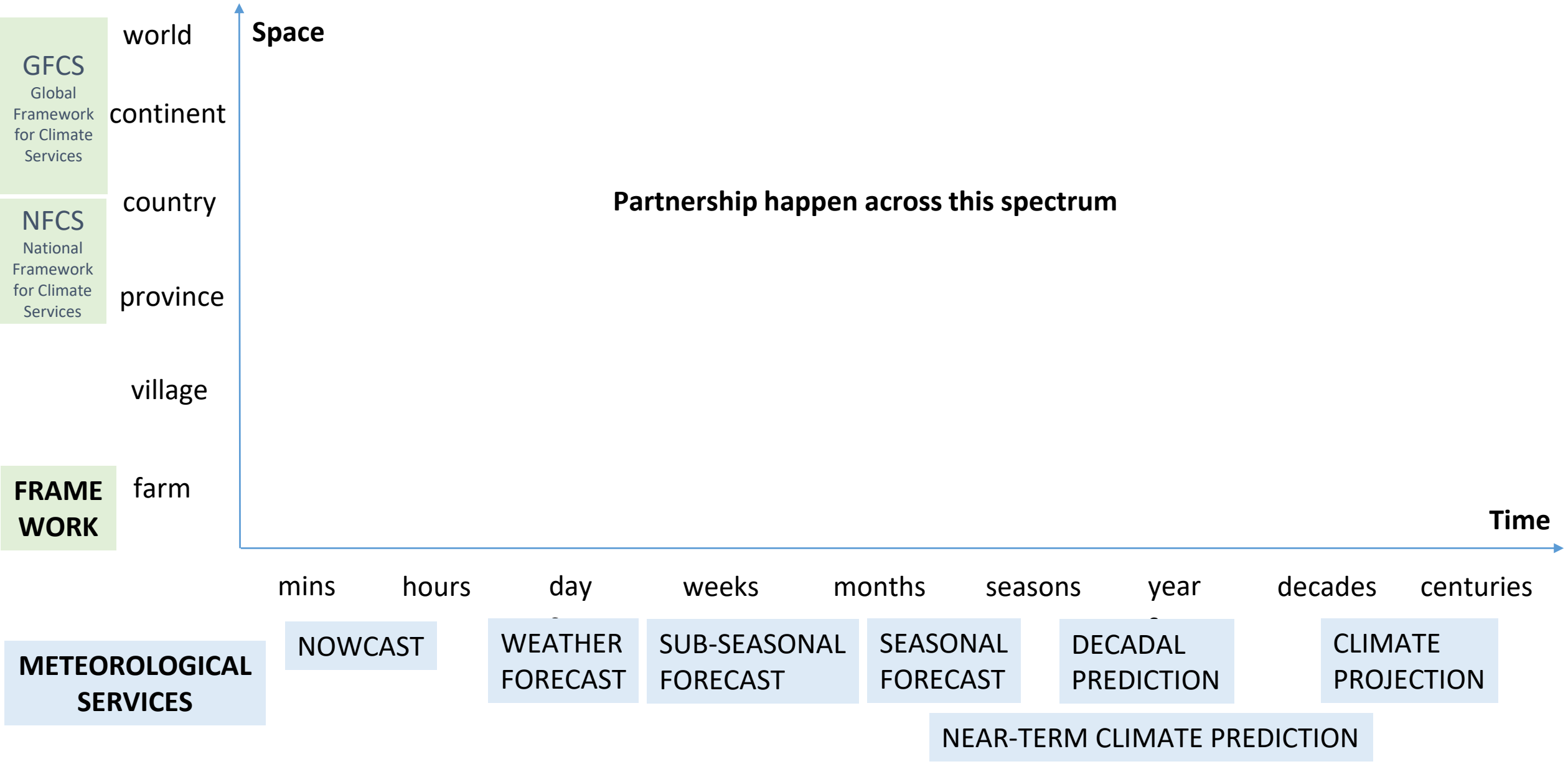
User-friendly python for regional modelling

Old model, now tool

- The software is designed bas government capacities and r
- Scalable national modelling t used at the regional and glob model
- Starting from SAMIS experie become a global tool



Vision: Regional foresight based on the future of climate


GFCS
Global Framework for Climate Services
NFCS
National Framework for Climate Services
FRAME WORK
world
continent
country
province
village
farm
Space
Partnership happen across this spectrum
Time
mins
hours
day
weeks
months
seasons
year
decades
centuries
METEOROLOGICAL SERVICES
NOWCAST
WEATHER FORECAST
SUB-SEASONAL FORECAST
SEASONAL FORECAST
DECADAL PREDICTION
CLIMATE PROJECTION
NEAR-TERM CLIMATE PREDICTION

LAO PDR

Partnerships and private sector engagement for improved climate services

Public-Private Partnership for distribution of the Lao Climate Services for Agriculture to farmers (DMH MONRE Laos)

Food and Agriculture Organization of the United Nations

The Government of Lao PDR and FAO are developing the SAMIS2 project.

The project will allow accessing the LaCSA for free in the entire country.

Benefit for increased use throughout the various AEZ of the countries.

No.	Province	village	Population_2021	LTC_Sim Number	4G Coverage	
					Coverage cover Village %	Coverage Cover population %
1	Vientiane Capital	481	906,859	98.09%	99%	99%
2	Borikhamxay	303	303,794	61.77%	84%	88%
3	Bokeo	256	546,446	52.62%	55%	87%
4	Champasack	646	733,582	48.34%	83%	86%
5	Vientiane Province	434	450,475	51.99%	80%	86%
6	Xayaboury	432	411,893	56.97%	66%	73%
7	Khammuane	582	420,950	51.44%	61%	70%
8	Saravane	588	426,991	31.61%	60%	65%
9	Savanakhet	1,015	1,037,553	36.29%	51%	60%
10	Luangnamtha	364	192,392	44.53%	50%	59%
11	Xaysomboune	96	102,041	53.30%	46%	55%
12	Oudomxay	471	334,657	39.47%	42%	55%
13	Xienkhuang	485	261,686	51.30%	43%	53%
14	Sekong	201	124,570	49.69%	36%	53%
15	Luangprabang	753	459,189	55.20%	41%	51%
16	Attapeu	147	153,656	39.87%	37%	48%
17	Phongsaly	528	189,777	45.60%	27%	34%
18	Huaphanh	718	306,247	43.39%	25%	31%
		8,500	7,362,758	54.88%	64.05%	50.64%

Trace your product

Where does your coffee go?

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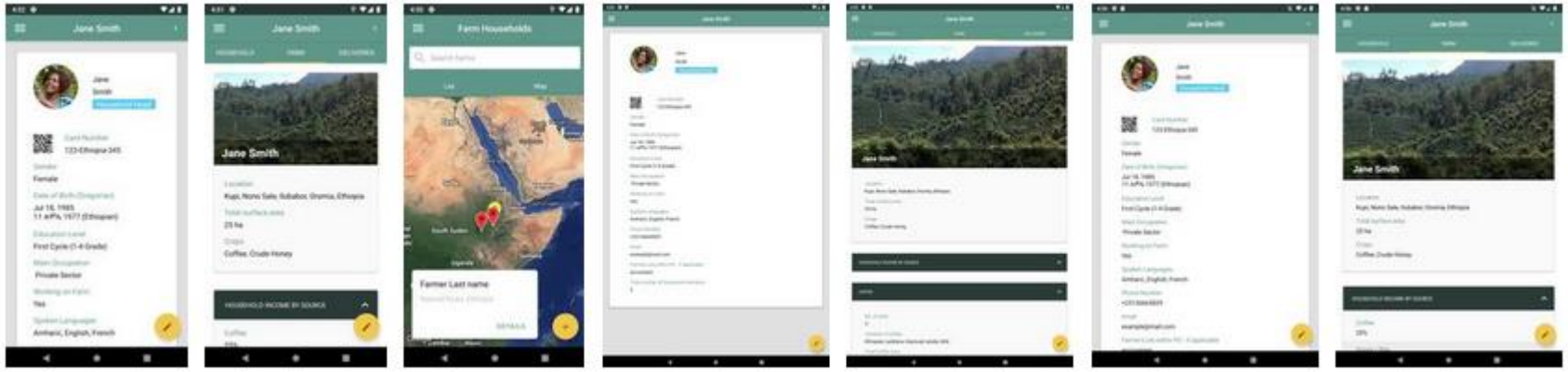
Registration of coffee production plot

Agro-advisory and recommendations based on season and weather

Registration and certification of the produce and successive traceability

Privately owned app

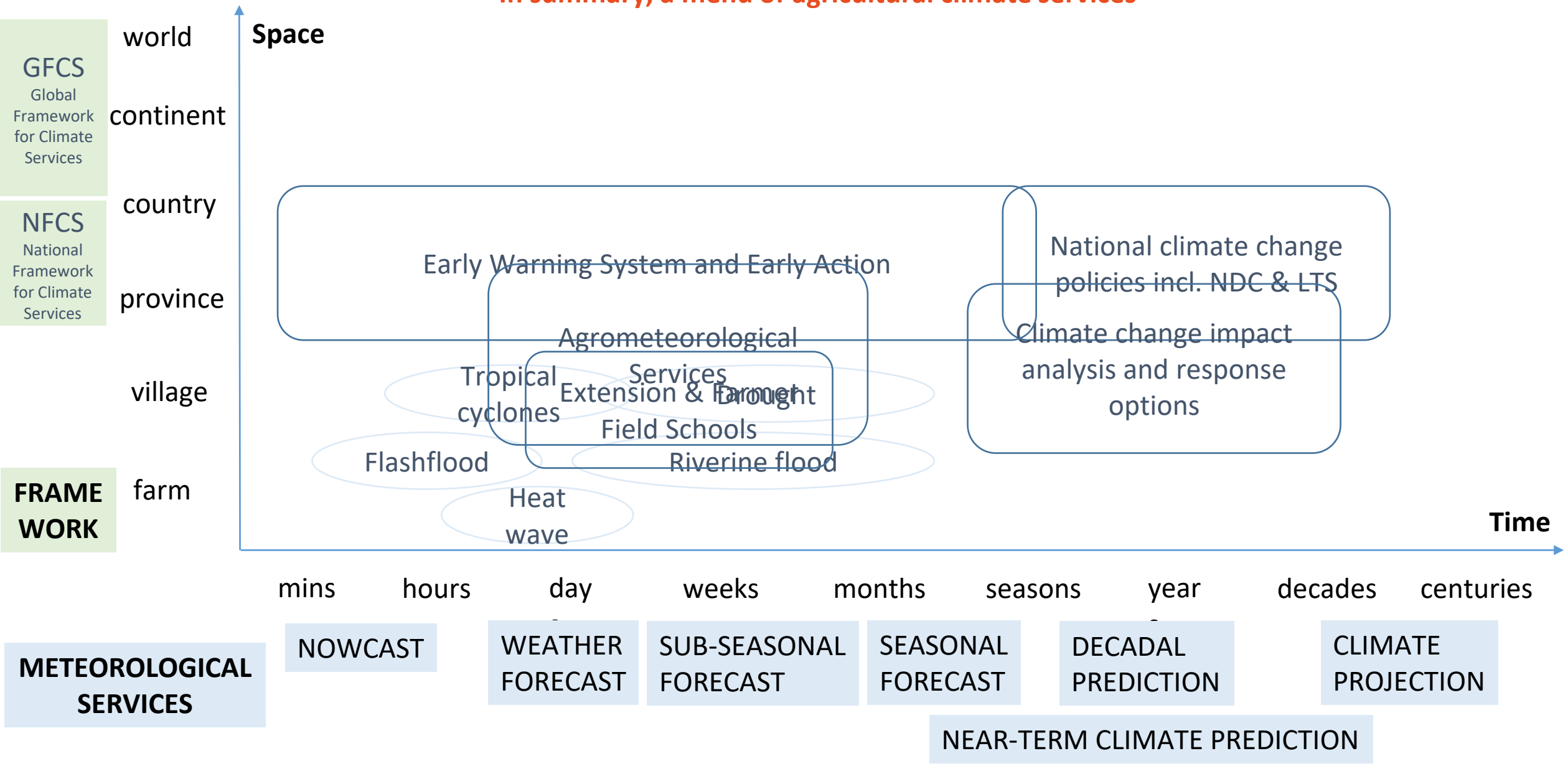
Ethiopia Farmer app



Support farmers by providing reccomandations

Business success linked to market

In summary, a menu of agricultural climate services



THE ROADMAP

Table of contents / outline

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Best Practices on Agromet and Climate Information Services: A Regional Investment Roadmap for Agricultural Climate Services

Guided group discussion

Two groups

One or two groups

- new investment proposals

(Malaysia, Vietnam, Thailand)

One group

- on additional requirement in top of present investments

(Philippines, Cambodia, Lao PDR)

Group discussion on ACS

1. for farmers and across multiple actors in the VC
2. for policy, planning over the long term
3. through partnership and collaborations

Working in teams, please reflect on the following:

Reflect on the examples that have been presented. What about the approaches impressed you? What are the approaches that should be adopted and/or scaled-up?

As a group, brainstorm ideas for an expanded set of climate services that would address the needs of a wider range of users across the full agrifood system? Are there already examples of these services elsewhere in the region or globally?

Group discussion

Brainstorm ideas for an expanded set of climate services

You have just stated your vision.
Let's say that you vision is for 2030.

Refine if necessary

Group discussion

What are there barriers that you will face to develop and deliver the types of agricultural climate services that appear in your vision?

Group discussion

What are the types of interventions do you would need to make your vision a reality? Think about specific:

- Capacities – Personnel? Education programs?
- Resources – Infrastructure? Equipment?
- Partnerships – To foster strengthened relationships between institutions? With private sector? With civil society?

Try to think about how much each intervention will cost?

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Best Practices on Agromet and Climate Information Services: A Regional Investment Roadmap for Agricultural Climate Services

Presentation by groups

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Best Practices on Agromet and Climate Information Services: A Regional Investment Roadmap for Agricultural Climate Services

Thanks

Session 4.A: A Regional Investment Roadmap for Agricultural Investment Services

Recap and next steps

Coffee/Tea Break

10.30-10.50

Session 4: 10.50-11.10

Potential use of agro-insurance in accessing loss and damage funds

Laura Blair
Cornell University

Session 4: 11.10-12.00

Regional Exchange – best practices, gaps and needs and untapped potentials on agro-insurance and agrometeorology

Caravan session

Julian Tost
GIZ

Representative
FAO and Philippine DA

Hang Thi Thanh Pham
FAO-RAP

Potential Use of Agri Insurance to Accessing Loss and Damage Funds

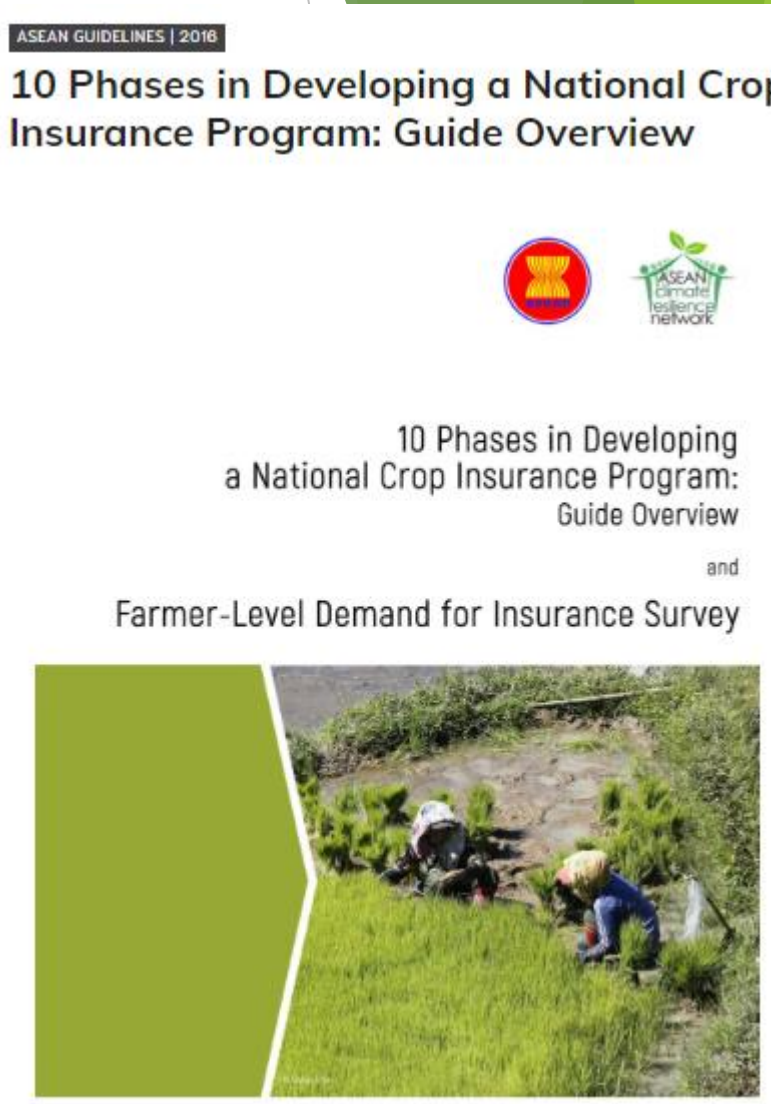
Laura Johnson Blair

ASEAN-CRN Knowledge Exchange

March 29, 2023

1. Involvement in Agri Insurance

- **Past**
  - Designed ASEAN Framework: *10 Phases in Developing a National Crop Insurance Program*
  - Moderator of *ASEAN-CRN Knowledge Exchange Event on Effective Policies for Promoting Agriculture Climate Insurance to Increase Resilience in ASEAN*
  - Author of *Agricultural Insurance – Promoting Climate Resilience*, in the ASEAN Guidelines on Promoting Climate Smart Agriculture (CSA)
  - Principal Advisor - Agri Insurance Solutions at Syngenta Foundation
  - Chief Development Officer - ACRE Africa (agri insurance intermediary)
- **Current**
  - Consultant to the **World Bank Group** to Assess the Impact of IFC's Agri Insurance Programs in Indonesia and the Philippines
  - Climate Change and Resilience Technical Advisor to **World Vision Ireland**



2. The Challenge and Insurance

Challenge and Awareness

- Unprecedented and increasing climate risks and volatility
- ASEAN particularly vulnerable and already impacted
- International acknowledgement of losses due to climate change
- COP27 commitment to establish a “Climate Change Loss and Damage Fund”

Agricultural and Climate Insurance

Goal – to transfer the risk from those impacted by climate risks (farmers, businesses, governments) to external sources who can provide and mobilize rapid compensation in response to climate losses

- Ongoing Regional Initiatives and National Programs
  - Southeast Asia Disaster Risk Insurance Facility, SEADRIF
  - ASEAN Disaster Risk Financing and Insurance Phase 2 (ADRFI-2) ‘plan of action’
  - National Government programs across ASEAN, World Bank/IFC supported initiatives, other donors

3. In Brief - Insurance Coverage

Target Beneficiary - receives insurance compensation

- Micro – for individual farmers
- Meso – for organizations, companies, district programs
- Macro – for whole country and regional

Scope of Coverage - how often the product pays

- Products can compensate at different triggers, amounts of loss
- Traditional products – trigger at 20-70% loss, upwards
- Catastrophic products – trigger at 70%+ loss
- The lower the loss threshold, higher the premium

4. In Brief - Risks to Insure and Distribution

Risks – covered causes of loss

- Weather – Drought, Erratic Rainfall, Excess Rain, Flooding, Typhoon
- Pest (including animals) and Diseases
- Market Price Fluctuations

Distribution – how to reach the farmer

- Directly to farmers, individual registration
- Through farmer groups
- Bundled with agricultural credit or inputs (seed, fertilizer)
- Linked to agricultural extension program
- National protection, linked to regions or countries, not specific farmers

5. In Brief - Index and Indemnity Products

Index (Parametric)

- Loss assessment based on external data source for an area (not individual farmer), priced on historical data, claims automatic, reduced moral hazard
- **Weather Index -** Automated Weather Station or Satellite rainfall data
- **Yield Index -** Field data collection (usually by government)
- **Vegetation Greenness Index -** NDVI imagery or Crop growth imaging
- **Soil Moisture** – moisture levels at a certain soil depth

Indemnity

- Loss assessment at field level for named risk, ideally priced on historical loss data, claims individually assessed

6. Using Insurance to Approximate Losses

- COP28 is deciding how the proposed "Loss and Damage Fund" will operate
- **Insurance Proxy** to Trigger Fund Payments:
  - Use the **principles of agri insurance as a mechanism to objectively quantity and report when there are severe, specific climate events, potentially without actually 'insuring' the risk**
  - Leverage index products to cover large areas and can trigger in events of drought or excess rain approximated by soil moisture levels during key growing season stages
  - Include risks most execrated by climate change, like extreme events tsunami, typhoon, cyclone
  - Data-linked risk "products" as a **proxy tool to facilitate more rapid new funds release** based on pre-agree triggers – **though potentially without working with insurance companies**
- Insurance to Build Climate Resilience:
  - Climate Financing for national/regional insurance program development from GCF and GEF, support upscaling climate resilience initiatives for vulnerable communities
- Needs to be investigated - scenarios tested in countries for specific climate risks – to assess viability and gauge ability to change typical insurance relationship
- **Goal to empower ASEAN with ideas and tools for COP28**

7. Discussion – Areas of Interest?

- Should agri insurance as a technical proxy tool be investigated to objectively access and claim for damage
- Interest in a revised “10 Phases Guide” for national agri insurance programs, including case studies on countries who have implemented
- Need for a new guide focused on “How To” accessing Climate Finance to deploy national agri insurance / climate risk programs from GCF, GEF, others
- Investigate ASEAN proposal for COP28 discussions - developing “index insurance type” monitoring to trigger “Climate Loss and Damage Fund” compensation

Laura Johnson Blair

Insurance *Climate Smart Agriculture* *Policy Strategy*

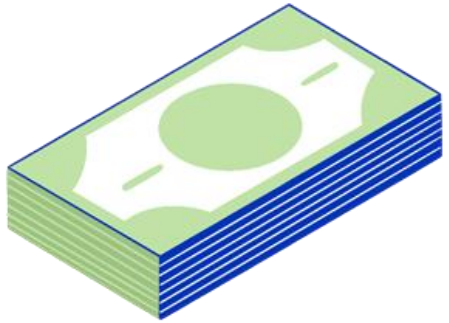
- LDJ3@cornell.edu
- LBlair1@ifc.org

Regional Exchange – Best practices, gaps and needs and untapped potentials on agro-insurance and agrometeorology

Caravan session

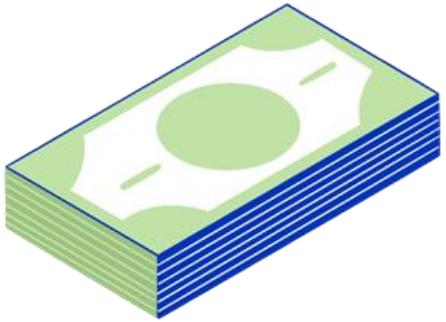
1. Participants are asked to split into 3 groups.
2. Each group will spend 12 minutes at each of the 3 stations. A countdown will be shown on screen. When time runs out, the moderator will ask the groups to move to the next station.
3. While at the 3 stations, participants will be engaged on the following topics:

Lunch



Session 5

Experiences with climate finance for agriculture and innovative approaches



Session 5: 13.00-14.30

Country experiences with (grant-based) climate finance for climate action in agriculture

- Introduction: Climate Finance
- Reflection on ASEAN country experience mobilizing climate finance for agriculture

Countries thriving for paradigm shift tapping into GEF, NAMA and GCF support

- Philippines
- Cambodia
- Thailand

Beau Damen, FAO and
Dr. Nana Kuenkel, GIZ TH

Dr. Mak Soeun, Cambodia
Dr. Alicia Ilaga, Philippines
Dr. Nana Kuenkel, GIZ TH

Climate finance

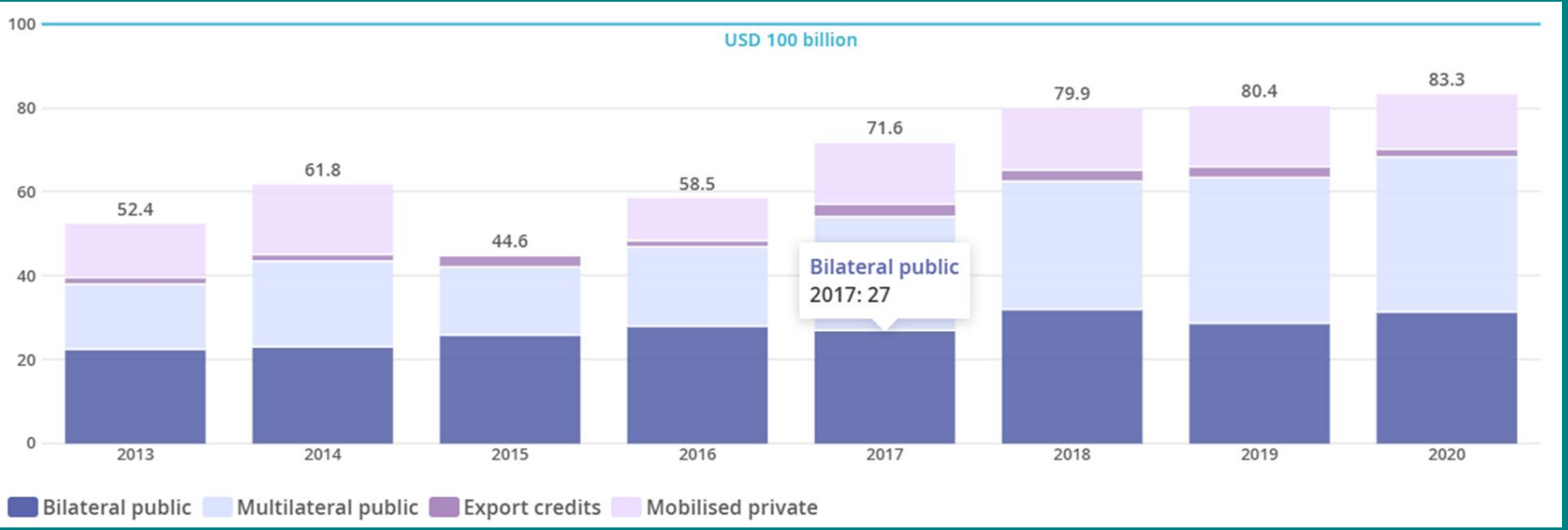
Beau Damen, FAO-RAP

- United Nations Framework Convention on Climate Change and its agreements: “climate finance is specifically mobilized to *help developing countries mitigate and adapt to the impacts of climate change.”*

- Developed countries committed to increasing climate finance to help developing countries to USD 100 billion annually by 2020 (COP 15 & COP 16).

Climate finance - OECD

Trends



Types covered:

- Bilateral public
- Multilateral public
- Climate-related export credits
- Private finance mobilized by public finance

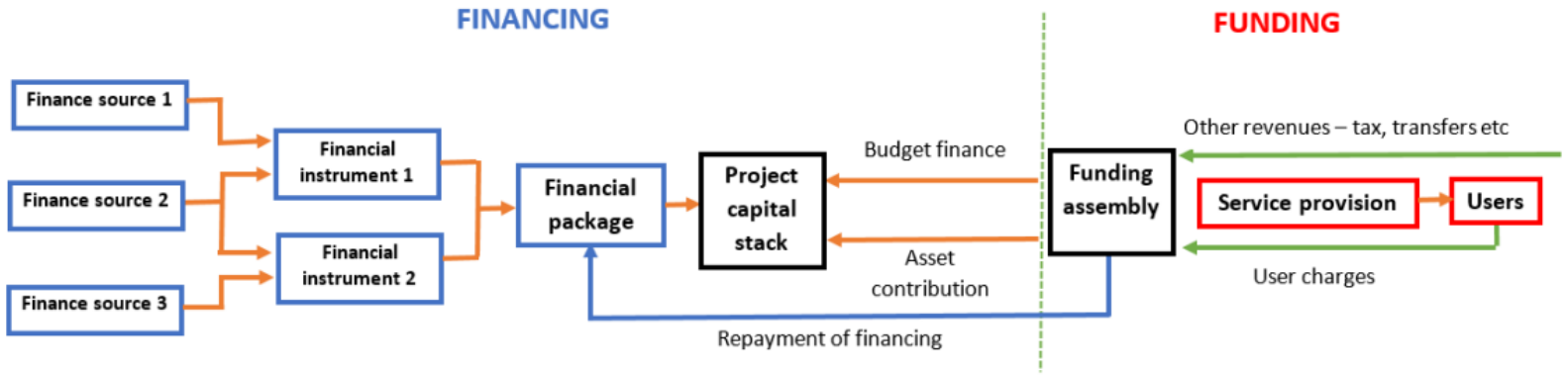
Figure - Climate finance provided and mobilised by developed countries, in USD billions

Source: OECD, 2022

Climate finance OECD – Take aways

- Climate finance for developing countries (USD 83.3 Billion) has increased over the past decade, but fallen short of USD100 Billion target
- Mitigation finance represent the majority (58% - USD 48.6 Billion)
- Adaptation finance (34% - USD 28.6 Billion) is growing and tends to focus more on water, agriculture and land-use
- Loan finance accounted for over 70% of finance (concessional and non-concessional)
- Asia was the main beneficiary (42%)

Broader climate finance essentials and assumptions



Example: Financing and funding urban infrastructure
Source: Adapted from Coalition for urban transitions, 2021

- Finance comes from a wide range of sources – not just public
- Funding is required for operations and maintenance
- **Fundamental assumptions** underpinning climate finance :
  - Investing in climate measures can be feasible and profitable or recover maintenance costs
  - Investing in climate measures reduces risks in the provision of essential services
- **Other assumptions** relate to additional benefits or impact that can be achieved from investing in climate action

Broader Climate finance

Trends

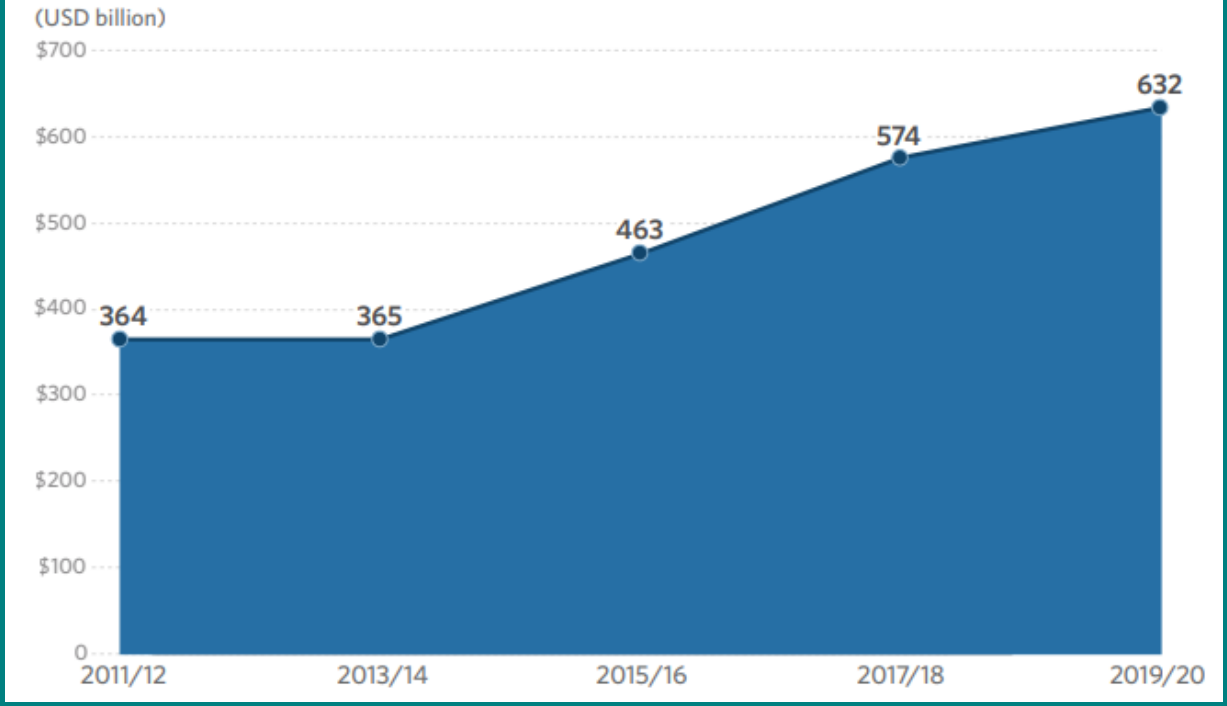


Figure - Global climate finance flows between 2011–2020, biennial averages (USD billion)

Source: CPI, 2021

Note: Data for 2020 is preliminary

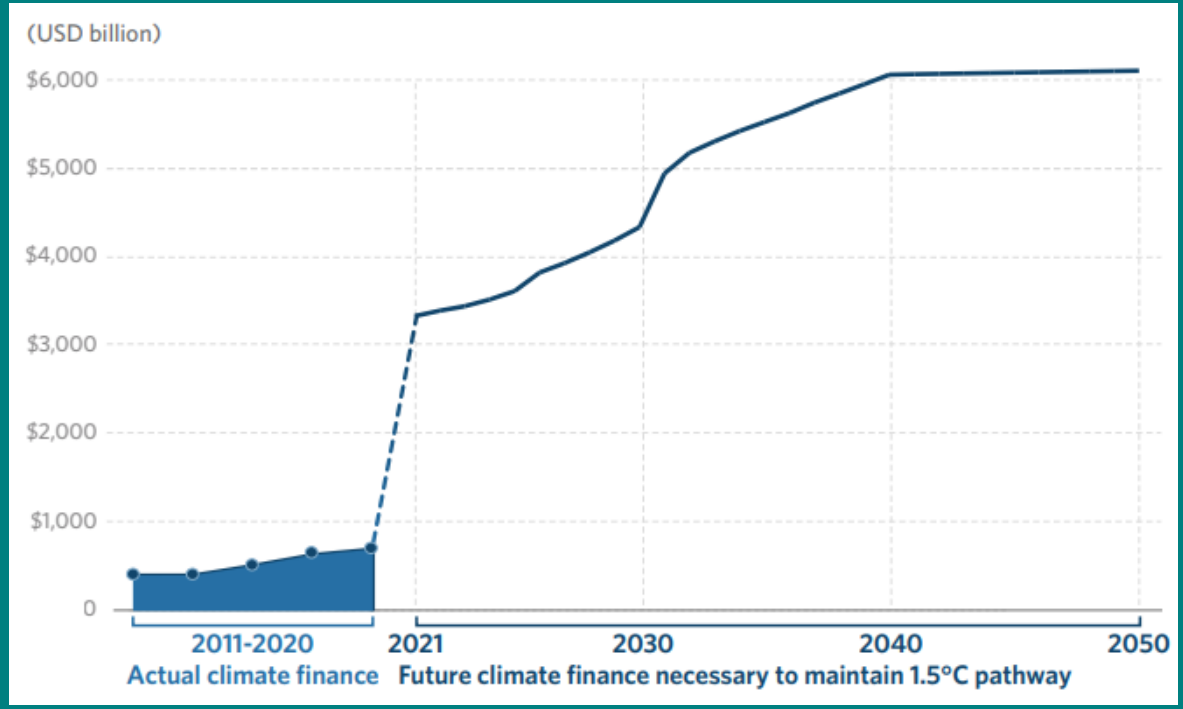


Figure - Global tracked climate finance flows and the average estimated annual climate investment need through 2050 for a 1.5 ºC pathway (USD billion)

Source: CPI, 2021

Broader Climate finance

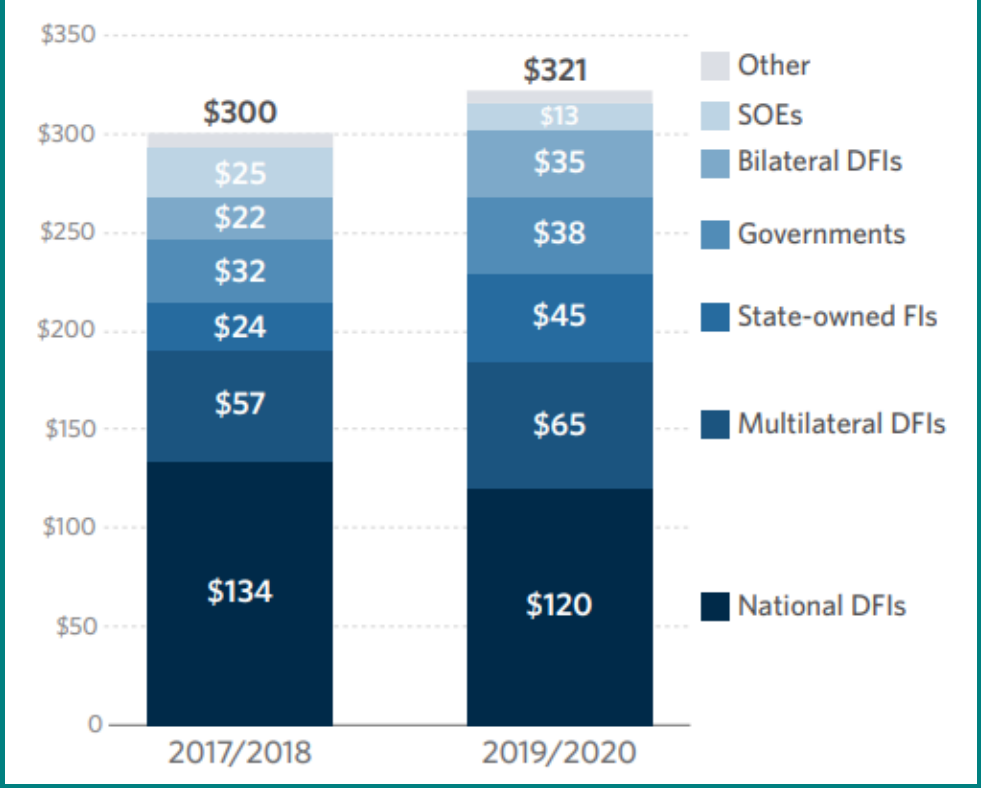


Figure - Climate finance by **public** sources in 2017-18 & 2019-20 (USD billion)
Source: CPI, 2021
Note: Data for 2020 is preliminary

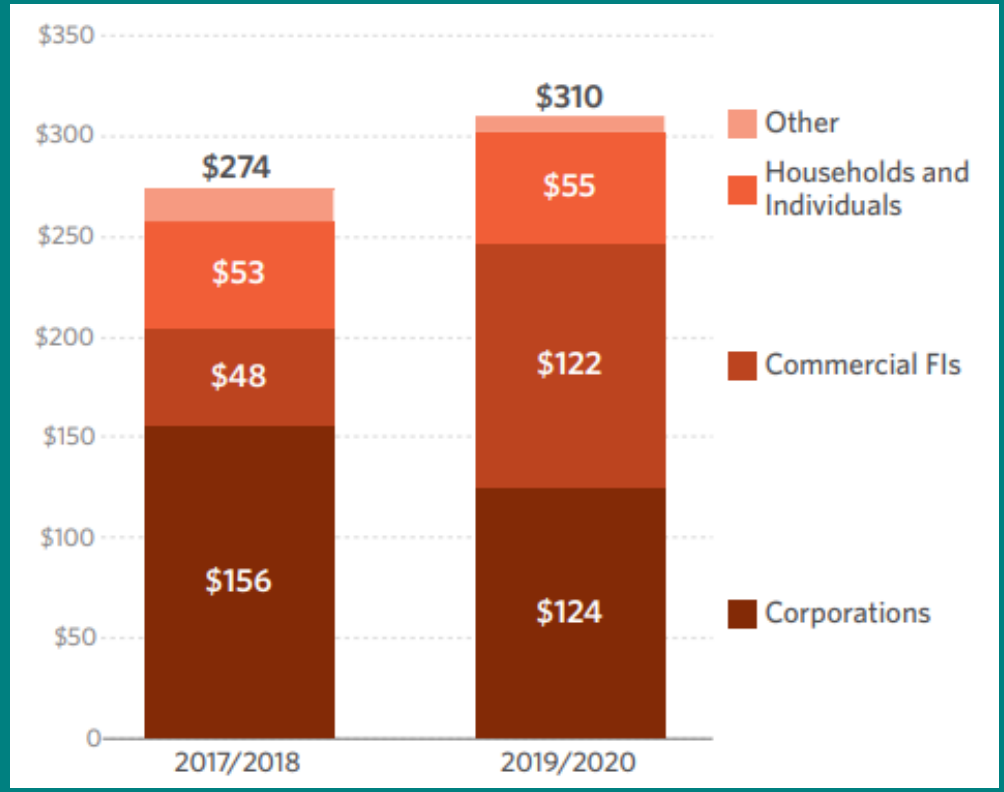


Figure - Climate finance by **private** sources in 2017-18 & 2019-20 (USD billion)
Source: CPI, 2021

Broader climate finance – Take aways

- If we broaden our definition of climate finance the amount channeled to agriculture and land-use is proportionally much less
- Agriculture mitigation around 1% of the climate finance landscape (UD$8.1 billion)
- Adaptation around 7% (US$46 billion) with more relevance for agriculture and land-use sectors
- 93% of climate finance in East Asia & Pacific (dominated by China) is domestically sourced – in South Asia the proportion is 43%
- Between 2011-2020 61% of climate finance was in the form of debt instruments, while 34% was equity and 5% was grant

Small holders have poor access to finance

- It is particularly difficult to channel most climate finance to smallholder farmers
- Smallholders have poor access to financial institutions
- Rely heavily on informal providers and value chain actors that are unlikely to attract climate finance

Source of Smallholder Lending	Share (%)
Formal financial institutions	25
Value chain actors	30
Informal & community based financial institutions	45

Source of lending by formal financial institution	Share (%)
State Banks	67
MFIs	22
Commercial banks	7
Social lenders	3
NGOs	<1

Figure: Source of smallholder farmer lending in sub-Saharan Africa, South and South-East Asia and Latin America
Source: Initiative for Smallholder Finance 2016

Private climate finance opportunities limited

- Despite much anticipation, opportunities for private climate finance in agriculture are limited at present
- Private finance tends toward lower risk or high return
- Such investments are unlikely to target smallholders
- Blended finance is an opportunity, but largely untapped due to issues with aligning risk-return profiles

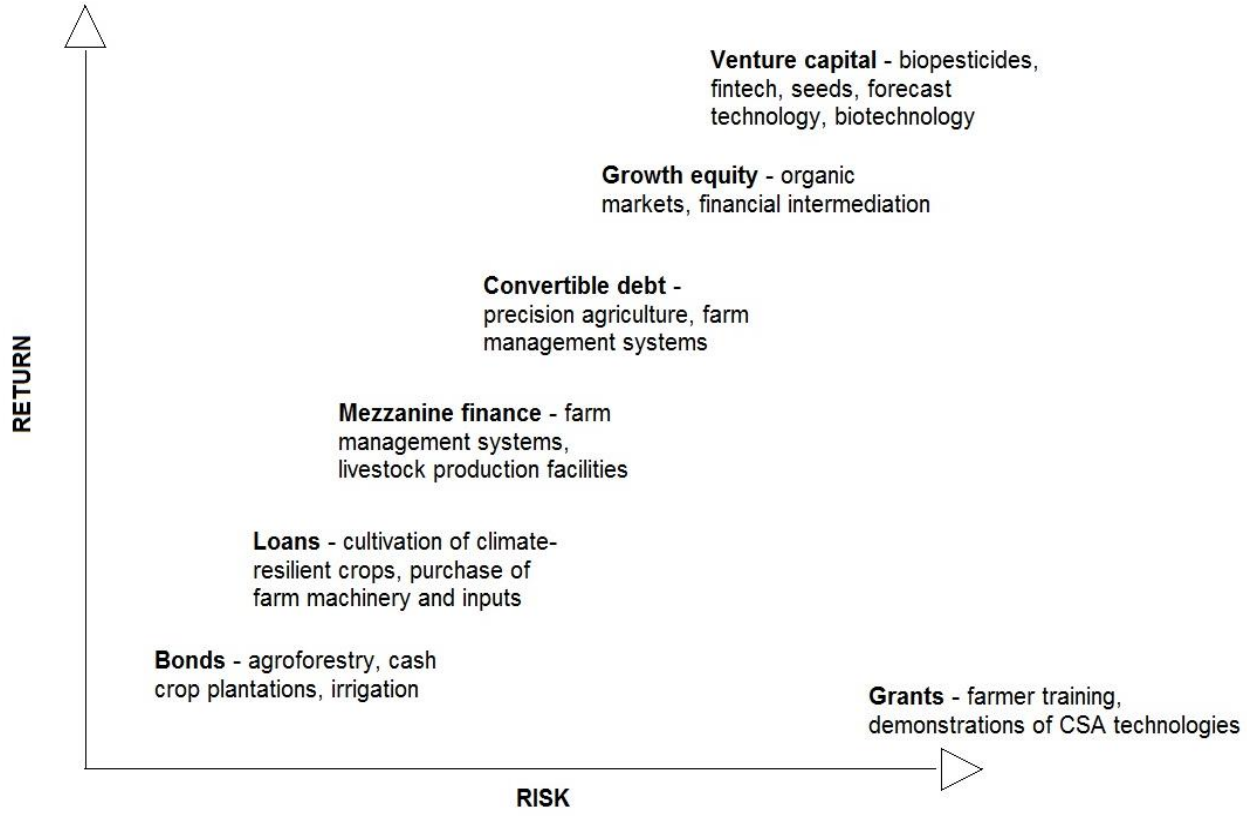
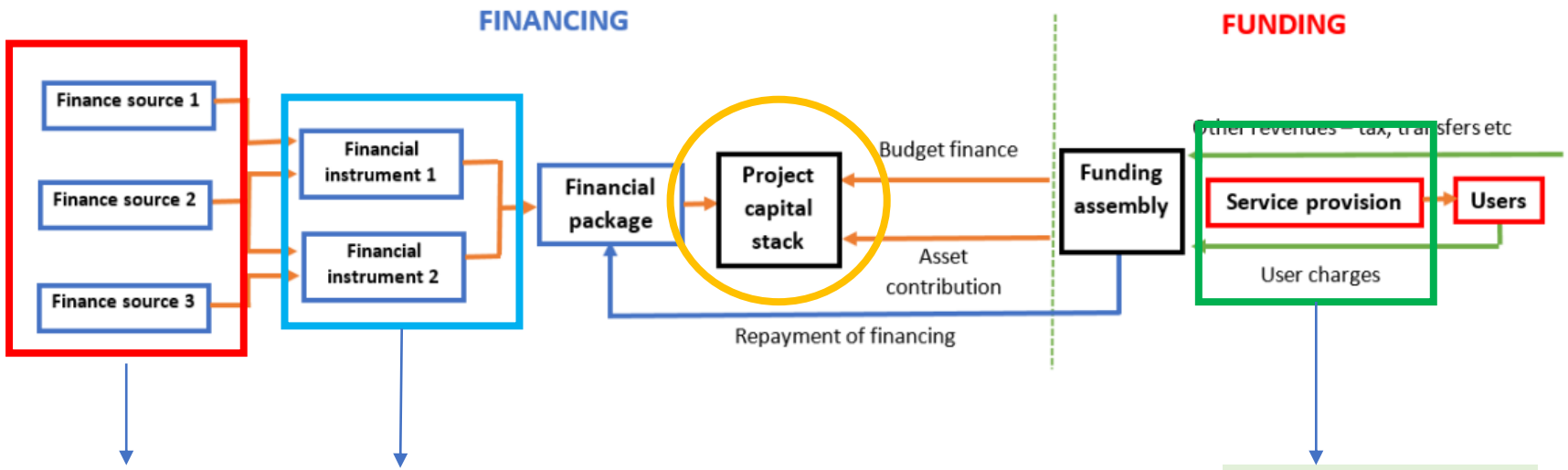


Figure: Spectrum of conventional financial intervention in CSA

Source: FAO & CIAT Forthcoming

Overcoming the Challenges for scaling climate finance



Example: Financing and funding urban infrastructure

Source of figure and box: Adapted from Coalition for urban transitions, 2021

Challenges to be overcome to bring different potential climate **finance sources (partners)** to the table**:**

- Lack of government capital
- Institutional inertia
- Institutional capacity
- Risk
- Low returns
- Imperfect information

Climate finance and the ‘capital stack’

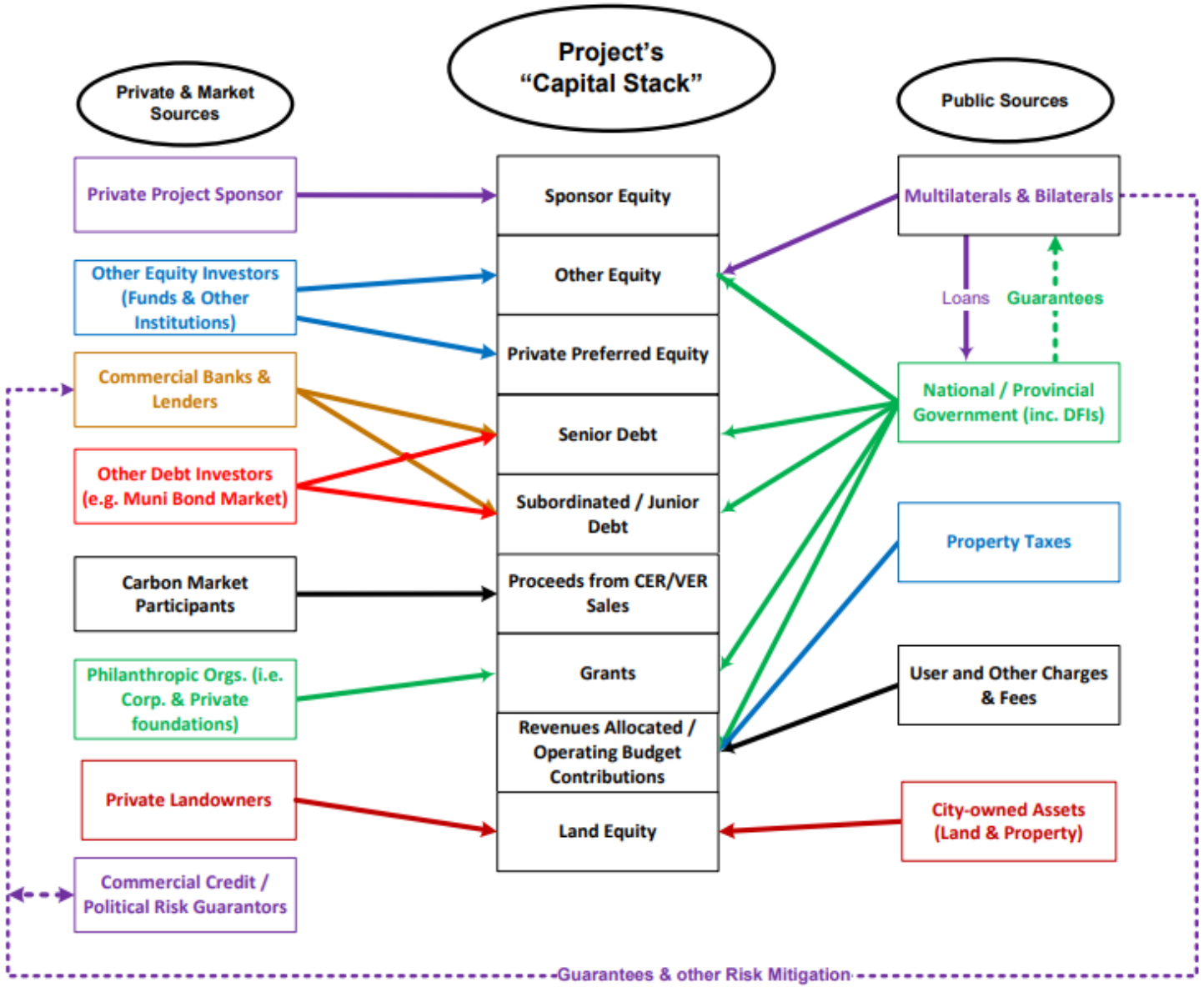


Figure - Illustrative capital stack showing how different sources of finance can be combined by deploying a range of instruments

Note: Sources of private finance are on the left and public finance on the right. Each of these prospective investors will have different risk/return profiles. A range of financing instruments is therefore deployed, each with different terms and conditions to suit a particular investor type.

Public climate funds addresses key gaps

- Public climate finance (GEF, GCF, Bilateral, etc.) crucial for addressing the gap in climate finance for agriculture
    - Particularly for providing grant and concessional finance for investments that may have poor risk return profiles but have broader social and environmental benefits
- Public climate finance will likely be the only source that can specifically address the needs of smallholders
- Climate finance can be transformational because of its potential to reach more vulnerable communities and longer-term outlook

Selected Recent Examples

1. **Cambodia** - Public-Social-Private Partnerships for Ecologically-Sound Agriculture and Resilient Livelihood in Northern Tonle Sap Basin (PEARL)
https://www.greenclimate.fund/project/fp199

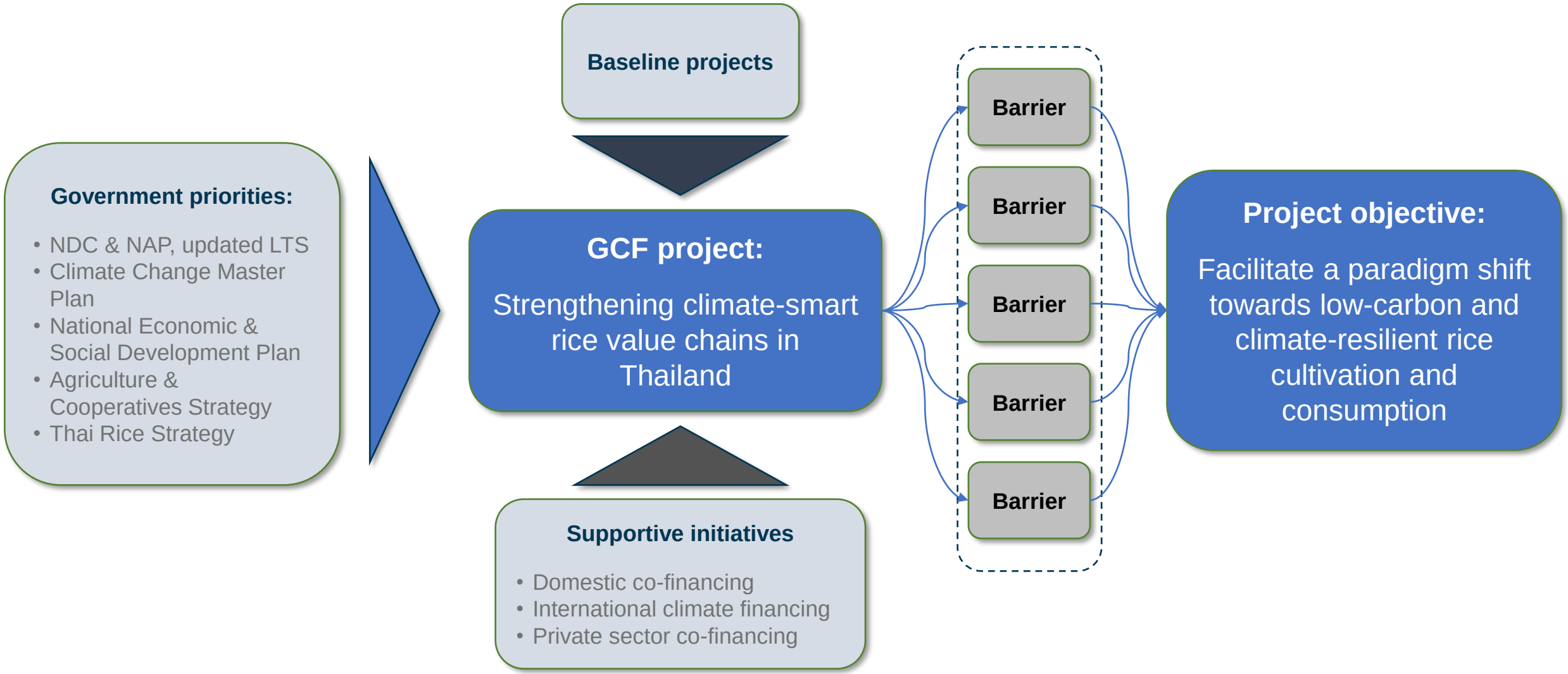
2. **Philippines** - Adapting Philippine Agriculture to Climate Change (APA) -
https://www.greenclimate.fund/project/fp201_1

3. **Thailand** - Thai Rice: Strengthening climate-smart rice farming
https://www.greenclimate.fund/document/thai-rice-strengthening-climate-smart-rice-farming
www.nama-facility.org/projects/thailand-thai-rice-nama/

Climate finance ctd.

Nana Kuenkel, GIZ Thailand

Example (Thailand Rice) of joint approach striving for paradigm shift by accessing International Climate Finance



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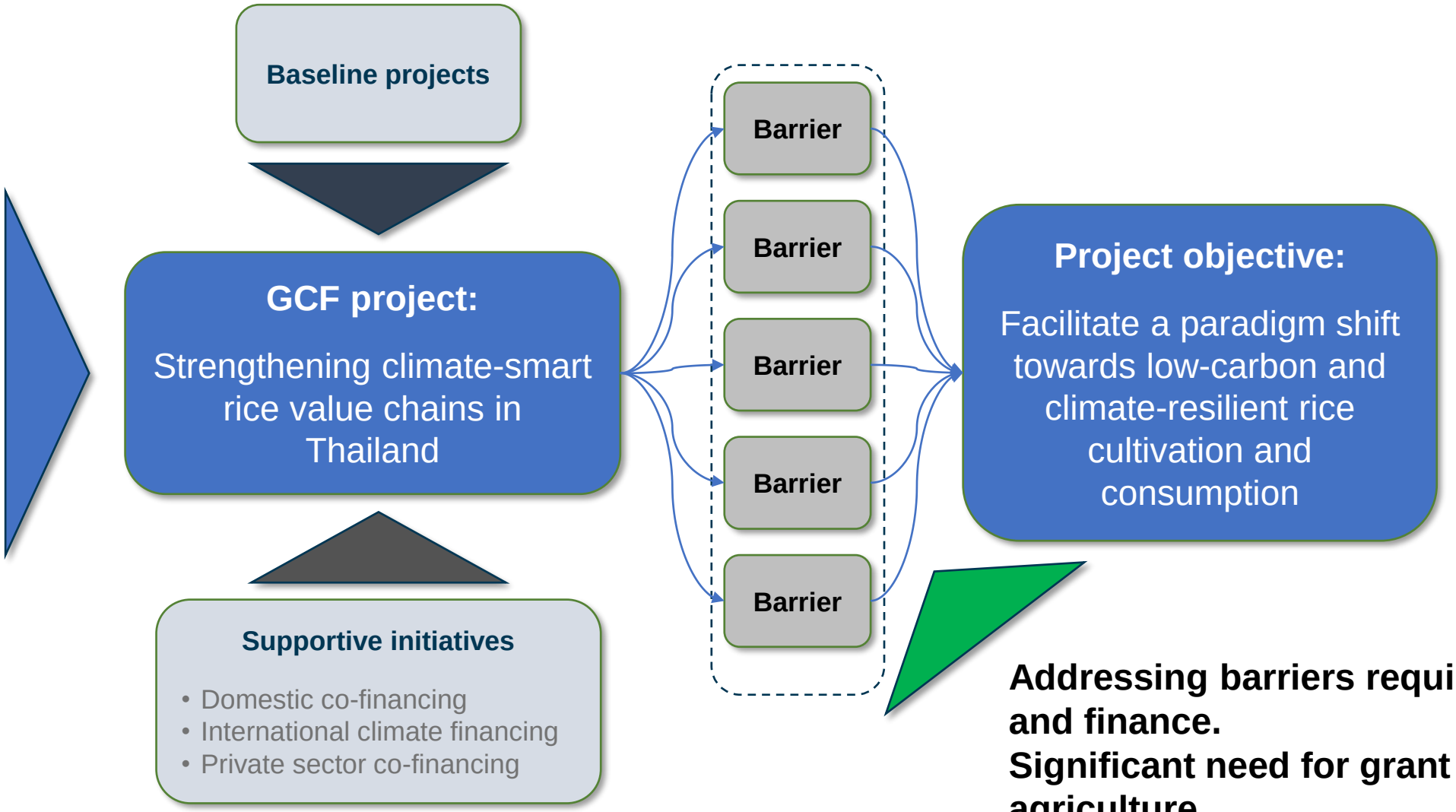
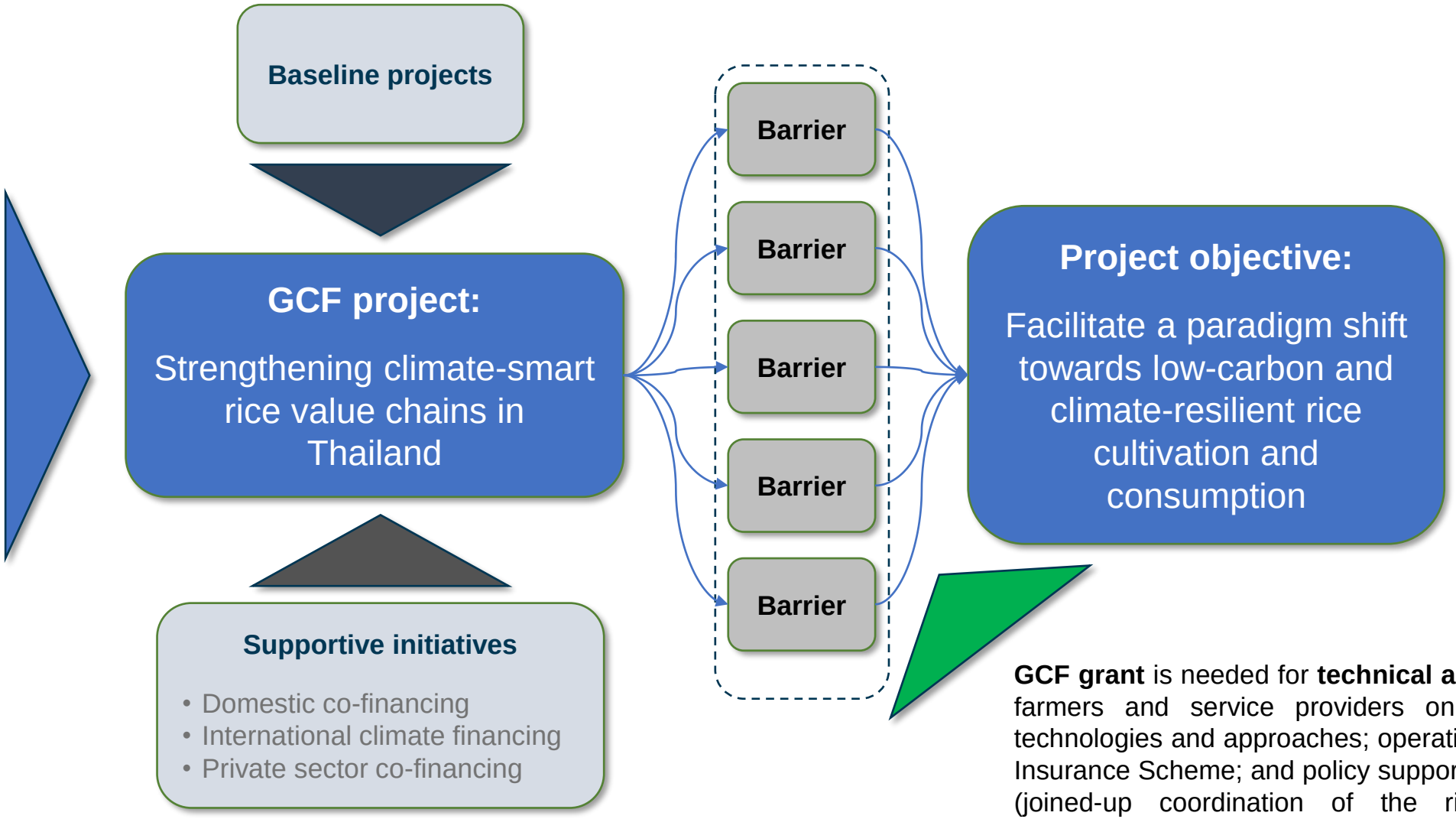


Addressing barriers requires capacity development and finance.
Significant need for grant finance in small-holder agriculture

Example (Thailand Rice) of joint approach striving for paradigm shift by accessing International Climate Finance



GCF grant is needed for **technical assistance (TA)** – notably, training for farmers and service providers on the deployment of climate-smart technologies and approaches; operationalisation standard; evolution of the Insurance Scheme; and policy support for relevant Government institutions (joined-up coordination of the rice sector MRV, carbon market development, etc.) – as well as **financial assistance (FA)** in the form of incentive payments for farmers to adopt climate-smart technologies and practices, and grants.

Focus on Agriculture and Climate Change by Multilateral and bilateral Donors – further reading

- https://www.greenclimate.fund/sites/default/files/document/agriculture-and-food-security-sectoral-guide.pdf
- https://www.folur.org/
- https://www.thegef.org/newsroom/publications/gef-8-moving-toward-equitable-nature-positive-carbon-neutral-and-pollution
- https://www.bmz.de/en/issues/climate-change-and-development/agriculture-and-climate
- https://nama-facility.org/wp-content/uploads/The-NAMA-Facility-Mitigation-Potential-of-AFOLU-Sector.pdf

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https://www.greenclimate.fund/project/fp201 1

3. **Thailand** - Thai Rice: Strengthening climate-smart rice farming
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www.nama-facility.org/projects/thailand-thai-rice-nama/

DEPARTMENT OF AGRICULTURE
Adaptation and Mitigation Initiative in Agriculture Program

Empowering Farmers Through Climate Resilient Agriculture

ALICIA G. ILAGA
Director, Climate Resilient Agriculture Office
Department of Agriculture Philippines

Address: 4th Flr,, DA Main Bldg., Elliptical Rd., Quezon City
Telephone: +63 (2) 920-1750
Trunkline: +63 (2) 928-8741 to 64 loc. 2489
Email: amicreate.da@gmail.com & aliciailaga.amia@gmail.com

OUR VISION: A food sufficient and resilient Philippines with empowered and progressive farmers and fisherfolk

ABOUT DA-CRAO

Memorandum Circular No. 04 Series of 2020 renamed the DA Systems-Wide Climate Change Office (SWCCO) to DA Climate Resilient Agriculture Office (CRAO) with new functions.

POLICY FRAMEWORKS

Climate Change Act of 2009

mainstreaming of Climate Change in policy formulation such that policies and measures that address climate change are integrated in development planning and sectoral decision-making

Sustainable Development Goals

MANDATE

Provides strategic direction and oversight in mobilizing DA resources and capacities towards achieving the CRA agenda of the Department

Oversees well-planned, coordinated and responsive support services in the establishment – and expansion – of AMIA Villages to town/ province/ region-level CRA, and from livelihoods to CRA enterprises

PROGRAMS

Adaptation and Mitigation Initiative in Agriculture

Balik Probinsya, Bagong Pag-asa

- Decision Support Tools
- Climate-resilient villages, livelihoods, and enterprises
- Climate Information Service

PARTNERS

- NGAs
- International Organizations
- SUCs
- NGOs/CSOs
- LGUs
- Business Sector

DA CLIMATE ACTION STRATEGIES

A. Integrate climate change issues in plans and programs of the DA and all LGUs with 3 climate risk-based planning tools developed by CRAO in compliance with the Climate Change Act of 2009

B. Institute climate information service as basic function of all regional field offices

C. Direct farming community assistance to improve adaptive capacity for climate change

DA CLIMATE ACTION STRATEGIES

A **Integrate climate change issues in plans and programs of the DA and all LGUs with 3 climate risk-based planning tools developed by CRAO in compliance with the Climate Change Act of 2009**

(1) National Color-Coded Agricultural Guide (NCCAG) Maps

NCCAG Map is an overlay of 29 maps obtained from different source agencies, to serve as a decision-support tool and investment guide for various sectors particularly agriculture. It features the natural suitability of twenty (20) economically important crops which are key to food security and eight major (8) climate change-induced hazards that largely affect the agri-fishery sector.

COMPONENTS
Crop Suitability | Climate-Induced Hazards | 10 Other Maps

SCOPE
All zones in the country

ACCESS POINT
http://farmersguidemap.da.gov.ph

DA CLIMATE ACTION STRATEGIES

A

Integrate climate change issues in plans and programs of the DA and all LGUs with 3 climate risk-based planning tools developed by CRAO in compliance with the Climate Change Act of 2009

(2) Climate Risk Vulnerability Assessment (CRVA) Maps

CRVA is a tool that analyze three main indices namely, exposure to hazards (exposure to significant climate variations), sensitivity (climate suitability of crops), and adaptive capacity. These information support DA resilience-building initiatives for better and longer-term geographic targeting.

COMPONENTS
Exposure to Hazards Index | Sensitivity Index | Adaptive Capacity Index | Vulnerability Index

SCOPE
Municipalities in 58 Provinces have completed CRVA Maps

ACCESS POINT
www.tinyurl.com/PhilCRVAMaps

DA CLIMATE ACTION STRATEGIES

A **Integrate climate change issues in plans and programs of the DA and all LGUs with 3 climate risk-based planning tools developed by CRAO in compliance with the Climate Change Act of 2009**

(3) Typhoon Risk Information Map

The Typhoon Risk Map shows the monthly typhoon incidence in each province of the country. It is a useful guide for adjusting planting calendar to ensure that production losses and damages are minimized. Patterns indicated that most super typhoons happen in third and fourth quarter of the year. Hence, farmers are advised to prevent from matching their harvest season during these months.

COMPONENTS
Typhoon Incidence from 2010 to 2019 for the months of January to December

SCOPE
All regions across the country

ACCESS POINT
http://www.tinyurl.com/TyphoonRiskMap

DA CLIMATE ACTION STRATEGIES

B Institute climate information service as basic function of all regional field offices

Climate Information Services

- PAGASA provides weather forecast
- DA provides technical advice and direct assistance

Through its Climate Information Services (CIS), the Regional Field Offices (RFOs) of the Department of Agriculture provide weather information and corresponding advisories, including climate-resilient approaches (CRA), and to assist farmers and fisherfolk in better decision-making during extreme weather events. CIS helps farmers decide when to plant, harvest, and use which CRA practice to build resilience and improve livelihoods.

COMPONENTS
Weather & Climate Forecasts | Climate-Resilient Agriculture Technologies & Practices

SCOPE
All regions across the country to all regions in the Philippines

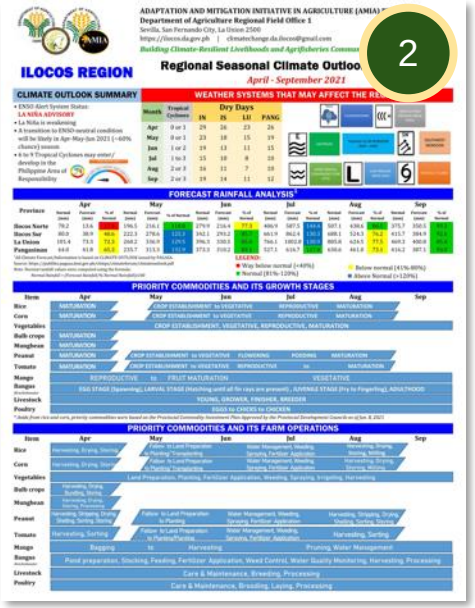
ACCESS POINT
https://tinyurl.com/ClimateInformationServices

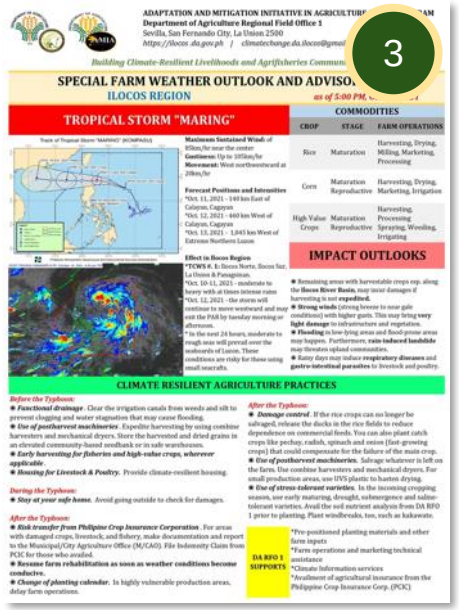
DA CLIMATE ACTION STRATEGIES

B Institute climate information service as basic function of all regional field offices

Climate Information Services

- PAGASA provides weather forecast
- DA provides technical advice and direct assistance





1. 10- day weather-based farm/ fishing advisories – guide to day-to-day farming activities
2. Seasonal weather-based farm/fishing advisories – guide to six month planning period for farming/fishing
3. Special weather farm/fishing advisories – guide to avoid damage during as well as recover after typhoons

OUR MILESTONES: ESTABLISHED 163 AMIA Villages

Go to:
tinyurl.com/PHAMIAVillages

REGION 1

CLIMATE RISKS
Drought, soil erosion, landslide, typhoon, storm surge, sea level rise

SAN EMILIO, ILOCOS SUR

↑0.15 Average yield (tons)

Use of NSIC Rc 356 (drought-tolerant variety) 3.9 vs. 3.75 (NSIC Rc 360)

↑59% Increased in net income

Use of CRA vs. without CRA

READY FOR ENTERPRISE DEVELOPMENT: DIVERSIFIED CROPPING

REGION 2

CLIMATE RISKS
Drought, flood, tropical cyclone, erosion, saltwater intrusion

BRGY. LUCBAN, BENITO SOLIVEN, ISABELA

↑361,360 Increased income (Php)

↑452 Increased yields (bags)

Inorganic fertilizer-based soil analysis + 20 bags of organic fertilizer + GAP (rice) (yield vs farmers' practice)

READY FOR ENTERPRISE DEVELOPMENT: CORN-BASED

REGION 6

CLIMATE RISKS
Typhoon, drought, flood, landslide, sea level rise, erosion, storm surge, saltwater intrusion

BANATE, ILOILO

↑148,000 (19%)

Increased income (Php)

Native pig production (vs without CRA)

↑3.39 (77%)

Increased yield (ton/ ha)

System for rice intensification

READY FOR ENTERPRISE DEVELOPMENT: RICE-BASED

REGION 10

CLIMATE RISKS
Drought, heavy rains, flash floods

NORTHERN MINDANAO

↑66%

Increased net income (vs corn monocropping)

Corn-cassava relay

605,000

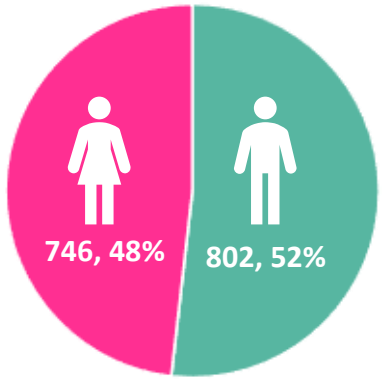
Net income (Php)

Balut production

READY FOR ENTERPRISE DEVELOPMENT: CORN-BASED

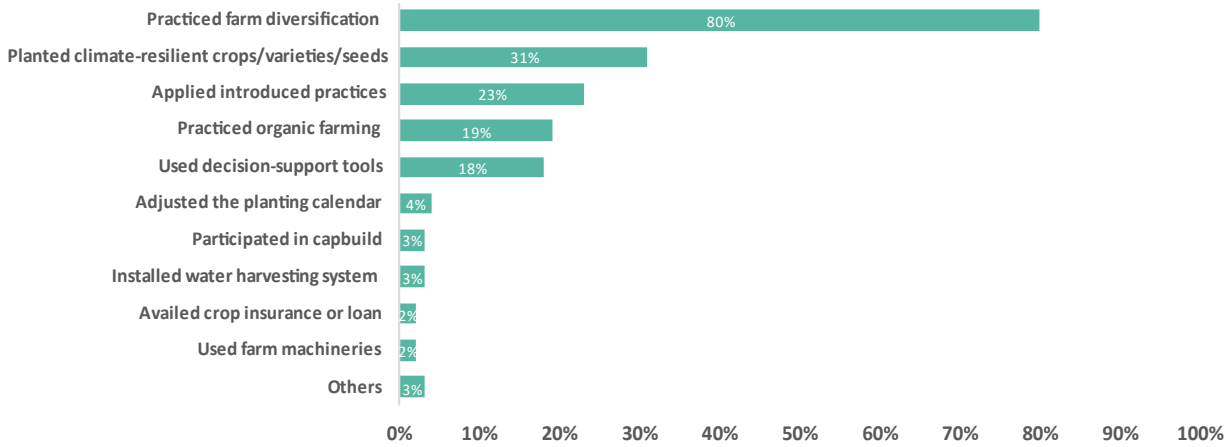
OUR MILESTONES:

Foster gender equality and champion the adoption of CRA



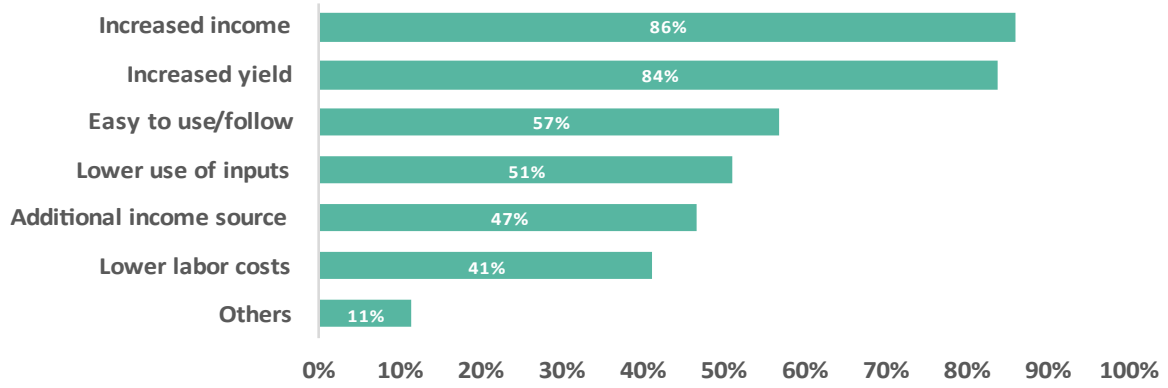
FEMALE TO MALE RATIO

No gender disparity observed with very slight difference in sample size between the female and male farmer respondents.



CRA PRACTICE/S ADOPTED

Farm diversification was overwhelmingly adopted by majority of the farmer respondents. Consequently, it diversified their income sources.



REASONS FOR CRA ADOPTION

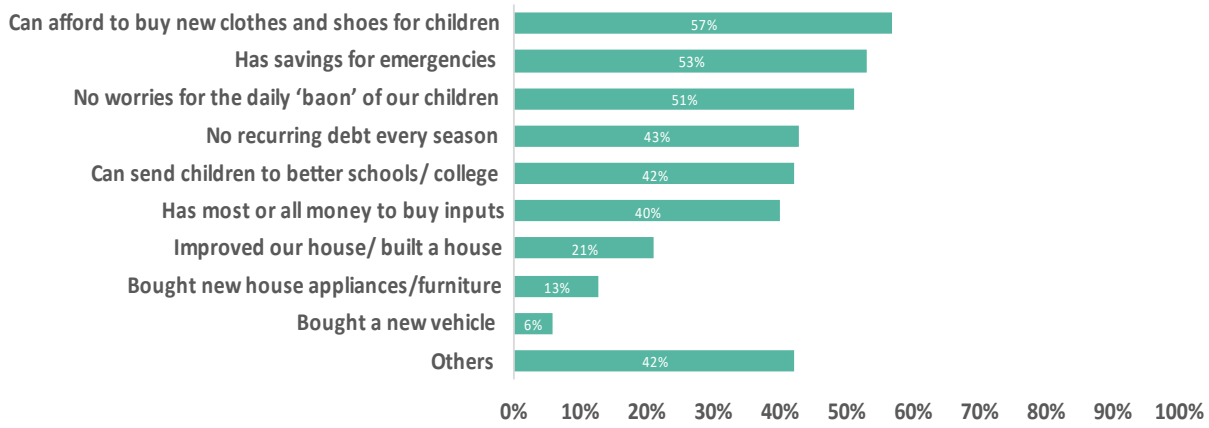
Most reasoned that increased income and yield were the greatest factor for their adoption of CRA practices.

based on the rapid assessment conducted in June 2022, participated in by 1547 farmer respondents from 106 villages across the 15 regions in the Philippines

OUR MILESTONES:

Increased income and yield as well as improve the welfare of the farmers through the adoption of CRA practices

IMPACTS OF CRA ADOPTION



Majority answered that the main impact of their CRA adoption was they can now afford to buy new clothes and shoes for children.

ADDITIONAL INCOME GAINED YEARLY FROM CRA ADOPTION

CORN-CASSAVA RELAY	CROP ROTATION	CROP-ANIMAL INTEGRATION	AGROFORESTRY
P20,000 to P100,000	P12,000 to P140,000	P10,000 to P54,000	P15,000 to P20,000

Highest additional income was generated through farm diversification. Corn-cassava relay adoption of AMIA Village in Region 10 produced additional profit of P20,000 to P100,000.

**based on the rapid assessment conducted in June 2022, participated in by 1547 farmer respondents from 106 villages across the 15 regions in the Philippines*

LESSONS LEARNED, GOOD PRACTICES, INNOVATIONS AND SUCCESS STORIES

AMIA Villages as platform for innovation and partnerships

AMIA Village approach as farmer-centric

AMIA Villages serve as 'go-to' place or lighthouse

AMIA Village approach increases the adaptive capacity of farmers

AMIA Villages as potential reintegration sites for Balik Probinsya, Bagong Pag-asa Program Beneficiaries

AMIA Villages serve as building blocks for scaling up of adaptation actions

AMIA Village is an effective approach to rural development

AMIA Village approach depends on partnership with and participation of LGUs for success and sustainability

Adapting Philippine Agriculture to Climate Change (APA) Project

A project in partnership among the Department of Agriculture (DA), Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), and the Food and Agriculture Organization (FAO) that will build on the Adaption and Mitigation Initiative in Agriculture (AMIA) Program of the Philippines.

Adapting Philippine Agriculture to Climate Change (APA) Project

Project:	Adapting Philippine Agriculture to Climate Change (APA Project)
Project Implementers:	Department of Agriculture (DA), Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) & Food and Agriculture Organization (FAO as GCF Accredited Entity)
Project Cost:	Total: USD 39.254 M GCF Funding: USD 26.273 M Co-Finance: DOST PAGASA - USD 4.715 M, DA - USD 8.266 M
Implementation Period:	7 Years: 2023-2030
Project Type:	Cross-Cutting - Climate Change Adaptation & Mitigation

Adapting Philippine Agriculture to Climate Change (APA) Project

OBJECTIVE:

The project is aimed at increasing the resilience of rural men and women in areas vulnerable to climate change who depend on agriculture for their livelihoods, while transforming the country's agricultural system toward climate resilience.

STRATEGY:

This will be achieved through improving farmers' capacity to develop Climate Resilient Agriculture (CRA) enterprises and adopt financially and economically viable CRA practices, as well as the government and private sector's capacity to build supporting systems for scaling up.

Adapting Philippine Agriculture to Climate Change (APA) Project

OUTCOMES:

1

Increased institutional capacities for the development and provision of climate information and CRA services

2

Adoption of Climate Resilient Agriculture through enterprises by farmers (female and male)

3

Strengthened regulatory framework, market, and knowledge management for mainstreaming and scaling up Climate Resilient Agriculture.

Adapting Philippine Agriculture to Climate Change (APA) Project

1

Increased institutional capacities for the development and provision of climate information and CRA services

- Aims to address the **capacity gaps identified** in implementing the AMIA and other DA programs: localized CIS, tailored CRA technologies, agri-business capacities, and effective delivery and feedback system of information and services.
- Will ensure PAGASA and DA collaboratively **collect and analyze relevant climate and agricultural information**, develop localized CIS and make them available for wider use by farmers and others at appropriate times.
- Will provide **tools and training** to government staff at national, regional, and LGU levels to deliver timely, relevant, and accurate CIS and CRA service packages to farmers, the private sectors, and other stakeholders.

Output 1.1: Strengthened capacity and coordination for CIS
Output 1.2: Develop capacity for localized CRA services

Adapting Philippine Agriculture to Climate Change (APA) Project

2

Adoption of Climate Resilient Agriculture through enterprises by farmers (female and male)

- Will support **climate change-vulnerable communities** in improving their adaptive capacity while developing farmers' CRA enterprises--enhancing both their resilience and income generation capacities.
- Farmers will be able to adopt climate- resilient technologies in a wide range of agro-ecological and socio-economic situations and become economically sustainable by linking themselves to **CRA investment opportunities and value chains**.
- Will improve farmers' access to climate information, CRA services, and finance, together with quality agricultural inputs and farm equipment, in order to reduce risks and losses, produce enough volume, attain economies of scale, ensure quality and establish a niche market.

Output 2.1: Climate Resilient Agriculture enterprise investment plans prepared and implemented

Adapting Philippine Agriculture to Climate Change (APA) Project

3

Strengthened regulatory framework, market, and knowledge management for mainstreaming and scaling up Climate Resilient Agriculture.

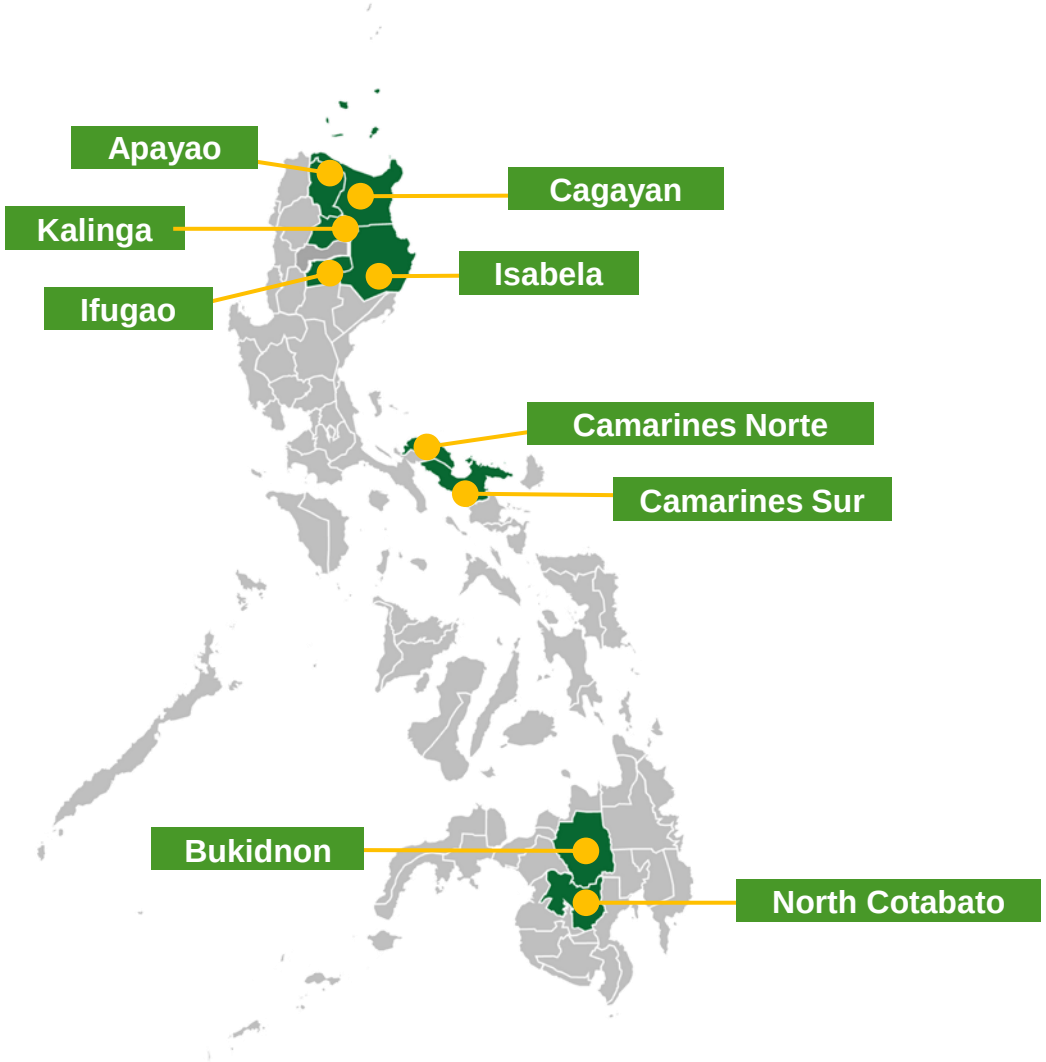
- Aims to **mainstream CRA enterprise development and project approaches** into the Philippines' agriculture and rural development programmes, at the same time raising awareness of both CC and natural disaster risks and equipping farmers across the country with know-how for CRA enterprise development practices.
- Will help private sectors **apply and use the CIS and CRA services** developed under Component 1 in developing financial products and businesses.
- Will raise awareness, mainstream localized CIS and CRA services, and enhance the extension capacities of **non-target LGUs, DAR, and other local actors** through working with other national programmes and organizing workshops.

Output 3.1: CRA mainstreamed into national and LGU programmes
Output 3.2: Enabling financial mechanisms and value-chains for sustainable CRA adoption

Adapting Philippine Agriculture to Climate Change (APA) Project

PROJECT AREAS:

AGROECOLOGICAL ZONES	ADMINISTRATIVE REGIONS	PROVINCES	NUMBER OF TARGET MUNICIPALITIES
North East Luzon	Region II – Cagayan Valley	Cagayan; Isabela	100 most vulnerable municipalities
Cordillera (high CC combined effects)	Cordillera Autonomous Region	Apayao; Ifugao; Kalinga	
Eastern Seaboard (CC intensifying cyclones, increasing precipitation)	Region V – Bicol	Camarines Norte; Camarines Sur	
Western and Central Mindanao (CC decreasing precipitation, increasing temperatures)	Region X – Northern Mindanao	Bukidnon	
	Region XII – Soccsksargen	North Cotabato	



Fast Facts : Climate Information and Climate Resilient Agriculture Services Adoption thru Enterprise Development

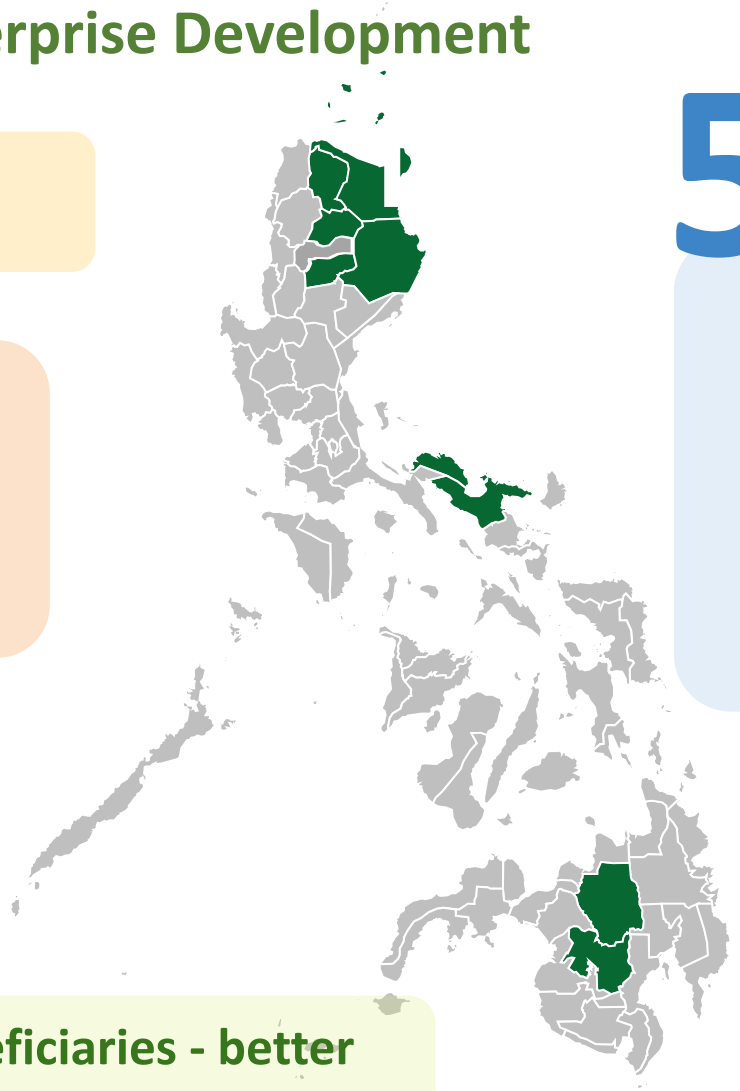
5 **Administrative Regions:** CAR, II, V, X, XII

9 **Provinces**

Apayao, Kalinga, Ifugao, Cagayan, Isabela, Camarines Norte, Camarines Sur, Bukidnon, North Cotabato

100 **Municipalities**

5M **people as indirect beneficiaries - better access to CIS and CRA information**



Legends:

Priority Areas

50,000

Farmers (50% women, 500 youth) to test and adopt CRA technologies due to better access to CIS services and CRA information

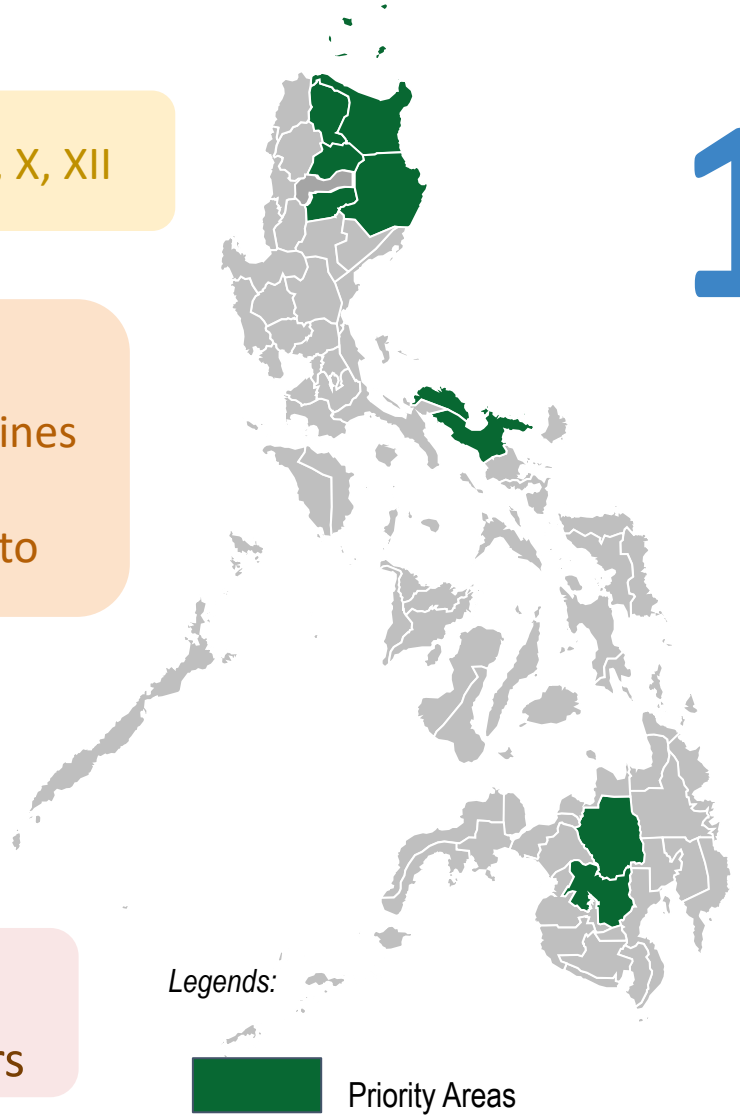
Fast Facts : CRA Adoption thru Enterprise Development

5 **Administrative Regions** | CAR, II, V, X, XII

9 **Provinces** | Apayao, Kalinga, Ifugao, Cagayan, Isabela, Camarines Norte, Camarines Sur, Bukidnon, North Cotabato

100 **Municipalities**

1.25 **M** Farmers



12,500

farmers per municipality

150

Climate-Resilient Enterprises

Achieve C-R-A for a CRA Philippines

CREATE
FOOD
SUFFICIENCY.

REDUCE
POVERTY.

ADDRESS
CLIMATE
CHANGE.

DEPARTMENT OF AGRICULTURE
Adaptation and Mitigation Initiative in Agriculture Program

#TowardsClimateResilientPHAgriculture

The New Agriculture is Climate Resilient Agriculture.

THANK YOU!

DEPARTMENT OF AGRICULTURE

Adaptation and Mitigation Initiative in Agriculture Program

@AMIA.PH DA-AMIA Program amiacreate.da@gmail.com

Food and Agriculture Organization of the United Nations

GREEN CLIMATE FUND

Public-Social-Private Partnerships for Ecologically-Sound Agriculture and Resilient Livelihood in Northern Tonle Sap Basin (PEARL)

TWG- AW meeting

Phnom Penh, 28 February 2023

PEARL approval status

- The PEARL proposal was technically endorsed by GCF's Climate Investment Committee (CIC), and Independent Technical Review Panel (iTAP)
- The PEARL project was approved at the GCF's 35th board meeting on 13 - 16 March 2023 in the Republic of Korea

https://www.greenclimate.fund/boardroom/meeting/b34#videos

- Development of the project started in 2017
- Endorsement of the concept note involved 2 years of consultation and negotiation
- Finalizing and review of the proposal took another 1.5 years

Concept Note (CN) V1 submitted
Dec 2019

1st round of GCF comments received/CN V2 + PPFA resubmitted
Mar- May 2020

Logic

2nd round of GCF comments received/CN V3 resubmitted
Jun - Aug 2020

Climate data

3rd round of GCF comments received/CN V4 resubmitted
Aug - Dec 2020

Sectoral Scope

4th round of GCF comments received/CN V5 resubmitted
Feb - Mar 2021

Conce-ssionality

5th round of GCF comments received/CN V6 + revised PPFA resubmitted
April – May 2021

Innovative financing/ Additionality

July 2021
GCF CIC2 endorsed CN for PPF support

Extensive consultations with GCF resulted in increased project scope (e.g., innovative finance) to require PPF support

About the PEARL project

Enhance the climate change resilience of smallholder farmers and local communities by increasing their access to growing premium market segments while using their improved market access to incentivize their transition to climate-resilient practices, mainly through effective public-social-private partnerships.

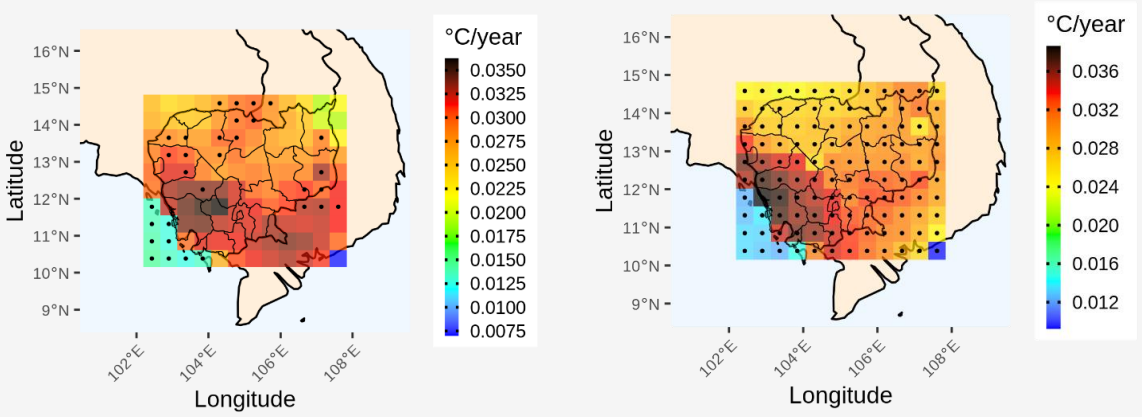
2023 - 2029

42,850,231 (36,231,981 Grant Financing from GCF)

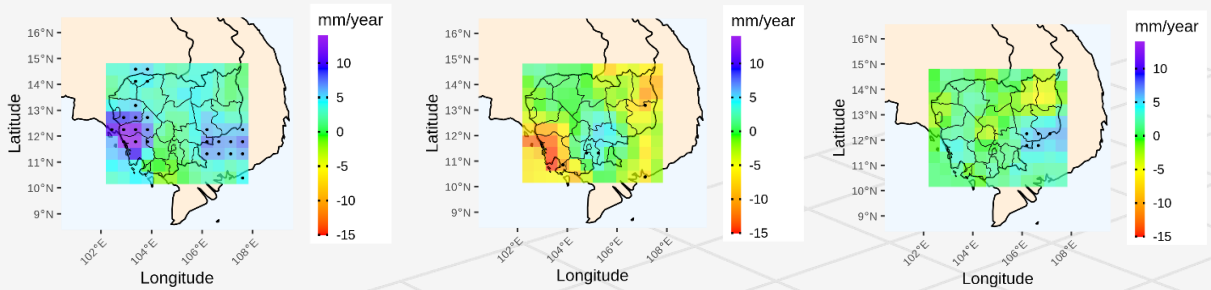
MAFF, MoE, MoWRAM, MoC, MoWA, ARDB

4 provinces, 24 districts, 124 farmer organizations (104 ACs/Associations/Groups, 14 CPAs, 6 CFs

Climate Rationale



Trend in the annual average maximum (left) and minimum temperature (right) (° C/yr.) over the 1981-2010 period from reanalysis dataset W5E5. Statistical significance of 0.05 is indicated by a black dot. Figures produced with the Climate HAzard toolbox (CHAT) developed by FAO (Climate Risk Team).



Precipitation trend over the period 1981-2010 period by season: (a) March-May, (b) June-August and (c) September-November. Statistical significance of 0.05 is indicated with a black dot. Figures produced with the Climate HAzard toolbox (CHAT) developed by FAO (Climate Risk Team).

Key current and projected changes:

- Increasing temperature, in particular during the dry season
- Shorter/more intense wet season incl. flash floods
- Longer/more intense dry season incl. droughts
- Increased pest and disease outbreaks
- Impacts on crop production as well as across agricultural value chains

PEARL project intervention

Climate Foresight

Enhancing farmers' capacities to manage climate change impacts and related risks

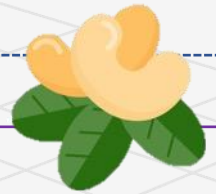
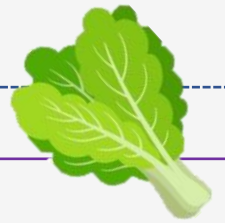
Market Incentive

Increasing smallholder farmers' (especially vulnerable women farmers') and other local value-chain actors' ability to adapt to a changing climate, particularly through market incentives that promote climate-resilient, higher-value, diversified, and sustainable production and processing

Enabling Environment

Strengthening regulatory and institutional frameworks and capacities for climate-resilient agricultural certification, cross-sectoral coordination for increased public-social-private partnerships (PSPPs) and smallholder financing, and climate-informed investment support



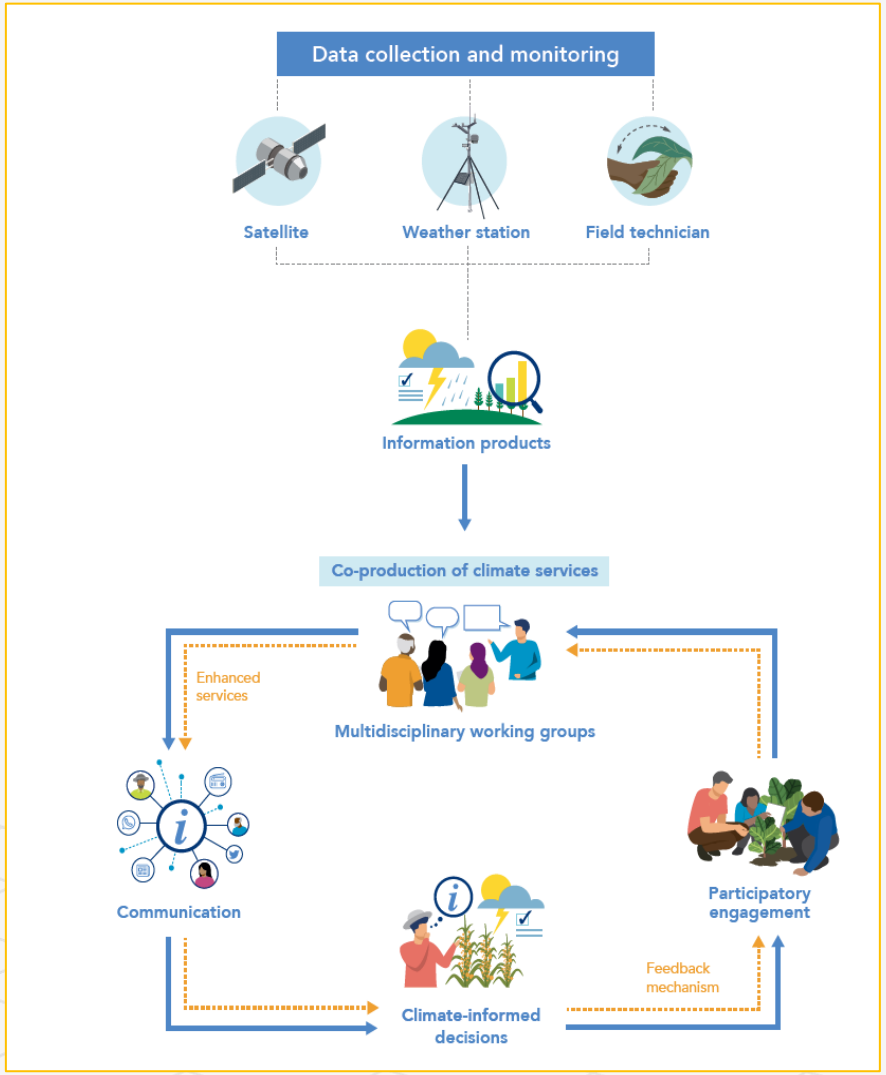
Climate resilient, high value and sustainable agriculture

Component 1: Climate Foresight

Availability and access to agrometeorological advisory services tailored to target value chains

Increase spatial scale of agrometeorological data collection and capacities for data processing to produce enhanced agrometeorological forecasts and advisory services, tailored for target value chain crops

Increase awareness of agrometeorological advisory services and the benefits of the application in farm management and value addition activities to support decision-making and reduce smallholder farmers and other local value chain actors' vulnerabilities to climate change, particularly women farmers and value chain actors



Component 2: Market Incentive

Product quality, access to finance, technologies and markets, and restoration of ecosystem services

Diversification and premium market access opportunities

Access to finance and technologies for climate-resilient agriculture and value chain development

Awareness and knowledge of climate-resilient and sustainable, higher-value agriculture

Restore and protect critical forest catchment area in upper watershed areas of where the target crops are produced

Farmer-led Agriculture Resilience Mechanism (FARM)

A graduated climate adaptation asset acquisition mechanism for ACs, FAs, PGs, CPAs, CFs and unions (registered businesses) that promotes savings for future investment for climate-resilient and high-value agriculture.

Stage 1: Business Plan

Development and approval of phased production and processing business plans (Output 2.1)

- Crop specific
- Climate resilient
- High value
- Developed by 124 ACs, FAs, PGs, CPAs, CFs and unions.
- Tailored technical, operational and business development support provided by project
- Approved by project.

Stage 2: Fund Initial Asset Acquisition

Procurement of climate-resilient production and/or processing technologies and infrastructure (Output 2.2)

- Avg. **US$ 50,000** procurement of climate adaptive assets to 124 ACs, FAs, PGs CPAs, CFs and unions.
- Upfront financial contribution of 5-20% – kept as an account minimum balance in Stage 3 or/and in-kind contribution.
- Operation, maintenance and revenue management plans developed and overseen.
- Asset insurance.

Stage 3: Saving and Finance for Future Assets

FARM trust fund established for investing in Business Plans (Output 2.2)

- Each AC, FA, PG, CPA, CF or union will establish a trust fund bank account.
- Trustees will be gender balanced and representative of group membership, plus project.
- Future climate adaptive asset, technology and/or infrastructure objectives will be identified in the business plan, including savings and investment action plans, to advance to the next phase of the business plan.

Parallel technical support throughout Stages 1- 3, include:

- Crop-specific agrometeorogical advisory (Output 1.1)
- Market development support (Output 2.1)
- Business development services (Output 2.1)
- Promotion of financial services (Output 2.2)
- Promotion of Insurance services (Output 2.2)
- Production support and services (Output 2.3)
- Processing support and services (Output 2.3)

Component 3: Enabling Environment

Foster coordination and collaboration across relevant sectors i.e., agriculture, finance, food, retail, hospitality, and trade to support the transition to climate-resilient agriculture

Strengthen the provincial public forum mechanisms by increasing private sector engagement to facilitate open dialogues between governments, the private sector, and smallholder farmers and local value chain actors to forge effective PSPPs.

Design and operationalize a scorecard system for the agricultural finance sector, with consideration of climate-resilience and sustainability as main eligibility criteria for screening loan applications

Establish a gender-responsive landscape-level agroecology monitoring system (LAMS) with an interactive web platform.

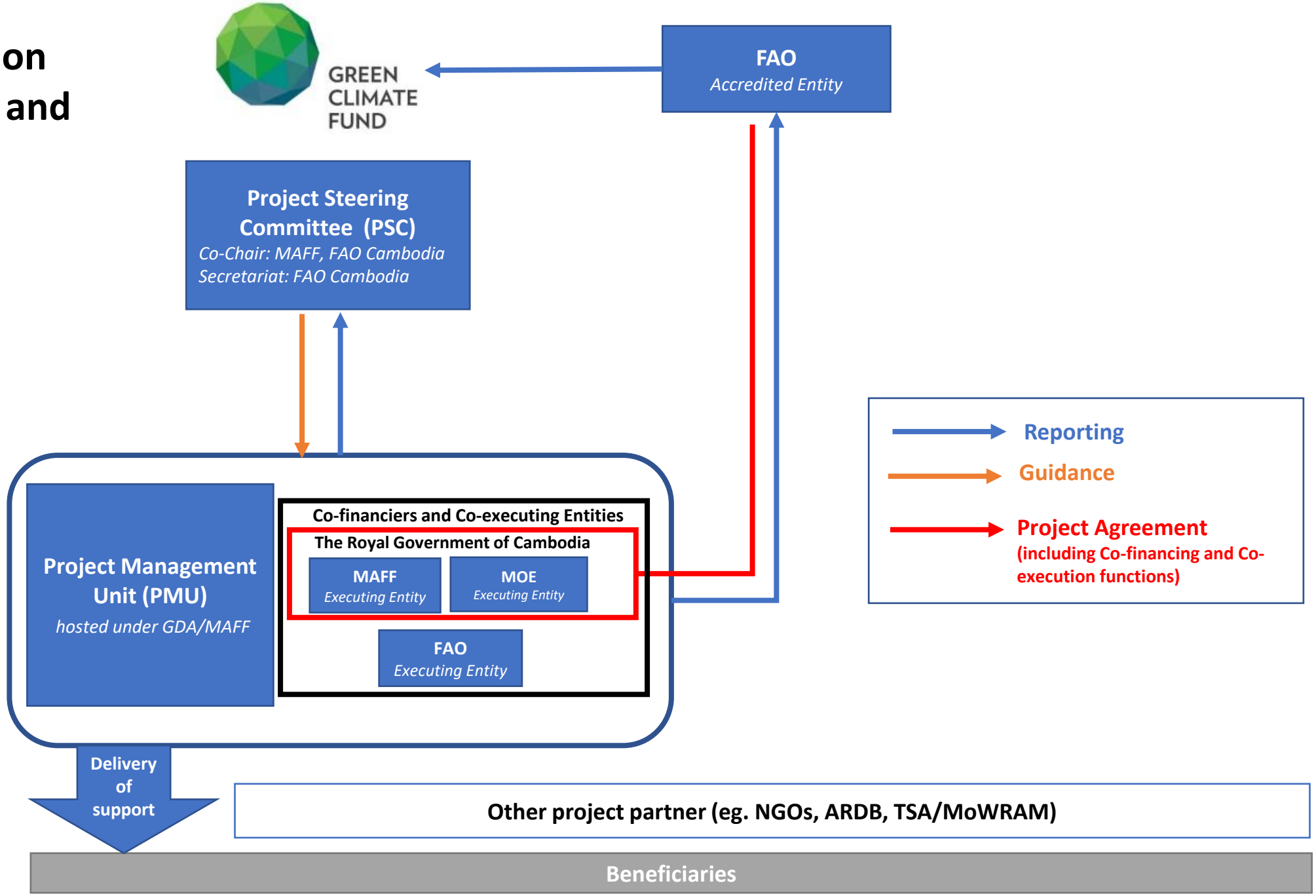
Beneficiaries

450,000 beneficiaries will directly benefit from improved agrometeorological information, training/extension services, and other last-mile services to increase their resilience to climate change

135,000 vulnerable farmers and other local value chain actors with improved financial access and accelerated support for adopting climate-resilient practices and technologies

50,000 farmers will benefit from improved agroecological conditions enhanced ecosystem services (7,600 hectares of critical catchment forests and other sensitive ecological zones restored and protected for improved agroecological functions)

Implementation Arrangement and Reporting



The PEARL funding proposal was published at the GCF website and is downloadable at:

https://www.greenclimate.fund/document/gcf-b35-02-add01


THANK YOU
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Countries working toward paradigm shift by accessing GEF, NAMA and GCF support

Examples from Thailand in the rice sector: Grant-based finance for adaptation and mitigation outcomes in agriculture

29th March 2023

Nana Kuenkel, GIZ Thailand, Cluster Coordinator Agriculture and Food

NAMA Facility

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Department for Business, Energy & Industrial Strategy

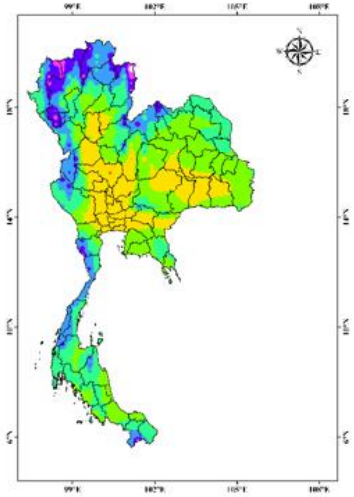
Danish Ministry of Energy, Utilities and Climate

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

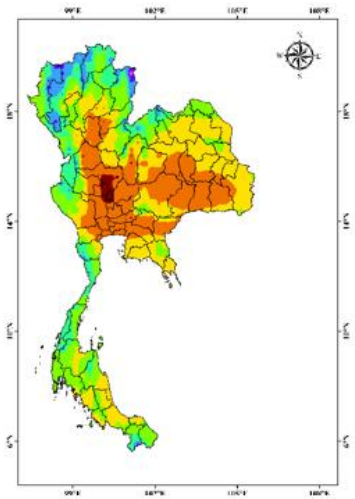
Rice Farming and Climate Change in Thailand

Climate change will lead to changing weather patterns and temperature in Thailand. The agricultural sector **is highly vulnerable.**

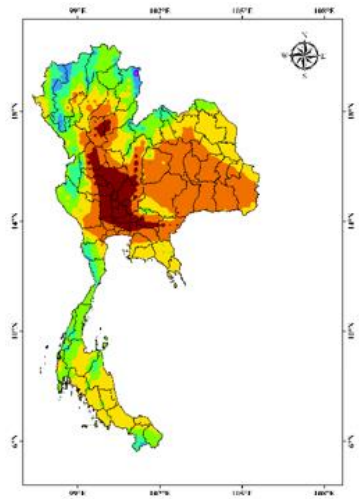
- Increased number of **hot days** above 35°C.
- **Dry seasons** will get drier, **wet seasons** will get wetter
- Increased seasonality and **weather extremes**



Baseline max. Temperature (1975-2004)



Tmax RCP4.5 (2049)



Tmax RCP8.5 (2049)

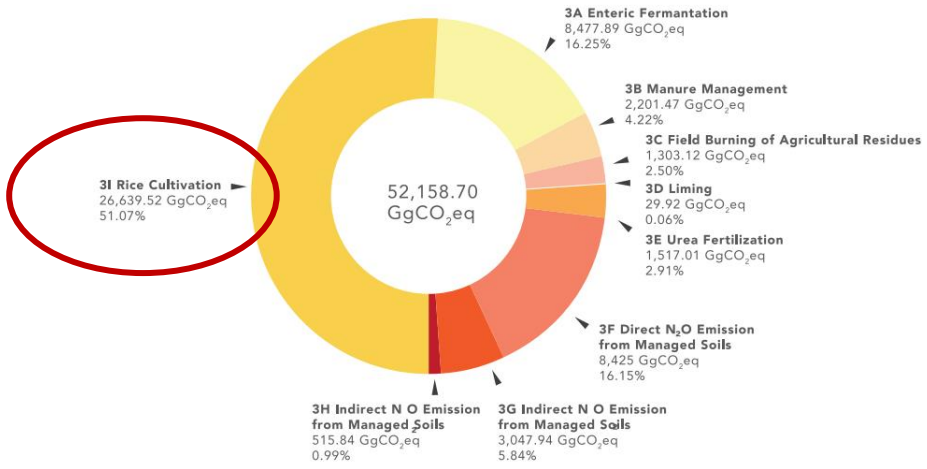


Figure 2-6: GHG emissions in Agriculture sector 2016

Agriculture is a critical **contributor to GHG emissions:**

Second largest emitting sector after energy in Thailand with Methane from rice production as the driving force

- CH4 emissions from flooded rice paddy (anaerobic decomposition in flooded paddy)
- Straw & stubble burning
- N fertilizer application

Thai Rice NAMA

Countries: Thailand

Partner(s): Ministry of Agriculture and Cooperatives, Bank for Agriculture and Agricultural Cooperatives, Office of Natural Resources and Environmental Policy and Planning

Overall Term: 08/2018 – 07/2023
Volume: 14,900,000 EUR

www.thai-german-cooperation.info

www.nama-facility.org/projects/thailand-thai-rice-nama/

Objective

To enable Thailand to effectively transform the Thai rice sector to low-emission rice production.

Approach

- **Low-Emission Rice Production Technology:**

  Train farmers how to implement low mitigation technologies in rice production and encourage them to switch practices through a revolving fund.

- **Mitigation Technology Services**

  Support business development by leveraging a national green credit programme for capital investment to provide mitigation technology services to farmers.

- **Policy Formulation & Supporting Measures**

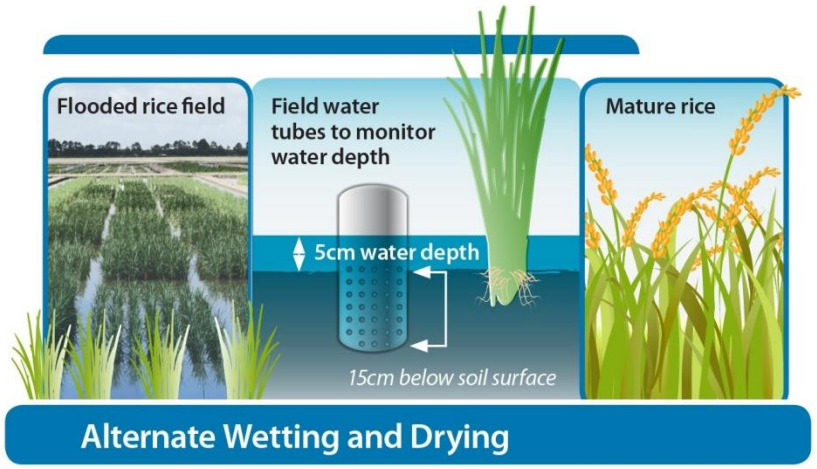
  Develop a model and expansion strategy and a Sustainable Rice Practice standard and integrate the project into the Thai government's work plans.

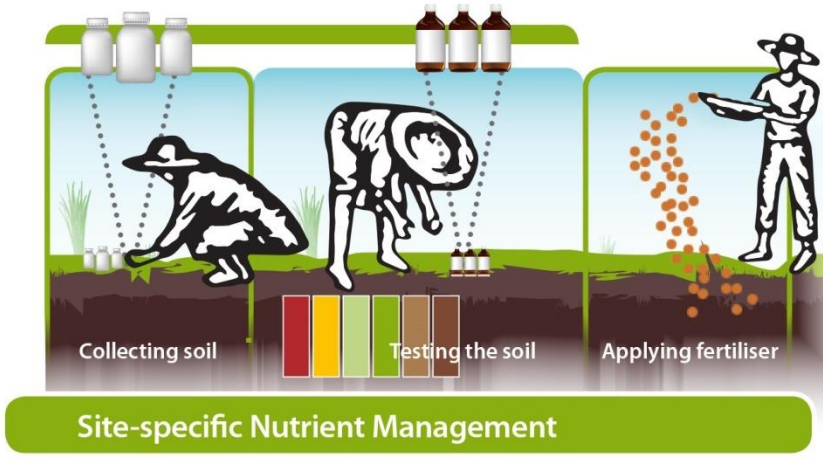
NAMA Facility

german cooperation

giz

Promotion of four main technologies and investment needs





Baseline in 2018

No market existing for climate-smart services

LLL / AWD was piloted in earlier projects of RD & IRRI

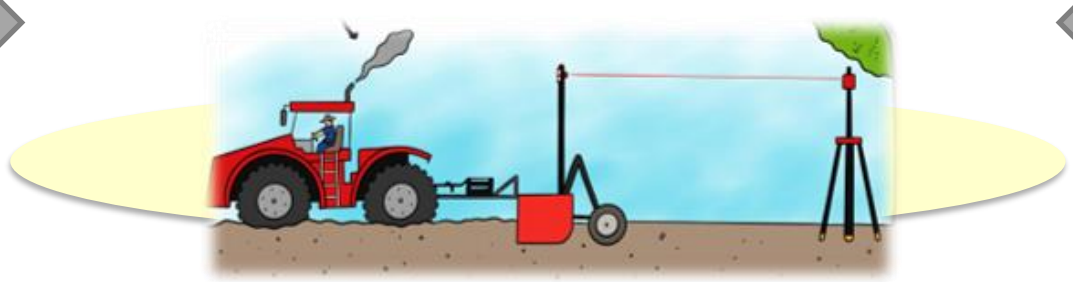
Laser technology is imported and scrappers manufactured locally

Attractive business case for LLL service provision

Additional credit needs by farmers & service providers

Two-sided Market Stimulation

End Services
บริการเตรียมดินและปรับพื้นที่นาด้วยเลเซอร์ (LLL)



Tool: LLL Machine
ชุดอุปกรณ์ปรับพื้นที่นาด้วยเลเซอร์ (LLL)

Farmer (Demand Side)

Service Provider (Supply Side)

Combined Measure Revolving Fund at BAAC
(Prefinance + Subsidy 50%)

Subsidy 50% for LLL machine investment (Pro 2)

Access to finance: initial assumptions & barriers, baseline

Farmers

Service Providers

Assumptions

- Laser land levelling increases income and investments break-even after 3 harvests
- Many **farmers** are already overindebted

- Service providers are small or medium entrepreneurs with credit history
- Service providers can access existing loan programs

Lessons

- Approximately 40% of farmers rent land with an reduced interest to invest in technologies that improve soil or water management, or soil quality
- Climate change is real; farmers experienced severe droughts which further hampered their investment capacity
- Famers consider very well about additional investments in new technologies – want to “see” benefit of new technologies first; LLL at first creates additional debt without direct income increase

- Market development takes time, esp. in an environment with risk-averse investment behavior
- Service provision in sugar cane is more profitable and the opportunity costs to move into rice are high – providers do not have a strong incentive to move into LLL
- Typical interested service provider is a farmer with all their limitations in accessing additional credits
- Additional investments: LLL machinery requires a 90/150 HP tractor while farmers use 60HP tractors

What lies ahead?

- High interest perceived in demonstrated mitigation outcomes of Thai Rice NAMA project
- Further scaling through multilateral climate financing institutions (GCF, GEF)
- Demonstrated large-scale mitigation approach attractive for carbon offsetting / carbon crediting projects

Green Climate Fund (GCF) Preparation

Countries: Thailand

Partner(s): ONEP, GCF

Overall Term: 09/2020 - 06/2023 (preparation)

Volume: planned GCF project: ca. 40,000,000 EUR

Timeline: Intended project start in Q4/2023

“Thai Rice: Strengthening climate-smart rice value chains”

Objective

Facilitate a paradigm shift towards sustainable, climate-smart rice cultivation and consumption. Reduce climate vulnerability of up to 250,000 smallholder rice farmers and reduce GHG emissions by at least 4 million tons of CO2 equivalent.

Approach

Scale-up climate-smart rice farming across both mitigation and adaptation goals and through an **innovative financial mechanism**. The project will work across three complementary outputs:

1. Farmers apply climate-smart rice farming technologies and practices
2. Service providers supply climate smart technologies to rice farmers
3. Market linkages and an enabling political environment promote climate-smart rice farming

GREEN CLIMATE FUND

german cooperation

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GCF-UNDP: Enhancing climate resilience in Thailand through effective water management and sustainable agriculture

Countries: Thailand (Phitsanulok and Sukhothai)

Partner(s): GCF, UNDP, RID

Overall Term: Q2/2022 – Q2/2027

Objective

To adapt water management and agricultural livelihoods in the Yom and Nan river basins to climate change induced extreme weather events (i.e., droughts and floods)

Approach

1. Improving climate information and cross sectoral coordination to enhance climate risk informed planning in the water and agricultural sectors
2. **Strengthening water infrastructure by Ecosystem based Adaptation (EbA) measures to improve water management (RID/GIZ)**
   - **Conduct diagnostic analysis (i.e. vulnerability and risk assessment and economic evaluation)**
   - **Implement three selected EbA solutions**
   - **Integrate EbA measures into water management rehabilitation policy and plans**
3. Implementing on-farm adaptation measures to reduce volatility of agriculture livelihoods in drought and flood prone areas

GEF Inclusive Sustainable Rice Landscapes in Thailand

Countries: Thailand

Partner(s): SRP, UNEP GEF

Preparation phase:

Period: 2019 – 2022

Volume: 100,000 Euro

Implementation Phase

Period: Q4/2022 -Q4/2026

Volume: 5,500,000 USD +1,400,000 EUR (BMZ)

https://www.asean-agrifood.org/

Objective

Transforming Thai rice sector and value chain for environmental sustainability by upscaling Good Agricultural Practices through SRP Standard. To improve sustainable rice landscape, watershed, water efficiency, biodiversity, and to reduce GHG emission, toxic chemical usage to environment

Approach

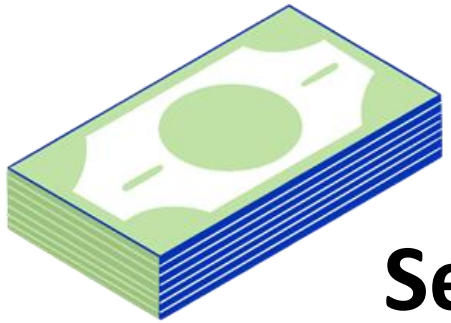
- National policy and institutional development for integrated multi-sectoral management of sustainable rice landscapes
- Integrated landscape management for productive agriculture and environmental sustainability in twoprovinces
- Upscaling of sustainable rice production and value chains through model provincial rice sector investments
- Knowledge management and outreach for national and regional replication and impact assurance systems

Thank You

Reflect on the examples shared…

- What are the key lessons learned on accessing climate finance for agriculture you take away from the presentations and these examples?
- What are good examples you would like to share of accessing climate finance for agriculture in your country?
- How could development of the climate finance project investment pipeline for agriculture be improved/strengthened?

Coffee/Tea Break



Session 5: 15.00-16.40

- **Moving beyond grants – Options to attract climate finance to agriculture sector priorities**
- **Perspectives from public and private finance providers at national, regional and global levels**

Kunduz Masylkanova
Green Climate Fund (GCF)

Chrissa Mari Borja
Grow Asia Investment Academy

Sakshi Chadha
United Nations Capital Development Fund (UNCDF)

Tanja Havemann
Clarmondial

Beau Damen
FAO

Inclusive Sustainable Rice Landscapes

Securing multiple environmental benefits and improved farmer welfare

gef

Food and Agriculture Organization of the United Nations

UN environment

wbcsd

SRP Sustainable Rice Platform

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by giz

IRRI

GREEN CLIMATE FUND

ASEAN - CRN Knowledge Exchange:
Moving beyond grants

Kunduz Masylkanova, Senior Agriculture and Food Security Specialist
Division of Adaptation and Mitigation

March 29, 2023

GREEN CLIMATE FUND

Who we Are

The world's largest dedicated climate fund

Set up by the UNFCCC, and serving the Paris Agreement

Supporting developing countries to transition to low-emission, climate-resilient societies

GREEN CLIMATE FUND

Areas we Focus

Mitigation
(for Emission Reduction)

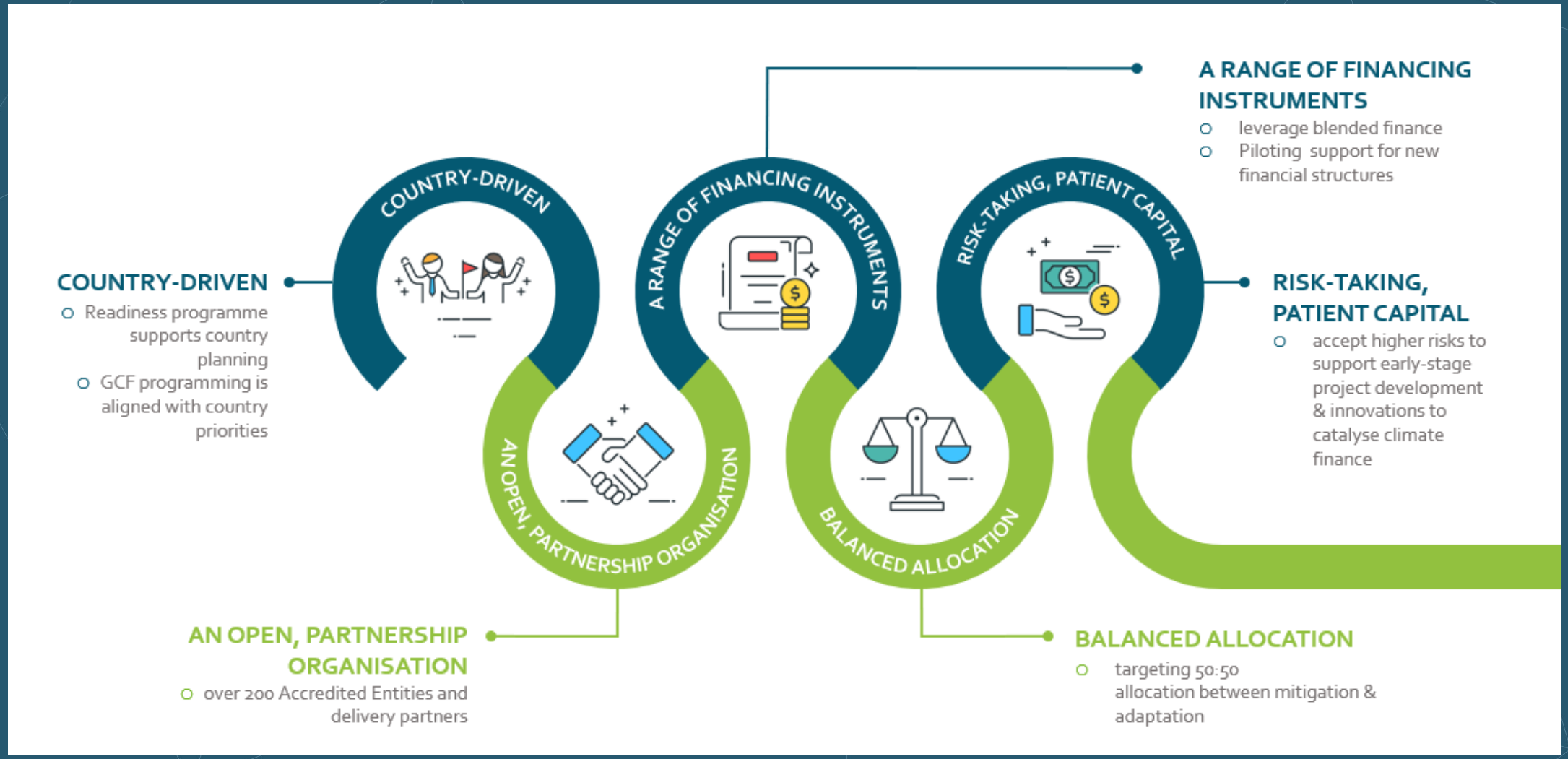
Adaptation
(to Climate Impacts)

GREEN CLIMATE FUND

Mobilizing Climate Finance toward Investments with the GCF

GREEN CLIMATE FUND

How we Work



COUNTRY-DRIVEN

- Readiness programme supports country planning
- GCF programming is aligned with country priorities

A RANGE OF FINANCING INSTRUMENTS

- leverage blended finance
- Piloting support for new financial structures

RISK-TAKING, PATIENT CAPITAL

- accept higher risks to support early-stage project development & innovations to catalyse climate finance

AN OPEN, PARTNERSHIP ORGANISATION

- over 200 Accredited Entities and delivery partners

BALANCED ALLOCATION

- targeting 50:50 allocation between mitigation & adaptation

GREEN CLIMATE FUND

How we Invest

Additionality of GCF Funding

Why GCF?

Projects should crowd-in additional financing on top of GCF whenever possible

Projects should have scale-up potential

Can support incremental cost of making a project climate proof

Aligned to GCF's Six Investment Criteria

Country-Driven Approach

Alignment with NDCs and other relevant country strategies

Early country engagement

Stakeholder driven

Strong Climate Science Basis

Climate impact of investment is key

Scientific evidence should be provided

Paradigm Shifting Idea

Context-driven

Changes market, behavior, or other aspect(s)

Private Sector Involvement

Leverage private sector involvement if possible

Projects should provide appropriate concessionality and de-risking opportunities

Use a flexible range of instruments

- Loans
- Guarantees
- Equity
- Grants

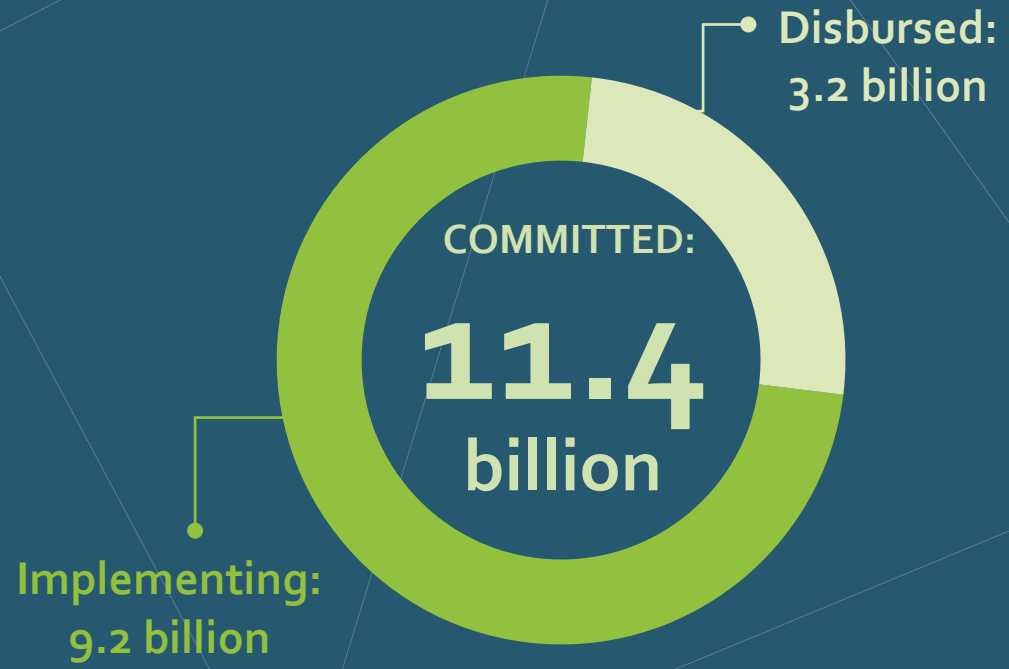
GREEN CLIMATE FUND

Fund and Sector Specific Investments

GREEN CLIMATE FUND

GCF in Figures *(USD)*

TOTAL GCF PORTFOLIO COMMITMENT



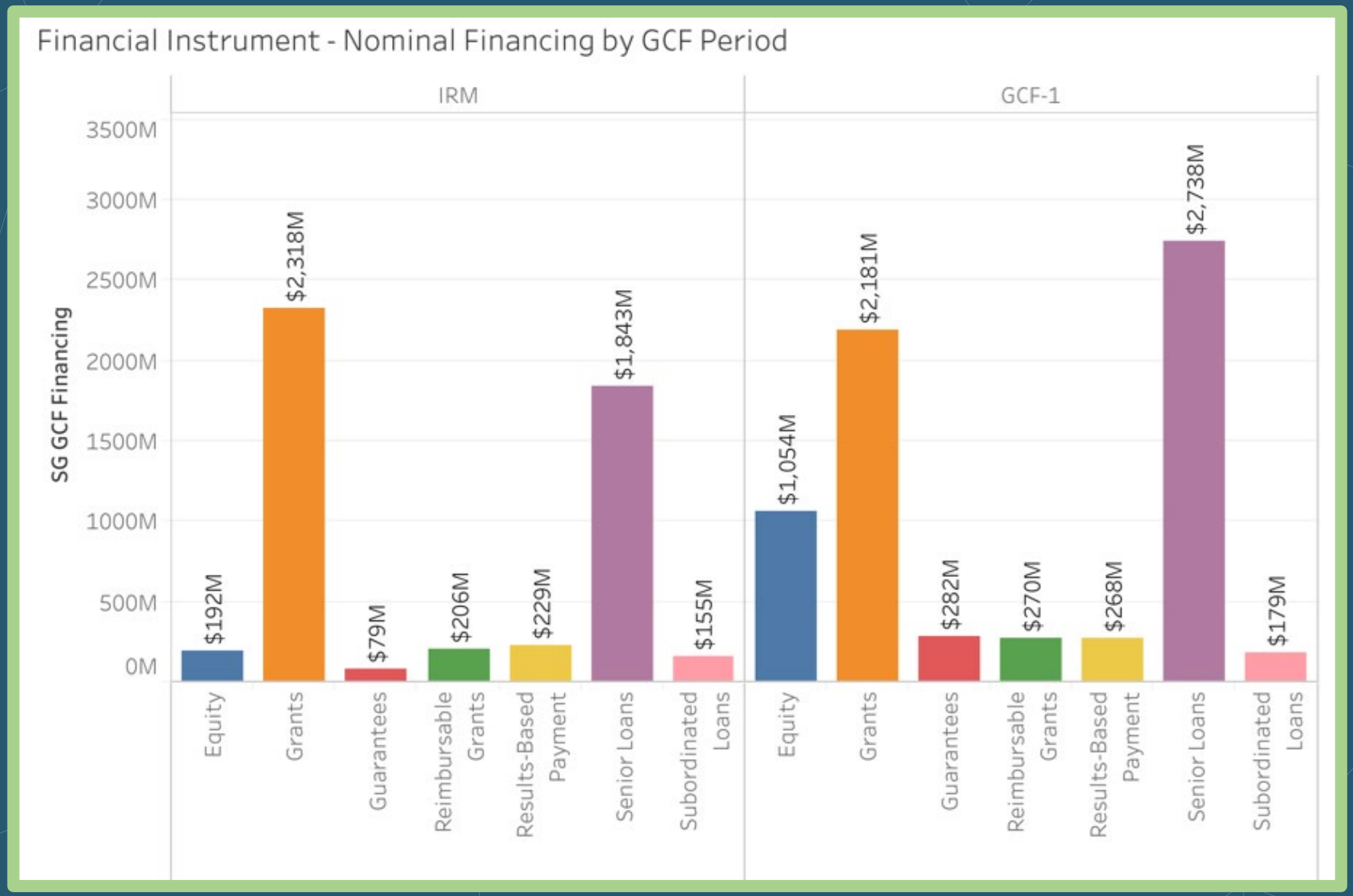
PORTFOLIO VALUE, INCLUDING CO-FINANCING:

42.7

billion

As of March 2023

Evolution of Financial instruments



Agriculture

01

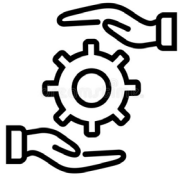
Promoting Resilient Agriculture

- Variety improvement
- Diversity
- Practices

02

Facilitating Climate Informed Advisory and Risk Management Services

- Climate & EWS
- Advisory & extension
- Index insurance



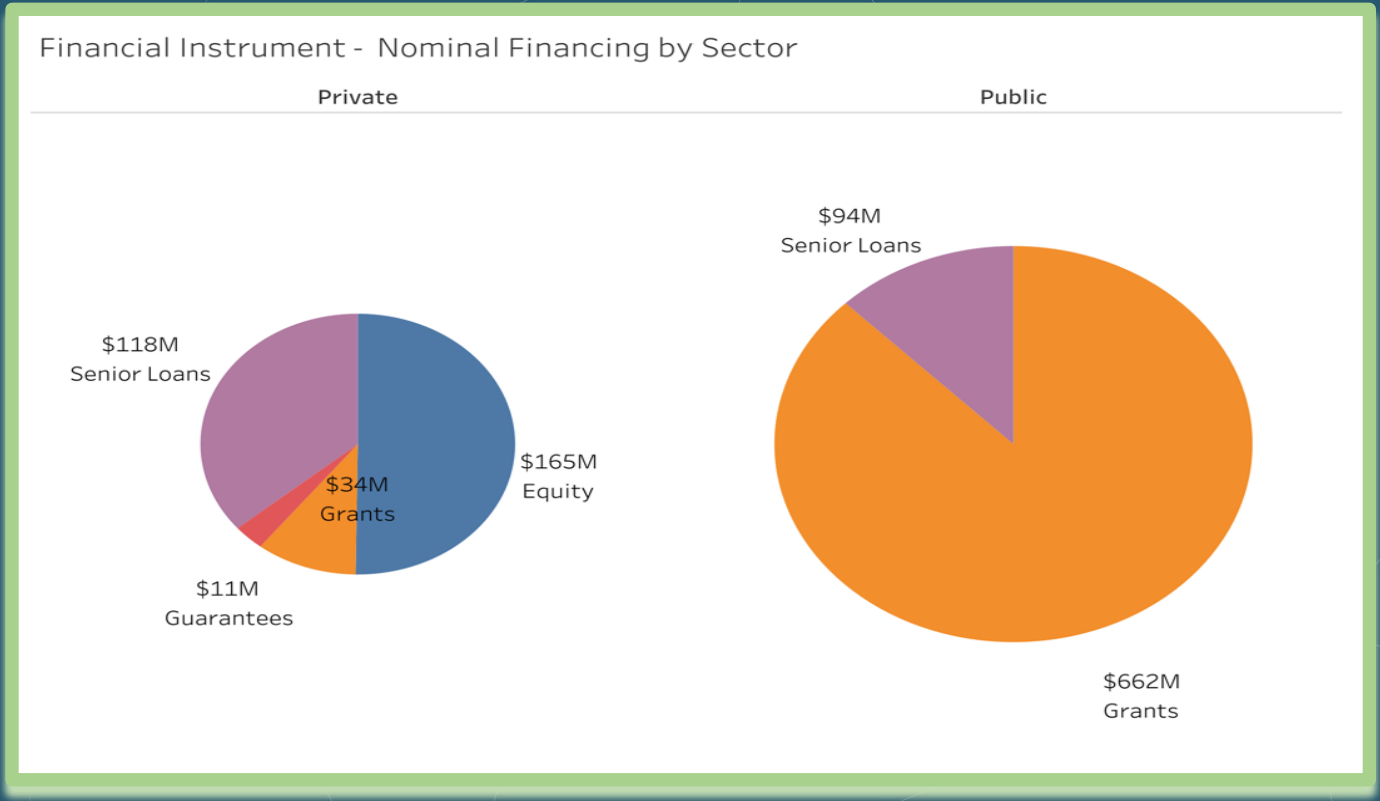
03

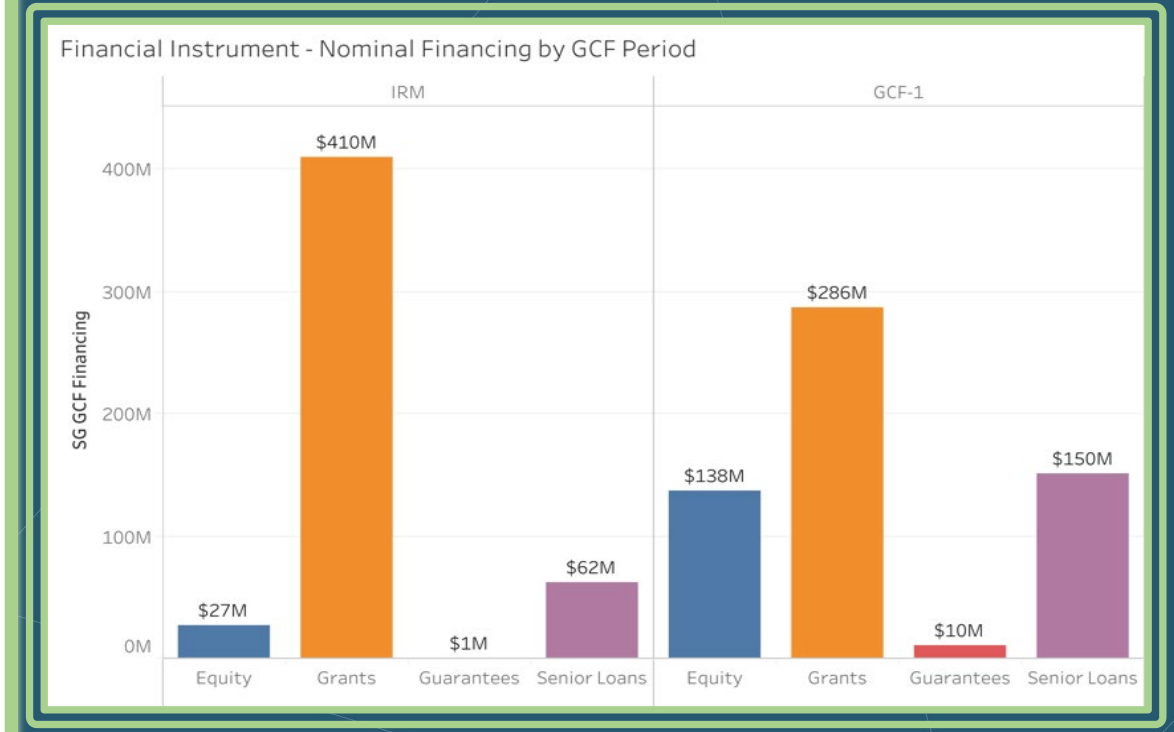
Reconfiguring Food Systems

- Supply chains / resilience
- Food loss
- Demand

Three complementary paradigm shifting pathways

Agriculture and food systems





FP 156: ASEAN Catalytic Green Finance Facility (ACGF): Green Recovery Program

Designed as Asia's **first regional 'green recovery'** programme, this initiative aims to kickstart countries' **low-emission investments** to support economic recovery following COVID-19. By catalysing increased **climate finance** from **private and public sectors**, the programme will support at least 20 high-impact, low-emission sub-projects in the region in agriculture, energy and urban sectors.

- ✓ **GCF Funding:** USD 300 M in loan and grants
- ✓ **Total Programme funding:** USD 300~ 635 M
- ✓ **GCF financing is** to leverage USD 3.7 B of public resources from several international institutions to mobilize over $ 7 billion from the private sector.
- **Accredited Entity:** Asian Development Bank

4- Cambodia, Indonesia, Laos, Malaysia, Philippines

https://www.greenclimate.fund/project/fp156

Water

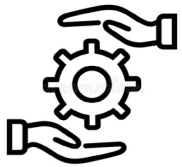
01

ENHANCE WATER CONSERVATION, WATER EFFICIENCY AND WATER REUSE

- Demand management
- Smart digital water management
- Decentralized models
- Resource recovery

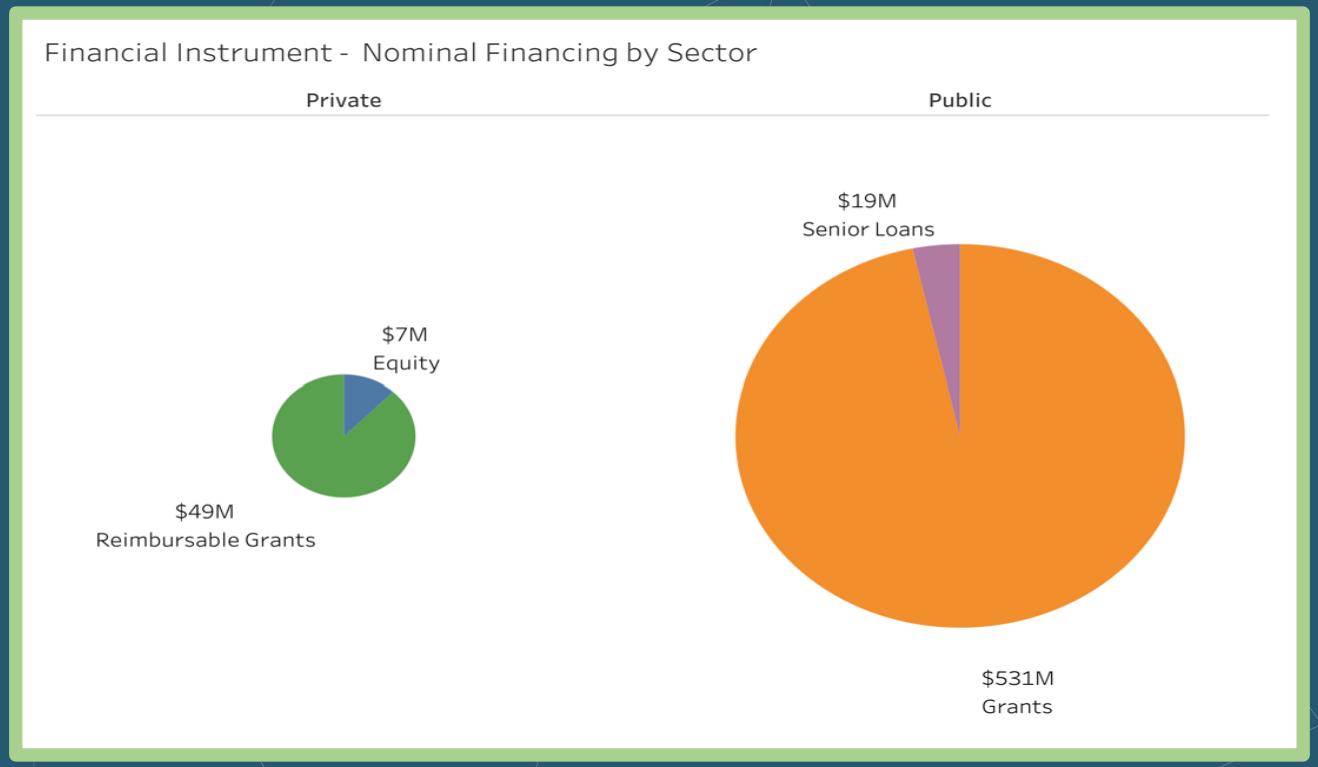
02

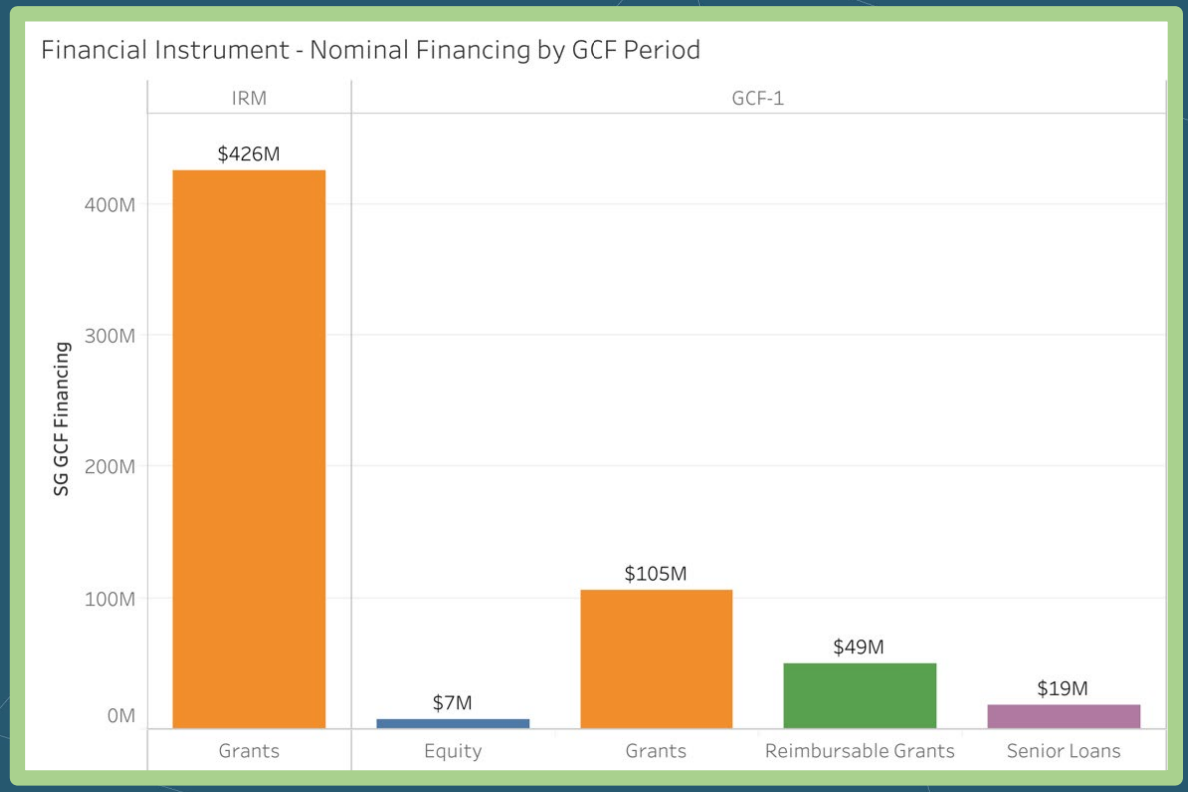
STRENGTHEN INTEGRATED WATER RESOURCES MANAGEMENT & WATER MANAGEMENT



- IWRM
- Ecosystem-based Management
- Alternative water sources

Two complementary paradigm shifting pathways





Water security

FP014 Climate Adaptation and Mitigation Program For the Aral Sea Basin (CAMP4ASB)

Scaling up the Climate Adaptation and Mitigation Program for Aral Sea Basin (CAMP4ASB) supports **adaptation** activities in Tajikistan and Uzbekistan. Providing grants to the most vulnerable communities for **climate resilient measures** in priority areas, including to the poorest populations residing in risk-prone areas, and marginalized groups such as women.

- ✓ **GCF Funding:** USD 19 million in grant
- ✓ **Total Programme funding:** around USD 69 M
- ✓ **Accredited Entity:** World Bank

2 – Uzbekistan, Tajikistan

https://www.greenclimate.fund/project/fp014

Ecosystems and ecosystem services

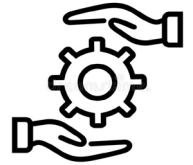
01

ECOSYSTEM-BASED MANAGEMENT OF TERRESTRIAL AND FRESHWATER ECOSYSTEMS

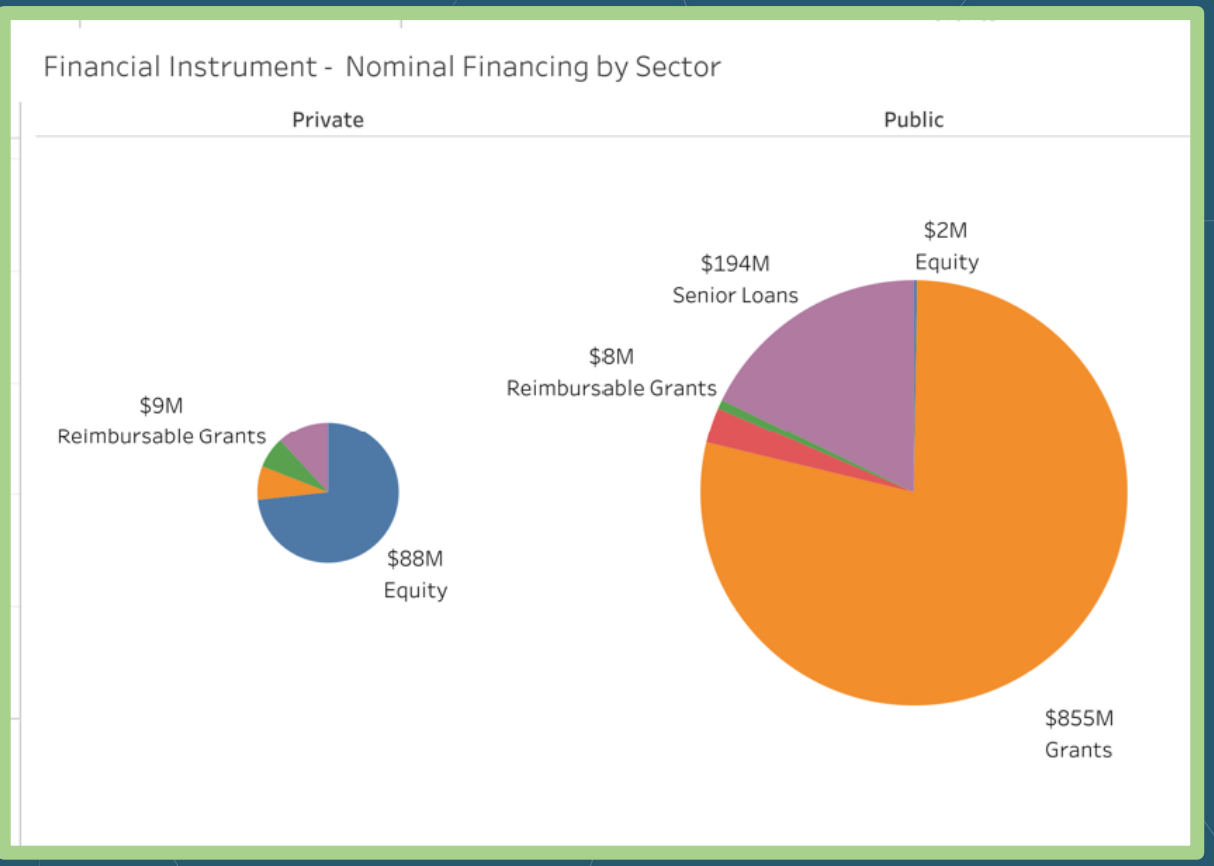
- landscape protection and restoration interventions
- maintaining or enhancing ecosystem function
- terrestrial and freshwater ecosystems management and mainstreaming

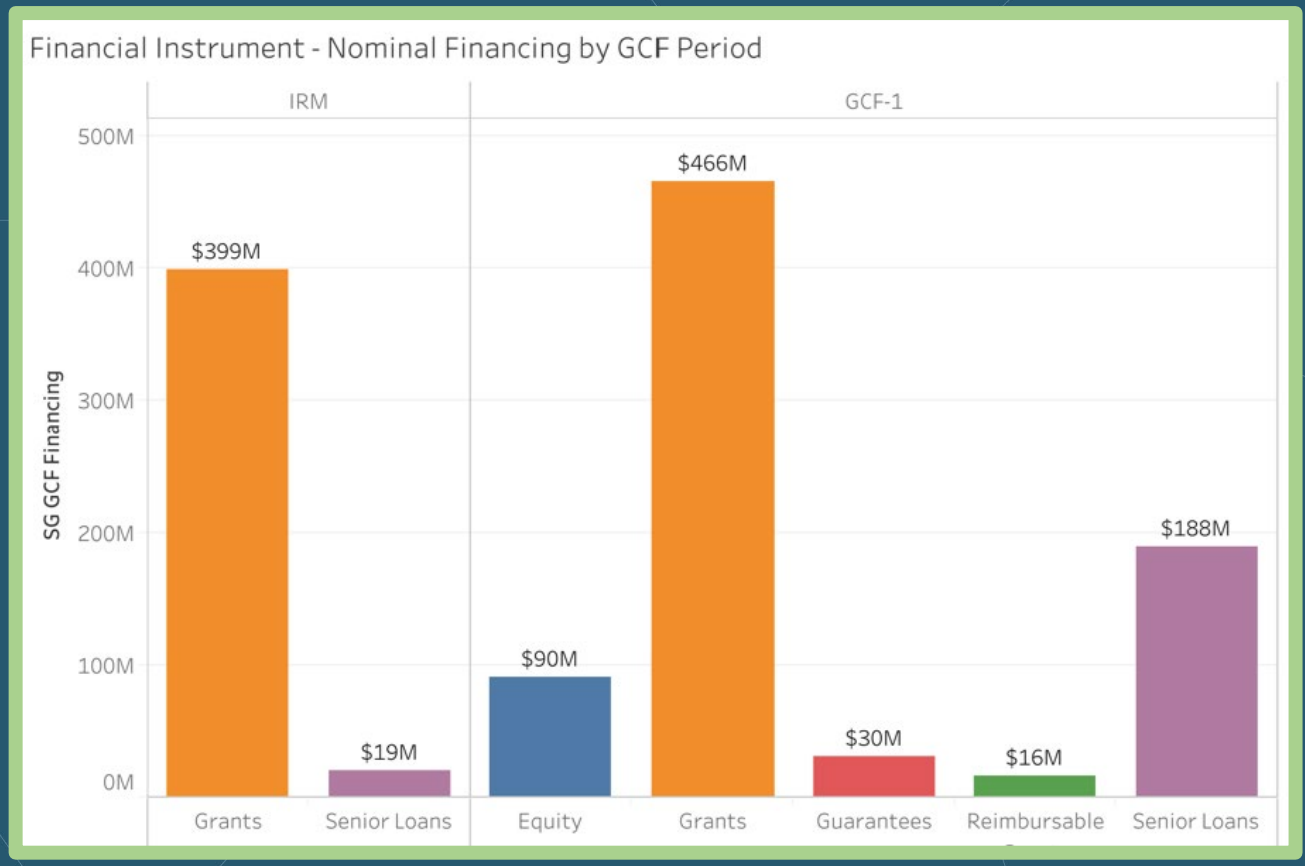
02

ECOSYSTEM-BASED COASTAL ZONE AND MANAGEMENT



Two complementary paradigm shifting pathways





Ecosystems and ecosystem services

FP180 Global Fund for Coral Reefs Investment Window

As GCF's first at-scale private sector programme in the **blue economy**, the Global Fund for Coral Reefs Investment Window (implemented with **Pegasus Capital Advisors** LP) will create a **private equity fund** to encourage investments in the blue economy, **protecting coral reefs**. It aims to address critical financing and **private investment barriers** centred around the blue economy.

- ✓ **GCF Funding:** USD 125 million in equity
- ✓ **Total Programme funding:** USD 500 M
- ✓ **Accredited Entity:** Pegasus Capital (Private Sector)
- ✓ **Role of GCF:** First-loss position as an anchor investor.

17 – Bahamas, Belize, Brazil, Colombia, Comoros, Ecuador, Fiji, Guatemala, Indonesia, Jamaica, Jordan, Mexico, Mozambique, Panama, Philippines, Seychelles, Sri Lanka

LDCs, SIDS, African States

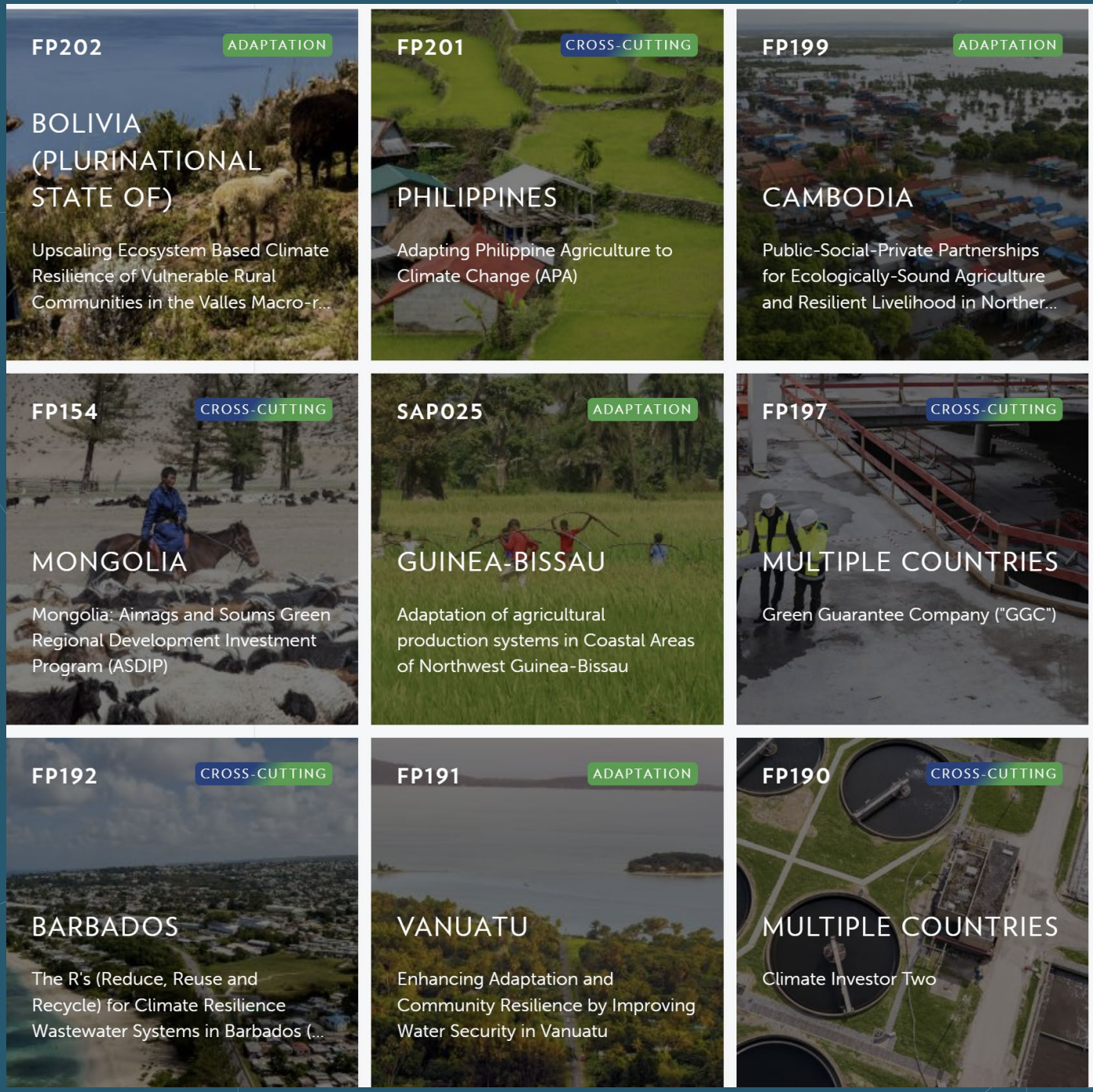
https://www.greenclimate.fund/project/fp180

Health, food and water security

Livelihoods of people and communities

Forests and land use

Ecosystems and ecosystem services



GREEN CLIMATE FUND

Thank you

UNCDF

Impact Capital for Development

Catalytic financing tools for climate finance in agriculture

Leveraging the Development Impact of Capital in Asia

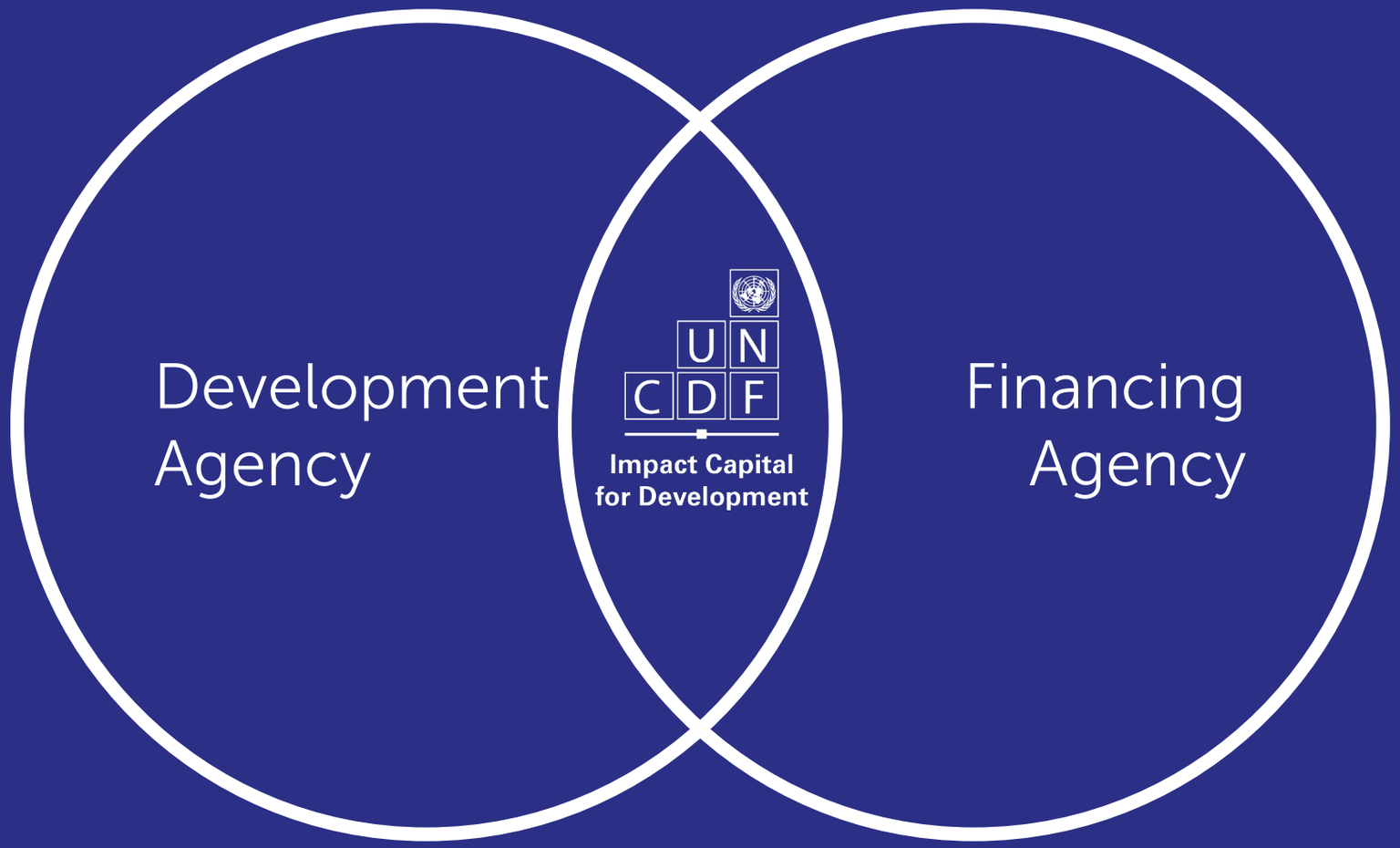
Impact Capital for Development

THE UNCDF OFFER

WHAT UNCDF DOES

Impact Capital for Development

With its **capital mandate** and **instruments**, UNCDF's objective is to **unlock additional public and private capital flows to reduce poverty and make sustainable development work for countries**.



2030 Agenda

Market Analysis

Policy and Advocacy

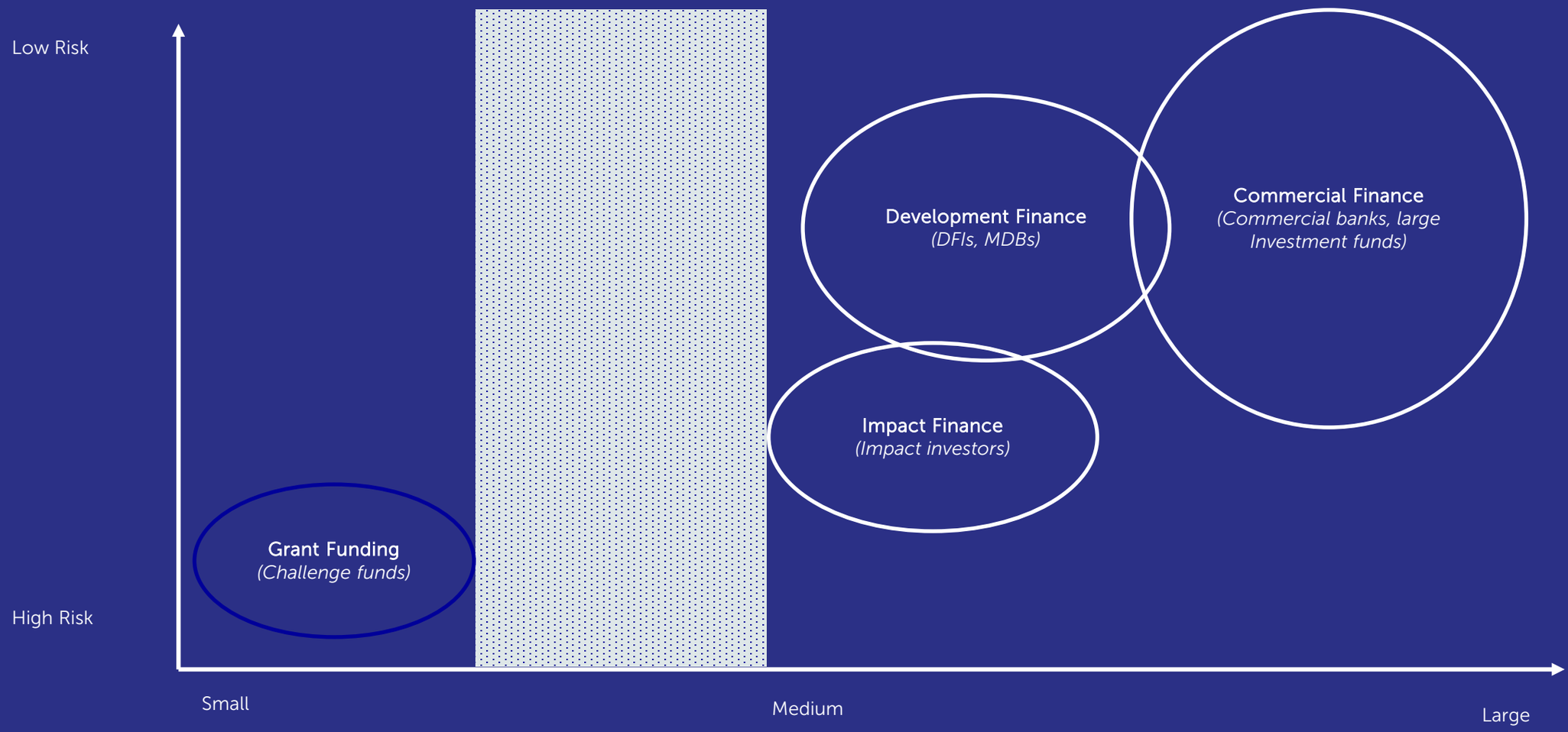
Technical Assistance

Investment Instruments

THE GAP IN THE DEVELOPMENT FINANCE ARCHITECTURE

Impact Capital for Development

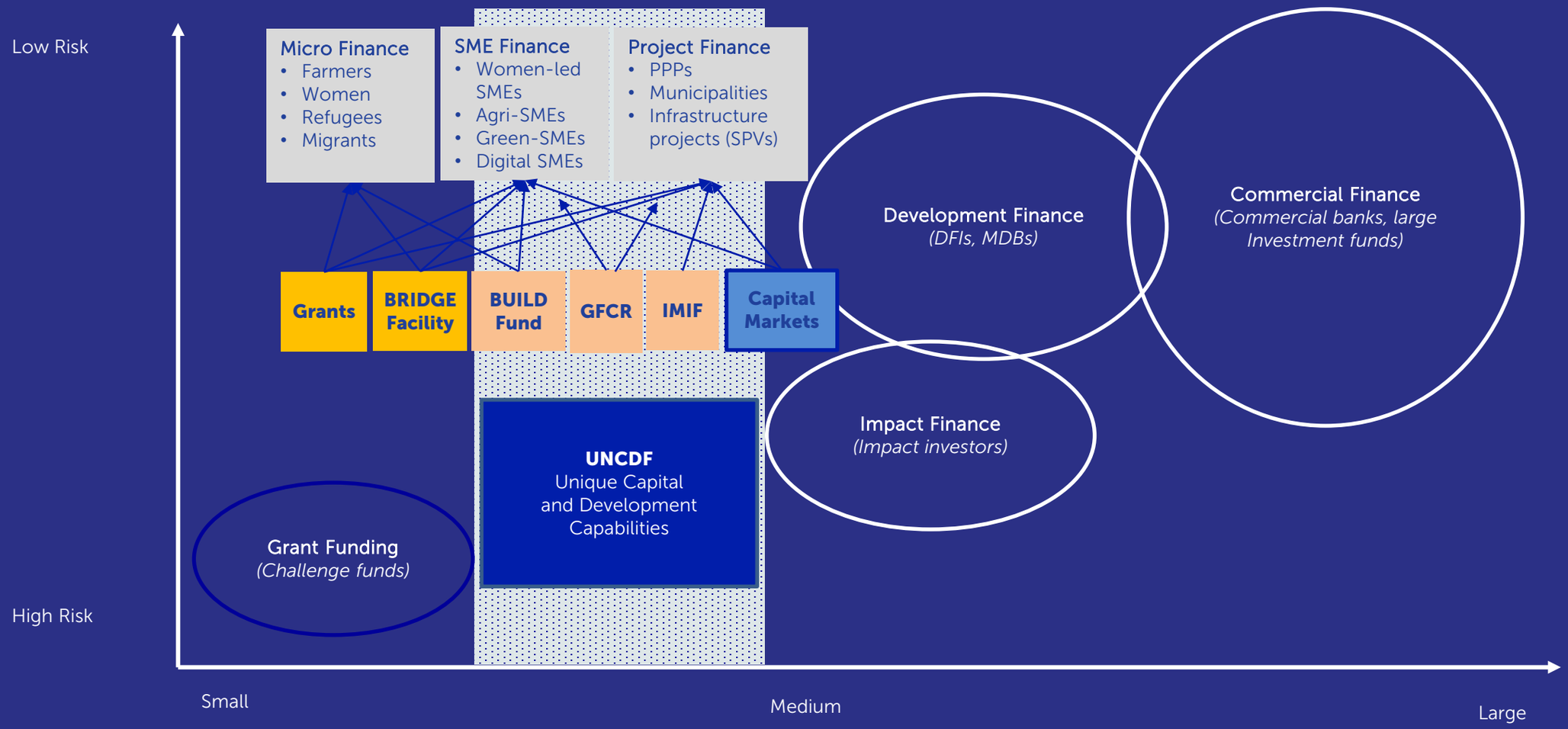
There is a gap in the development finance architecture to properly address the financing shortfalls impeding the achievement of the SDGs.



UNCDF FILLING THE GAP

Impact Capital for Development

Financing solutions that help fill the missing middle financing gap.



UNCDF - A UNIQUE TOOLKIT TO LEVERAGE PRIVATE AND PUBLIC FUNDING

UNCDF
Impact Capital for Development

⑧ **Blended financing**
Blended capital, including grants, concessional financing, commercial debt, equity, and third-party managed funds.

⑦ **Equity-like investment**
A grant with contingent repayment (receive payments from a grantee when the grantee generates a revenue stream following receipt of a UNDP grant) is used as a direct capital contribution to a company, or PPP, usually to send a signal to other investors and attract additional capital.

⑥ **Technical assistance grant**
Grant is provided to a company to strengthen the design of a project and increase the chances of crowding in finance. Can be combined with other forms of finance.

⑤ **Investment grant**
Grant is used to reduce the project's overall cost and the total investment required from other actors. It increases the project's financial viability and makes external financing more likely.

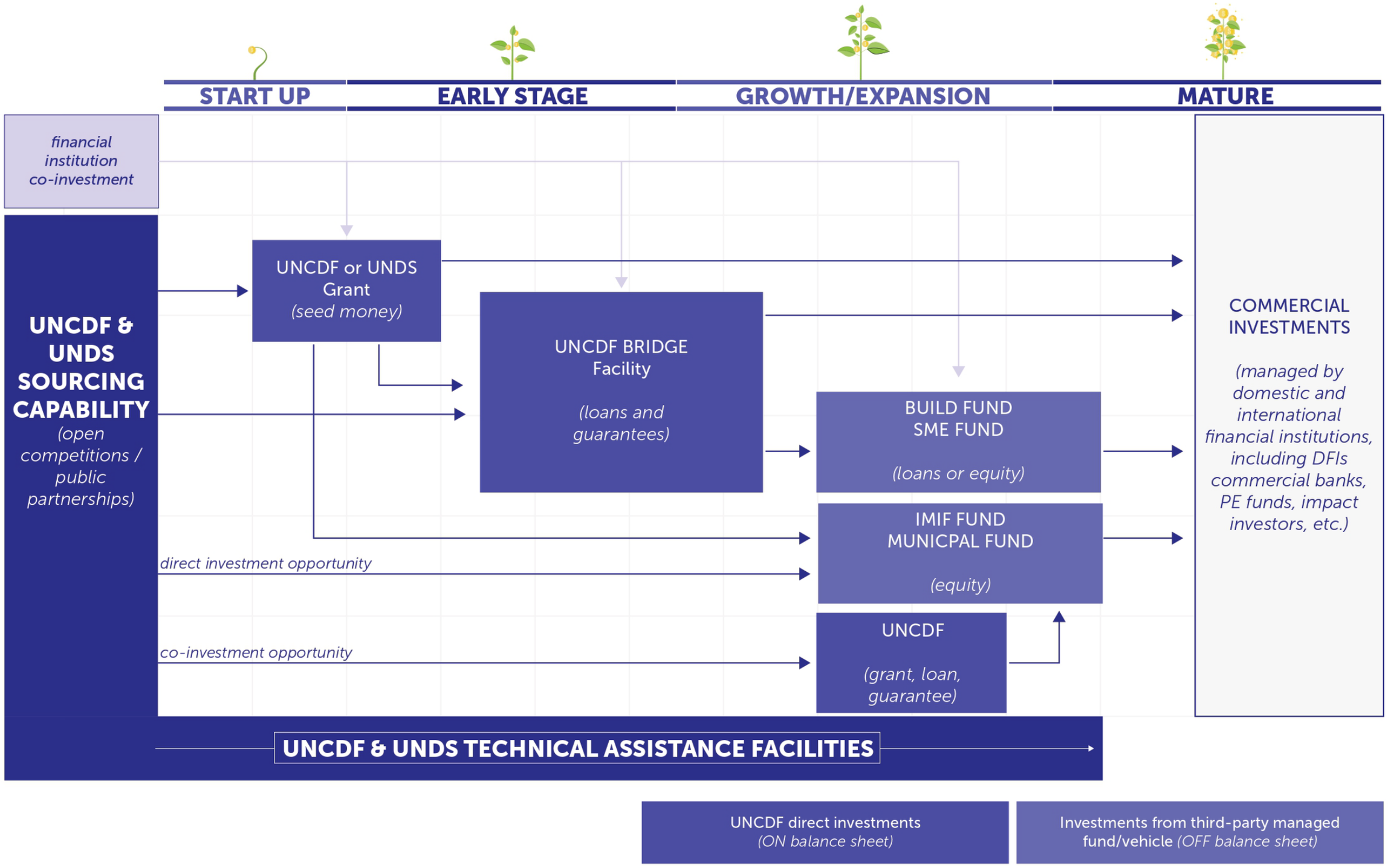
① **Loan guarantee**
Guarantee issued to secure debt liabilities in case of default so that lender agrees to finance the project or to do so on better terms.

② **Interest rate subsidy**
Grant used to cover part of the interest payments: project beneficiary thus receives a subsidized loan at a below-market interest rate, and/or including affordable climate risk insurance products targeting agriculture. The interest rate subsidy is generally provided in relation to loans from third parties.

③ **First loss**
Finance tranche with a lower priority for repayment than debt issued by other financiers. In the case of default, UNCDF absorbs the losses first.

④ **Concessional loan**
Finance tranche with a lower priority for repayment than debt issued by other financiers. In the case of default, donors absorb the losses first.

UNCDF INVESTMENT CONTINUUM



Impact Capital for Development

THE UNCDF SOLUTIONS

GLOBAL LOCAL CLIMATE ADAPTIVE LIVING FACILITY

LoCAL

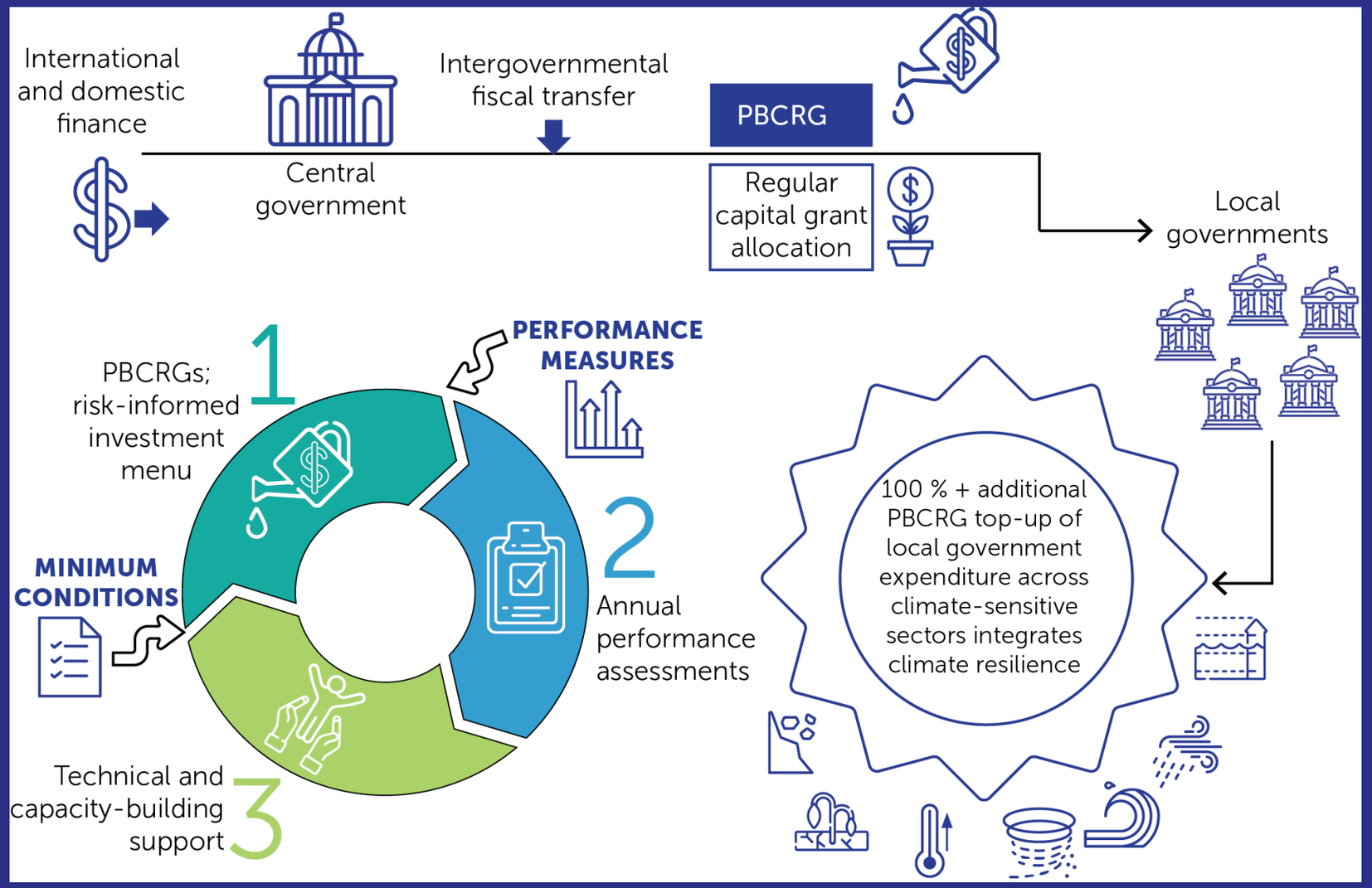
UNCDF
Impact Capital for Development

LoCAL

A mechanism for financing **locally led adaptation** to enable local authorities and their communities to contribute to the implementation of the **Paris Agreement, NDCs, NAPs** and SDG 13 and deliver on Paris Agreement commitments.

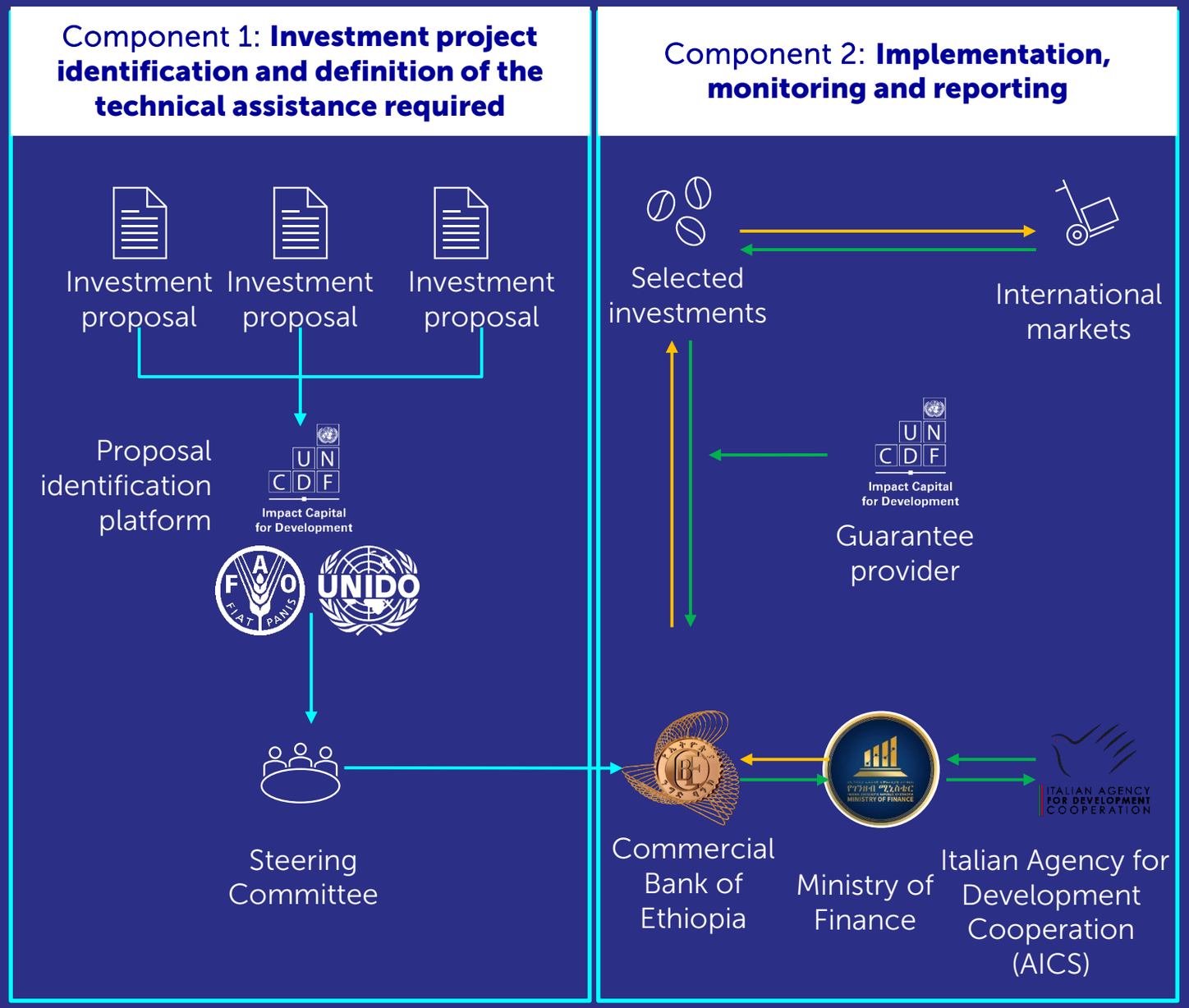
- Designed by UNCDF to help local governments and their communities **access and effectively use climate finance at the local level**
- Promotes the **integration** of climate change adaptation (CCA) in **local government planning and budgeting systems** in a participatory and gender sensitive manner
- Uses innovative **Performance-Based Climate Resilience Grants** (PBCRGs) to guarantee programming and verification of local adaptation expenditures

uncdf.org/local



EXAMPLE: DE-RISKING INVESTMENTS IN THE COFFEE SECTOR IN ETHIOPIA

The FAO-UNCDF-UNIDO joint programme employs a combination of de-risking mechanisms including technical assistance and credit guarantees to encourage investment in coffee value addition



Initiative overview:

The project aims at driving investment in the form of **loans towards coffee value addition** strengthening the sector in Ethiopia for both **employment and foreign exchange generation**.

UNCDF contribution:

Advisory

Advise on the minimum viable ecosystem

Designing investment selection criteria

Identifying need for technical assistance to increase bankability

Transaction

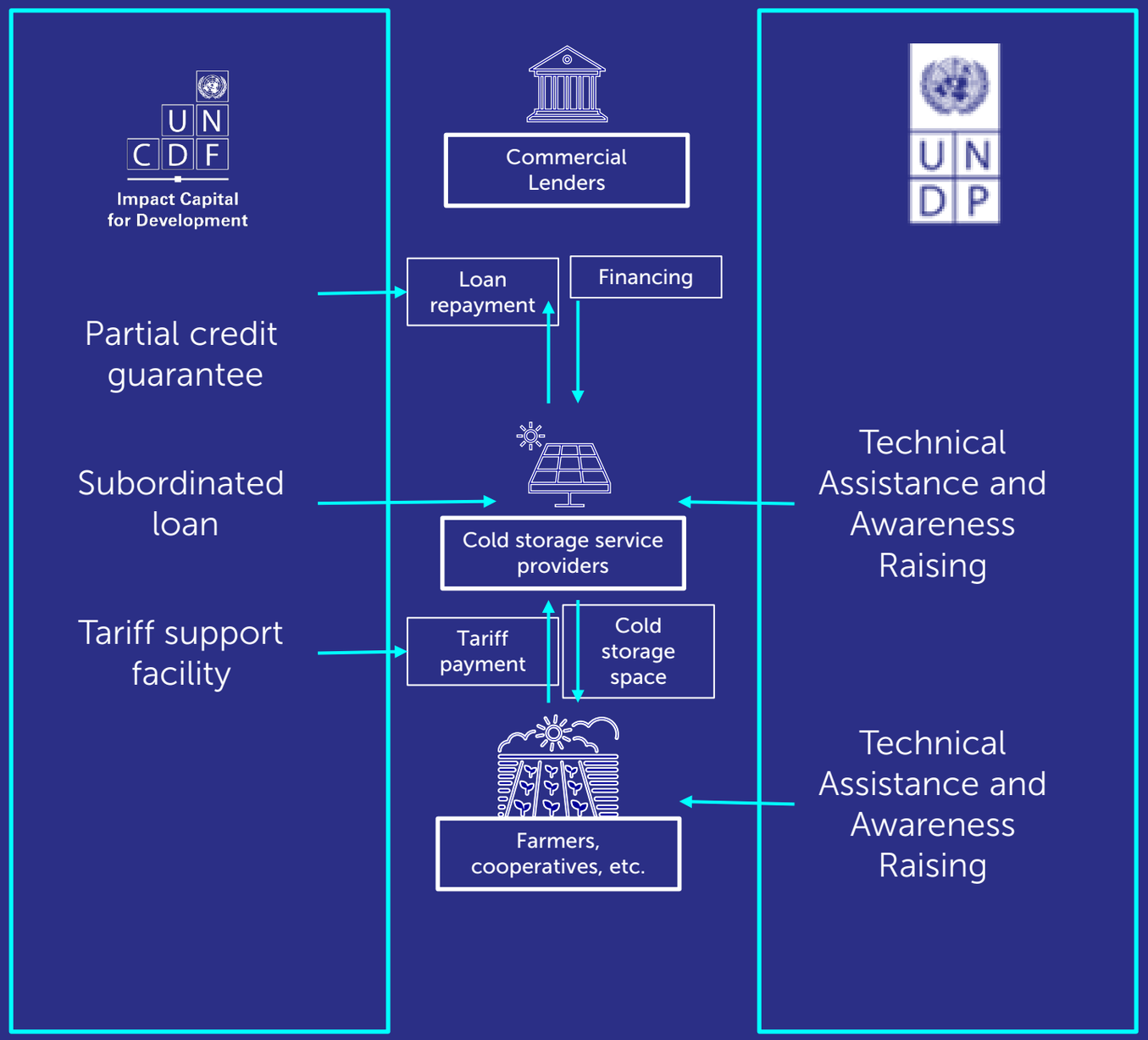
Provide credit guarantee to the Commercial Bank of Ethiopia or market guarantee to selected coffee producers

Policy

Leverage demonstration effect with the Ministry of Finance of Ethiopia to enable policy development

EXAMPLE: COLD CHAIN STORAGE TO REDUCE POST-HARVEST LOSSES IN KENYA

The UNDP-UNCDF Joint Proposal to the NAMA Facility aims at reducing CO2 emissions by limiting post-harvest losses through adoption of cold storage services across the agriculture value chain



Initiative overview:

The NAMA-supported projects **aim at reducing post-harvest loss by encouraging the adoption and use of cold storage services** through:

(i) a flexible financial mechanism to drive investment,
(ii) raising awareness around the benefits and opportunities in cold storage services, and
(iii) targeted technical assistance and training to cold chain service providers, farmers and financiers.

UNCDF contribution:

Advisory

Coordinate with banks and ensure their participation
Develop the financial mechanism to drive investment
Evaluate the bankability of cold storage service providers

Transaction

Extend partial credit guarantee to eligible loans
Provide subordinated debt to cold storage service providers
Maintain a tariff support facility covering payment delays

EXAMPLE: BLENDED FINANCE FOR FOOD SECURITY IN RWANDA

A blended finance facility to scale-up access to finance in the agricultural value chain for youth-led MSMEs

WFP

mastercard

Budget: $15M

Timeline: 2021-2026

Initiative overview:

The project aims to create **market access for smallholder farmers, improve quality and reduce post-harvest losses**

Impact

- 200K smallholder farmers (50% women)
- 600 aggregators trained in farming (60% women)
- 600 MSMEs accessing financial products/instruments
- 6,000 saving groups organized (60% women membership)
- 117K jobs created (with 116,000 on-farm and 1,200 off-farm)

UNCDF contribution:

Creation of a **Blended Finance Facility** to provide concessional loans and technical assistance (budget - $5M)

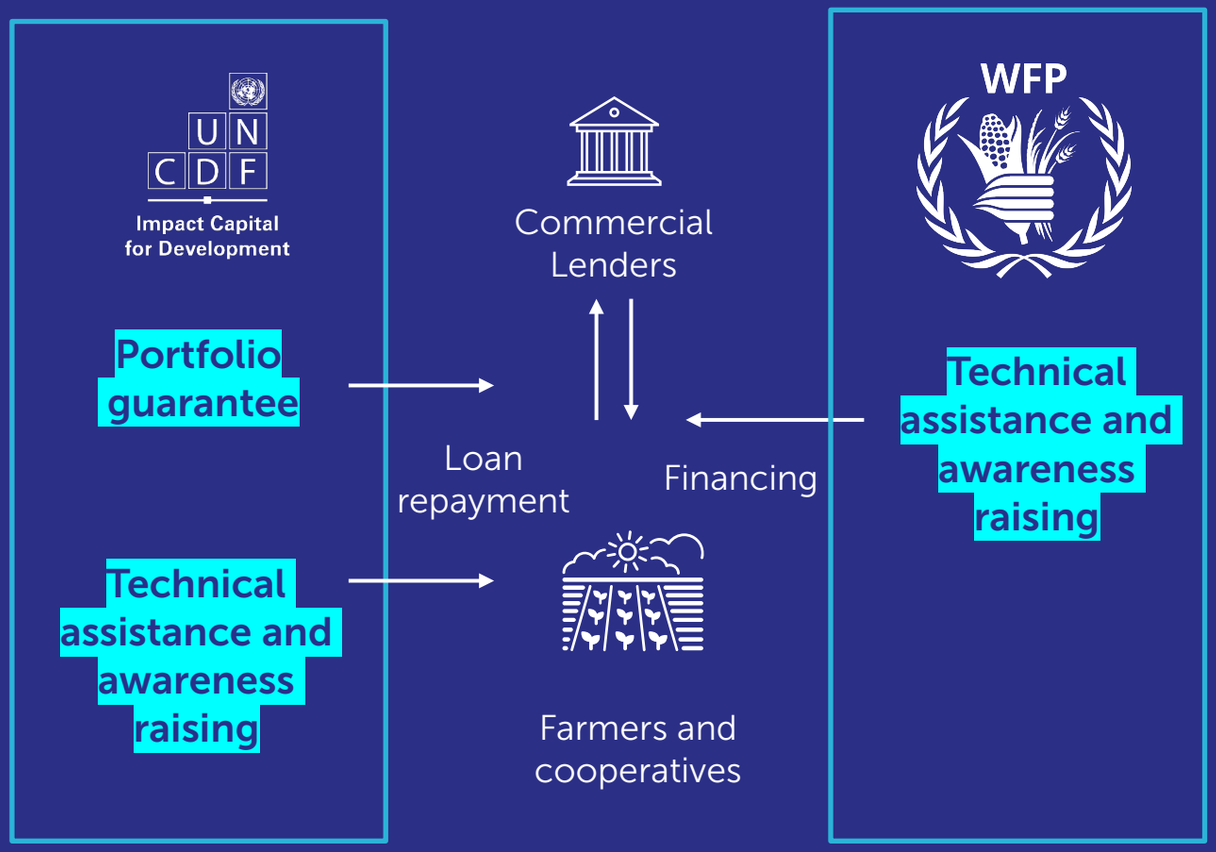
Sourcing businesses from the existing pipeline of WFP Rwanda

Application of **capital instruments** - working capital and medium-term loans

Providing **technical assistance, business advisory and mentoring services**

Fund management and monitoring

EXAMPLE: BLENDED FINANCE FOR FOOD SECURITY IN GHANA



Initiative overview:

WFP has programmes that **support smallholder farmers** including through technical assistance. The farmers need **financial literacy training and access to finance for their businesses** which initiated the WFP-UNCDF cooperation.

UNCDF contribution:

Advisory

Support WFP on the financial literacy component of their technical assistance interventions leveraging UNCDF's expertise

Advisory on the structuring and deployment of a portfolio guarantee to a local financial institution to de-risk lending to smallholder farmers

Transaction

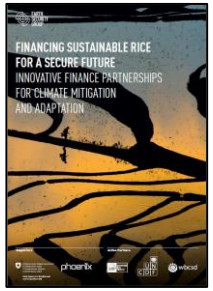
Analysis of the creditworthiness of Premium Foods Limited (PFL), a fortified cereal producer and WFP beneficiary, for a possible investment from the BUILD Fund

Impact Capital for Development

THANK YOU!

For more information please contact:
Sakshi Chadha
Country Lead for UNCDF in Bangladesh
sakshi.chadha@uncdf.org

Sustainable Rice Landscapes Initiative



1. Global Advocacy:
Elevating the global role and importance of rice into UNFCCC and related dialogues

2. Private Sector Engagement
Engaging private sector actors along the value chain with a focus on climate market incentives

3. Scaling landscape financing
Feasibility for bankable blended finance opportunities mechanisms across Asia on rice financing

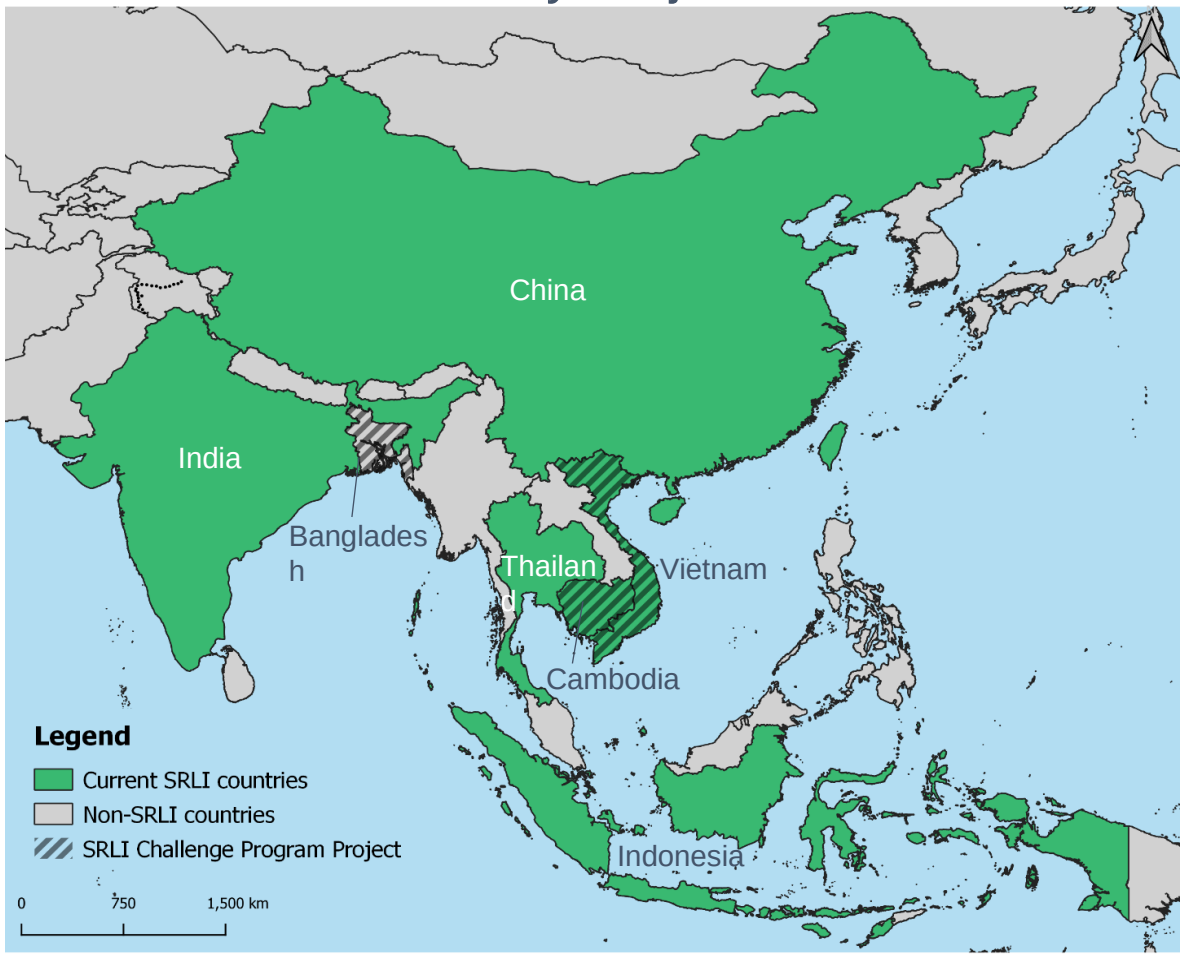
Food and Agriculture Organization of the United Nations
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
IRRI International Rice Research Institute
SRP Sustainable Rice Platform
UN environment programme
wbcsd

Off-takers: Olam, Kellogg's, LIDL, SunRice, MARS

Finance: gef, BNP PARIBAS, Rabobank, ADB, THE WORLD BANK, DBS Development Bank of Singapore

Inputs: BAYER, CORTEVA agriscience, syngenta, YARA

Sustainable Rice Landscapes Initiative (SRLI) Country Projects



The designations employed and the presentation of material in this map do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

	GEF-7 FOLUR	GEF-7 LDCF	GEF-7 Adaptation Challenge Fund	GEF-8 under development
Bangladesh			X	
Bhutan				X
Cambodia		X	X	
China	X			
India	X			
Indonesia	X			
Nepal				X
Pakistan				X
Philippines				X
Sri Lanka				X
Thailand	X			
Timor-Leste				X
Vietnam	X		X	

gef

Food and Agriculture Organization of the United Nations

UN environment

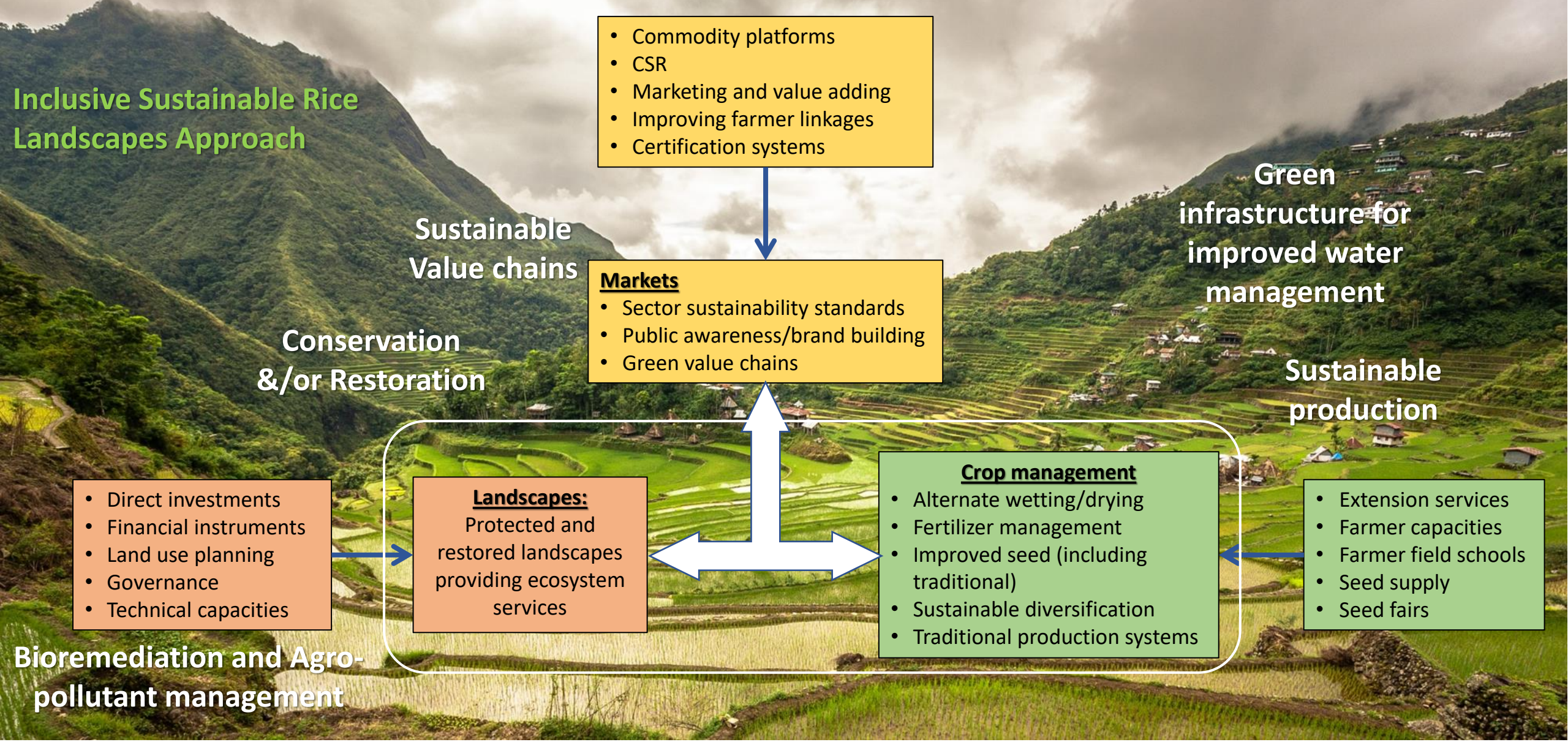
wbcsd

Sustainable Rice Platform SRP

german cooperation DEUTSCHE ZUSAMMENARBEIT

Implemented by giz

IRRI



gef

Food and Agriculture Organization of the United Nations

UN environment

wbcsd

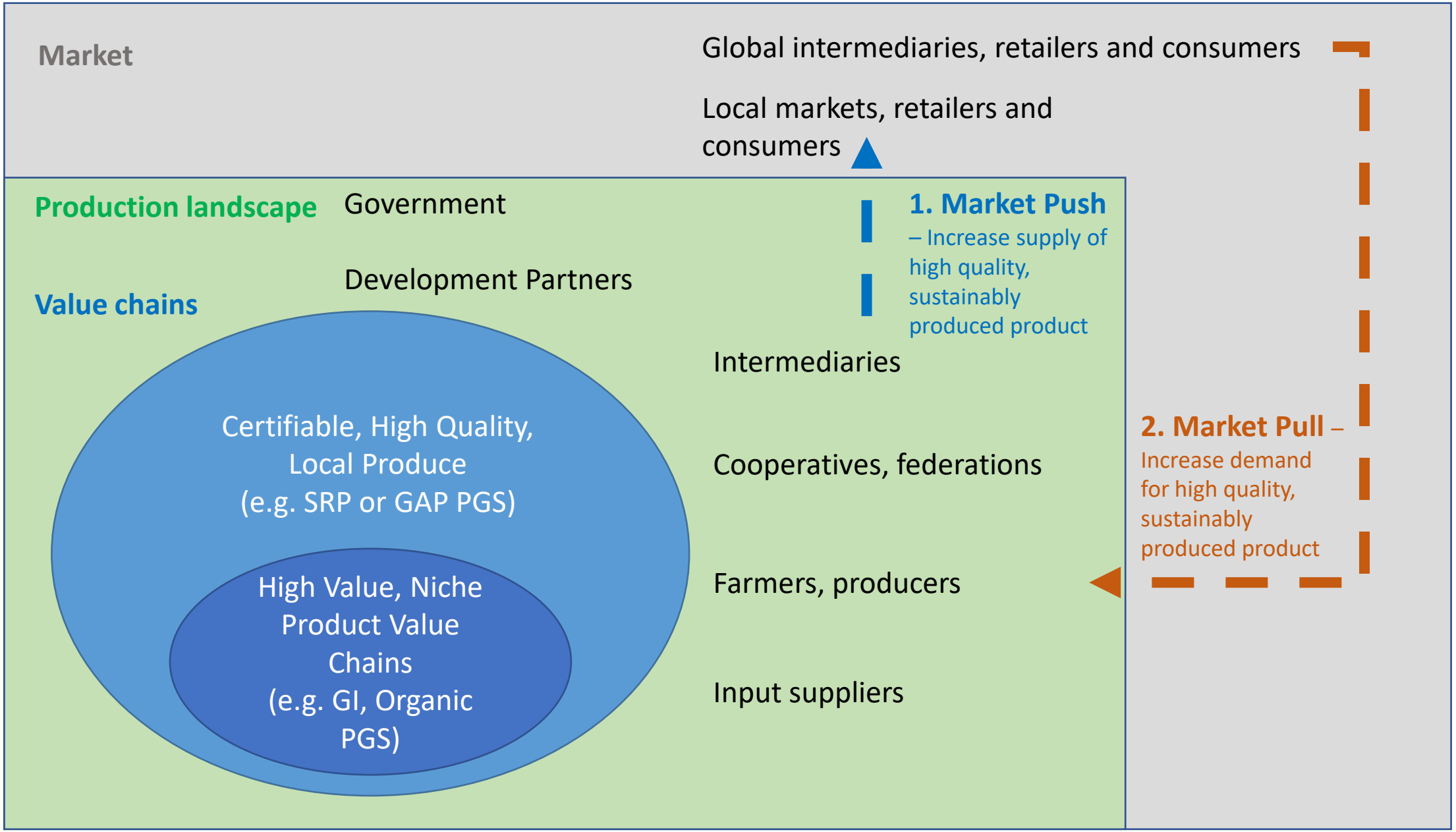
SRP Sustainable Rice Platform

german cooperation

Implemented by giz

IRRI

Simplified market transformation logic



Inclusive Sustainable Rice Landscapes = Environmental and Social Benefits

gef

Food and Agriculture Organization of the United Nations

UN environment

wbcsd

SRP Sustainable Rice Platform

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by giz

IRRI

GEF & SRLI Country Programmes – at a glance

GEF Resources	US$ 50.4 million
Co-Finance	US$ 629 million
Land Under Improved Management	4.2 million Ha
GHG Emissions reduced	122.9 Mt CO2 eq
Beneficiaries	841,000 ~50% women

gef
Food and Agriculture Organization of the United Nations
UN environment
wbcsd
SRP Sustainable Rice Platform
german cooperation
Implemented by giz
IRRI

Challenges to scaling sustainable rice

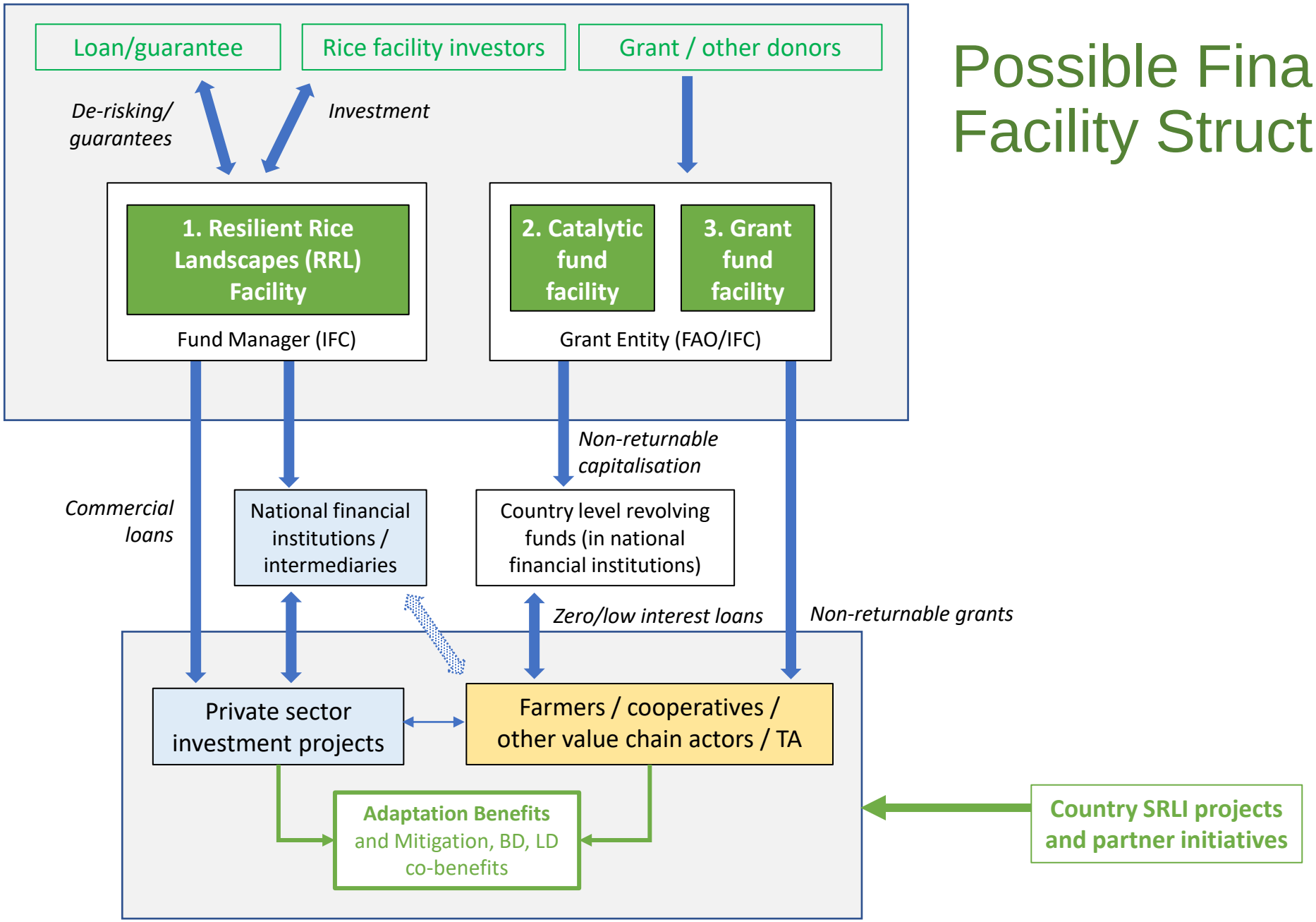
- Aggregation & counterparts: e.g. very large (government - irrigation) and very small (inputs - farmers)
- Fragmented, loose value chains and dominance of informal domestic markets
- Relatively low margins
- Local & international politics including subsidies & dumping
- Farmer & SME financial inclusion including collateral & credit history

Potential strategies to scale sustainable rice technology & practice
R&D
Agronomic support
Inputs and services
Off-take infrastructure
Market building
Finance mechanisms

Looking ahead - GEF Challenge Fund Project

- In 2021, WBCSD and FAO submitted a concept for rice finance facility to the GEF Challenge Fund
- GEF is providing US$1 million over 3 years to develop a finance facility/ a funding proposal
- Objective is to catalyse public and private financing for climate-resilient rice landscapes, value chains and livelihoods
- Project will aim to leverage existing SRLI partnerships, new financial partners (IFC and GCF) and LDCF and FOLUR projects
- Initial target countries include Bangladesh, Cambodia and Vietnam – but opportunities to expand to other countries in Asia and SRLI countries in particular

Possible Finance Facility Structure



Thank you.


Q&A

Group discussion to explore new, innovative climate finance models for agriculture

Guiding Questions

- What was interesting about the finance models presented?
- Are there examples that you can already highlight in your countries?
- What types of support is needed?


Deep Dive into the PathwayS to achieve
net-zero GHG emissions in the agri-food
and land uses systems

Net-zero GHG emissions

Emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals (IPCC)

Getting to net zero means we can still produce some emissions, as long as they are offset by processes that reduce greenhouse gases already in the atmosphere.

ROAD TO A RESILIENT AND LOW EMISSIONS ASEAN AGRICULTURE

VISION 2050

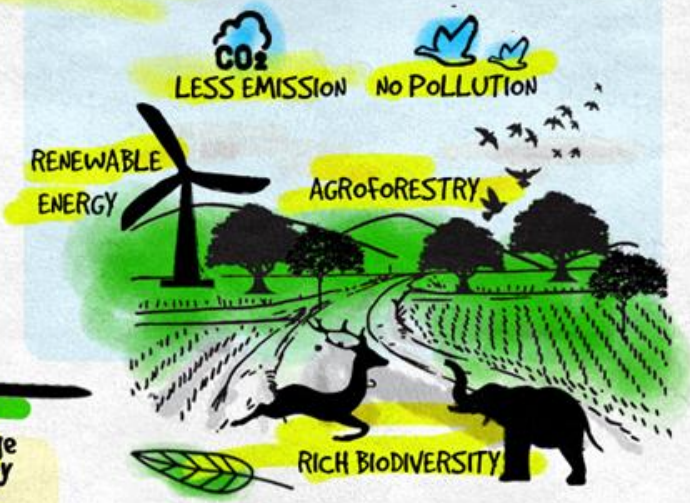
2015
- Financing and implementation of existing NDC
- governments to recognize the role of agriculture in climate emergency

2022
- push innovations on R&D
- Halt of deforestation
- Identify key technologies implemented

2030
- ALL FARMERS AND AGRICULTURE PRODUCERS HAVE MOVED TO RENEWABLE ENERGY AND LOW EMISSIONS PROCESSES, INCLUDING ORGANIC FARMING
- High emitting practices are subject to very high taxes while best of class practices are incentivized
- Sustainable and organic food is affordable for everyone

2040
- Diet Change
- Implement KJWA work program
- Climate pledges and commitments renewed; agriculture is rethought for more climate resilience

2050
- ORGANIC FARMING BECOMES MAJORITY
- AGROFORESTRY MAINSTREAMED



TRIGGERS OF CHANGE

- Integrated approach, coordination, and political will
- Strengthening the policy, financial support and spread awareness and understanding of climate change
- Institutionalize and binding ASEAN climate Policy and Action
- Scientific knowledge sharing and capacity building

TRANSFORMATIVE ACTIONS AND ENABLING CONDITIONS

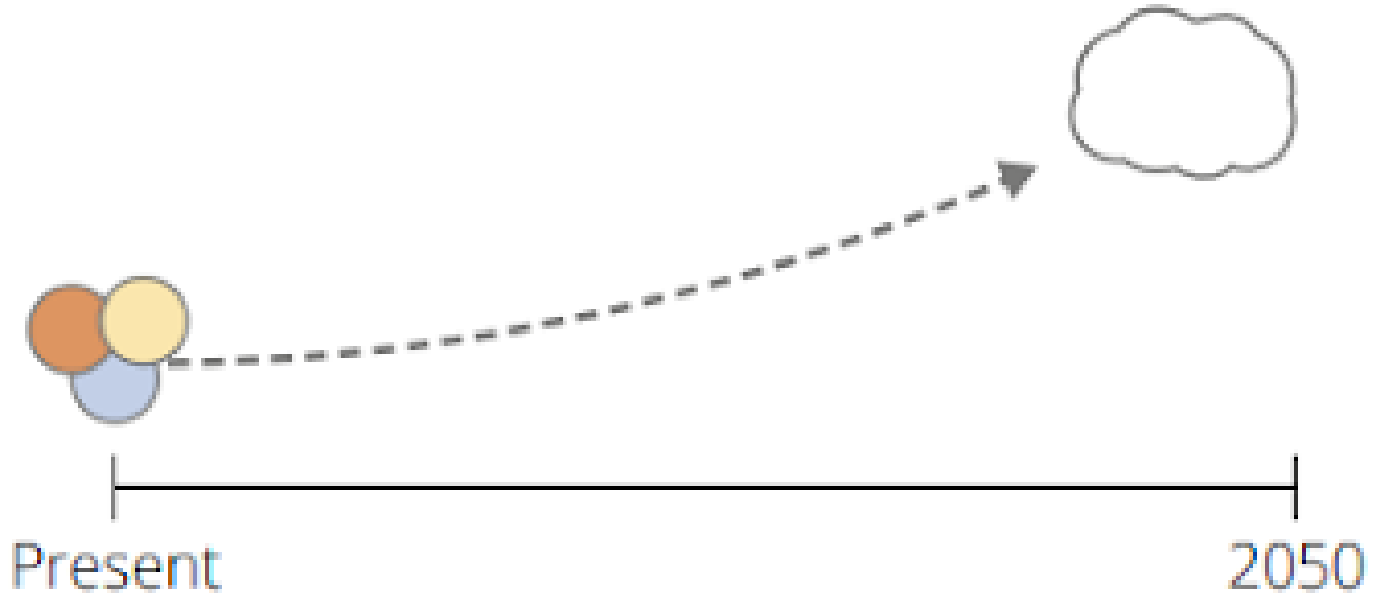
- Food system transformation action involving all stakeholders
- Multi-stakeholder program, steering committee, global alliance on climate change
- Investment in R&D
- Strengthening stakeholder participation
- Sustainability framework guiding action of public and private entities
- Strengthening data generation management and use

- Sustainable finance, effective implementation and sustainability
- Elect national champion or key officials
- Awareness of stakeholders through capacity building, advocacy, regional guidelines
- Identify success story from the region
- Link national guidelines to regional guidelines

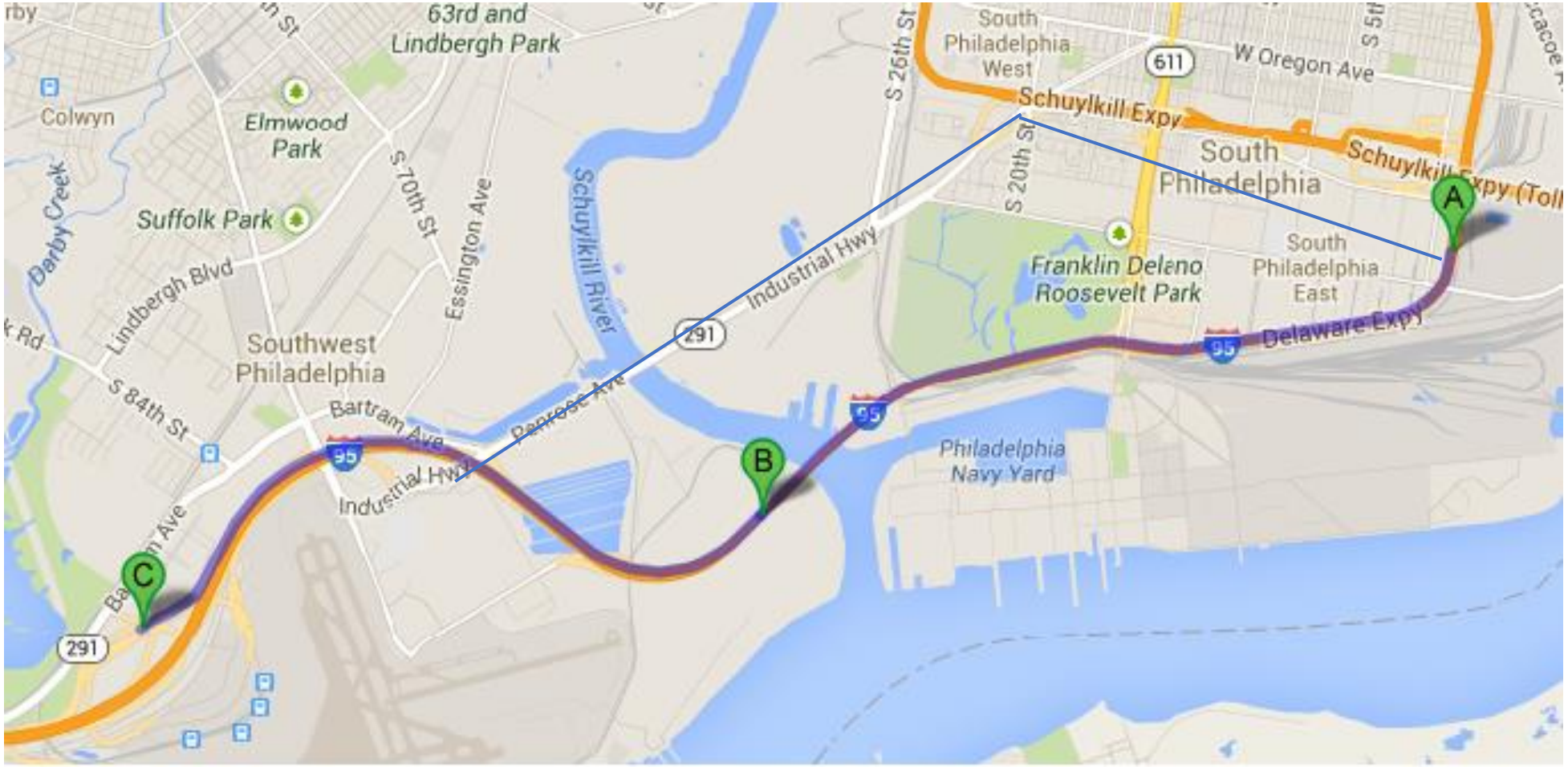
Resilient, biodiverse and pollution free agrifood system that provides healthy & nutritious food for all by 2050 in ASEAN

What are PATHWAYS?

- Normative pathways connect the future to the present through a sequence of concrete local actions.
- **Pathways as scenarios are not forecast**
- Pathways depict plausible path towards this transition to a resilient, biodiverse and pollution free agri-food systems

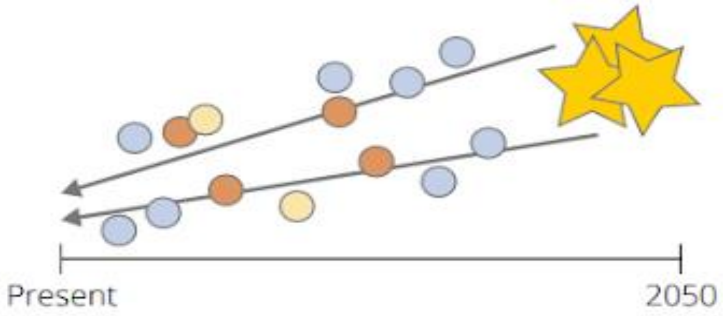


The function of a navigator, think of your GRAB!

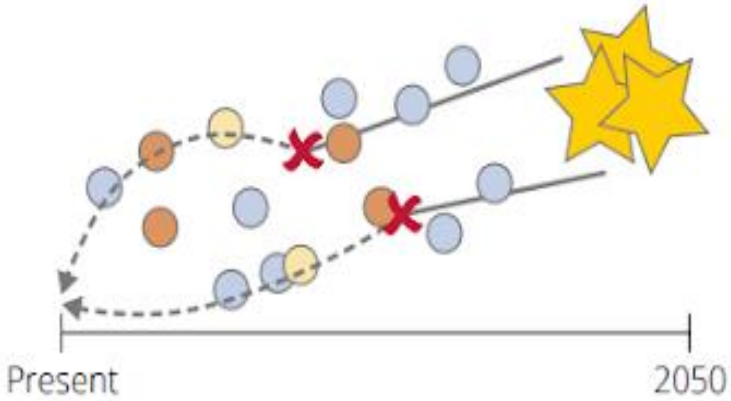


What type of pathways development ?

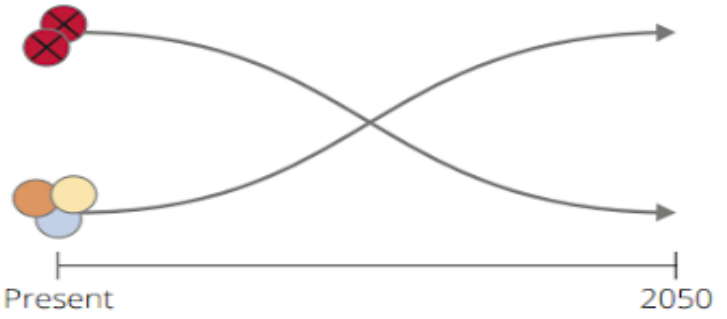
In Bali,
September 2022



In Bangkok,
December 2022



Normative back casting Pathways:
Walking from 2050 back to today with possible disturbances and effective actions



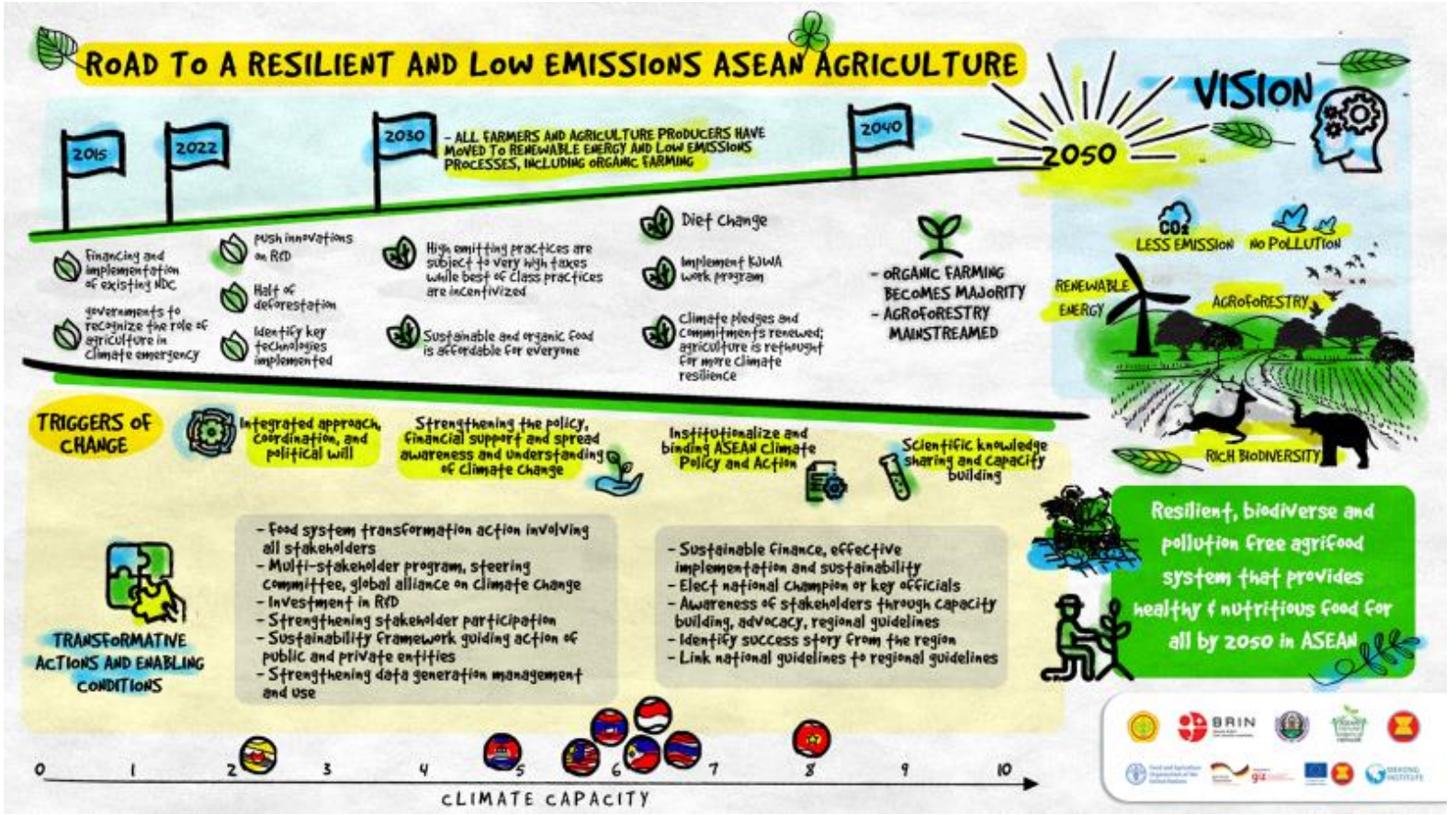
Seed- based pathways:
Characteristics of the present and how they can possibly grow or decline in the future

3 steps seed pathways

Concrete **actionable** and **measurable** interventions that form back casting pathway**S** from the future to the present

STEP 1

- ❑ Reviewed the Road to resilient and low emission ASEAN Agriculture in sub – region groups
- ❑ Discussed in group if the vision is relevant
- ❑ Discussed in group what kind of obstacles will need to be overcome to reach this vision- **list the barriers**



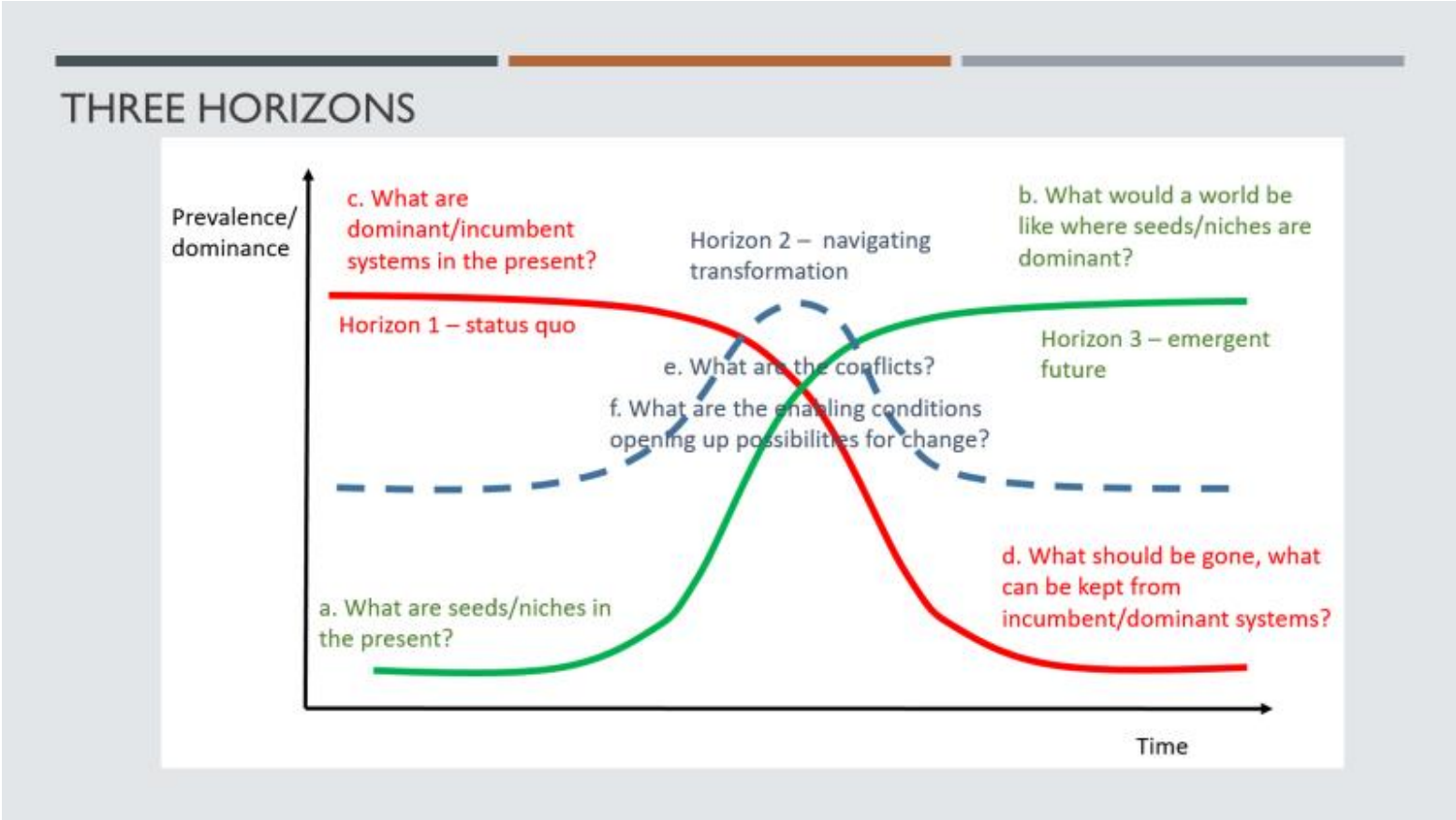
STEP 2

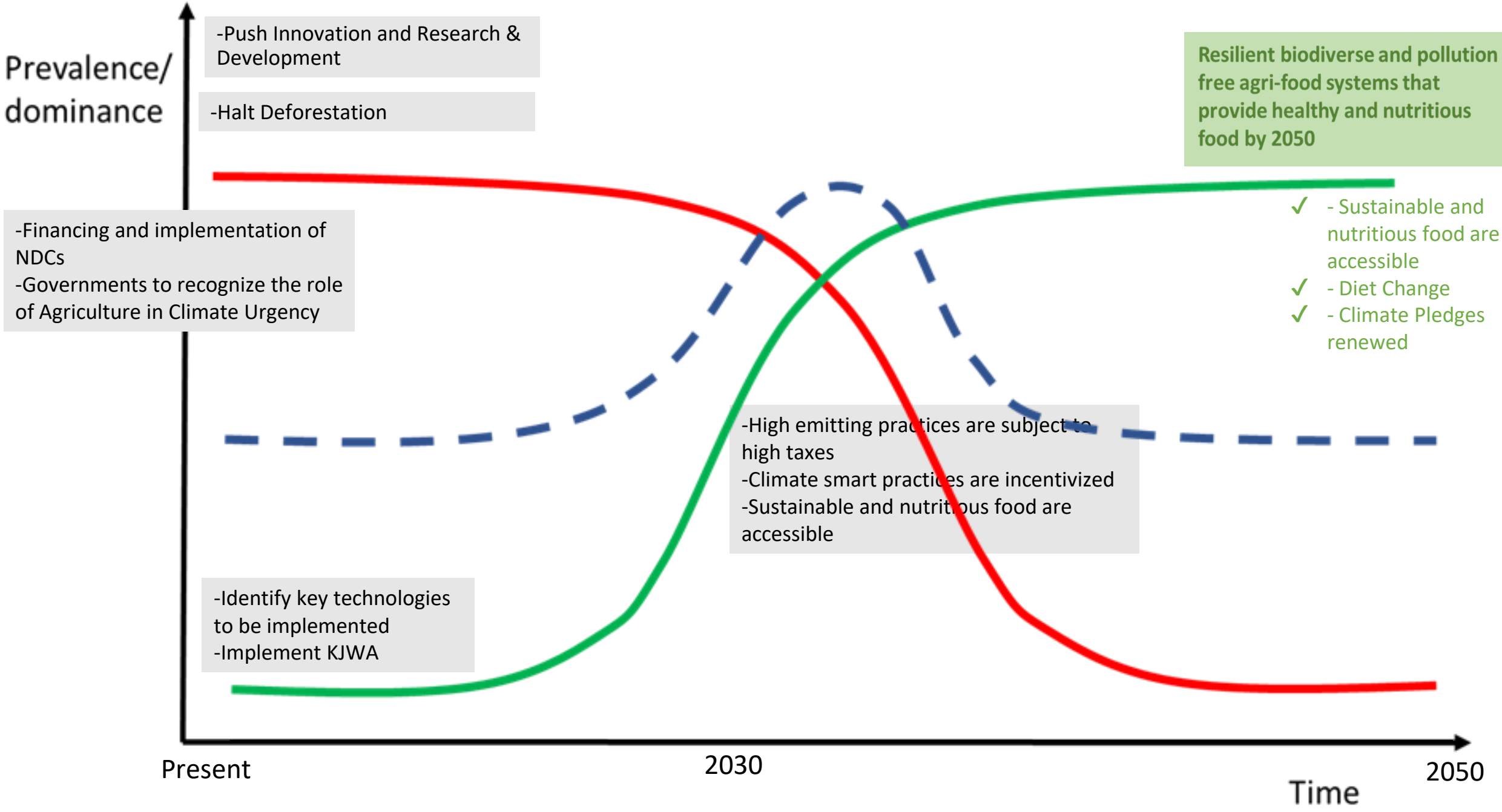
- What kind of enabling conditions exist that make is possible or easier to reach the future we WANT? (push factors)
  - *Who is changing? Who are the influencers? Those that benefits the most?*
  - *What kind of technologies need to become available and accessible ?*
  - *What kind of institutional changes are required?*
  - *What kind of cultural or social changes are required?*
- How can we reach the future we want by overcoming obstacles and making use of enabling conditions? What need to be done differently ?

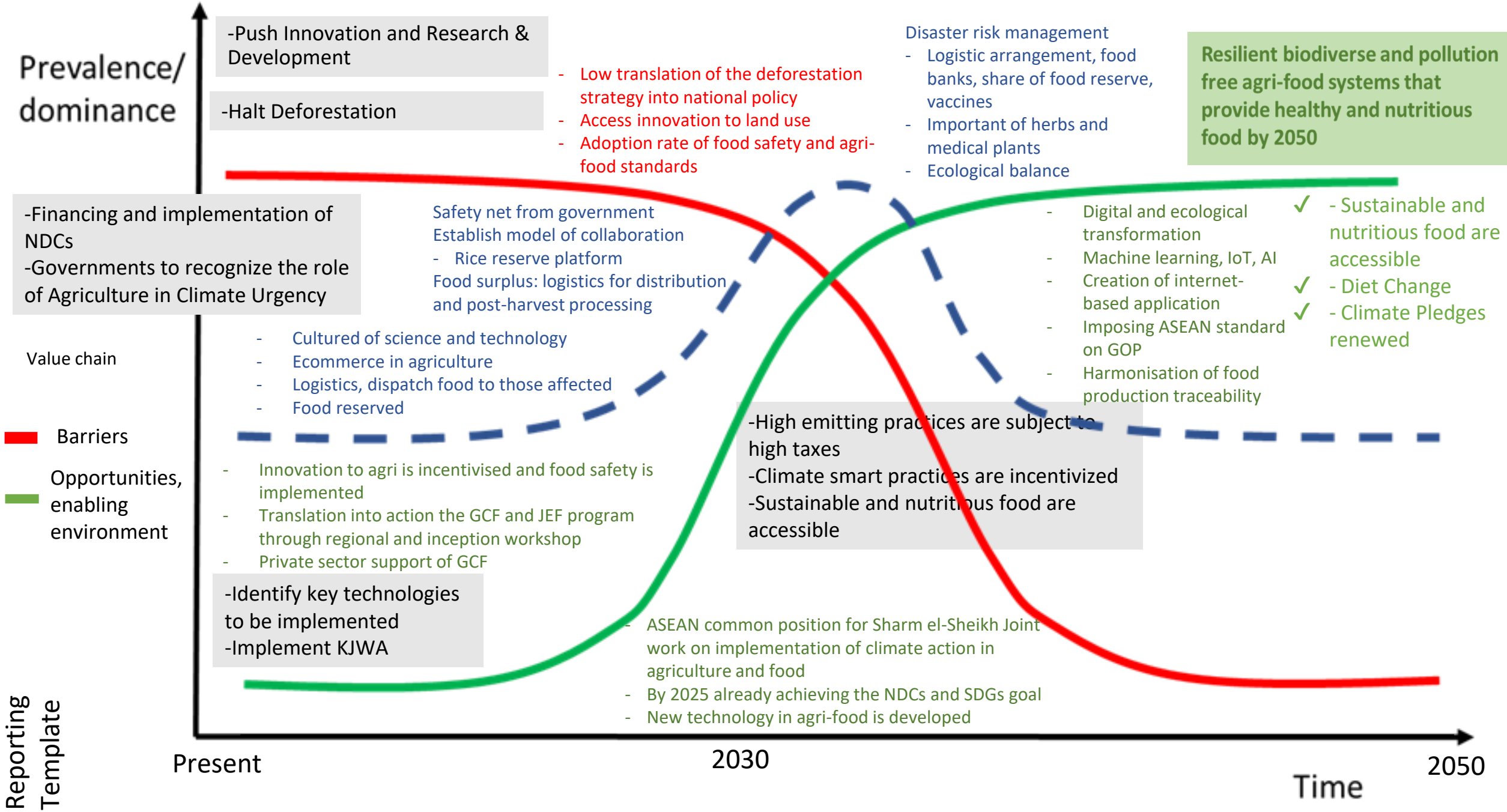
STEP 3

Review and complete the three horizons seeds pathways

- ❑ Add **actionable** and **measurable** actions that address the identified barriers of Step 1 in red
- ❑ Add **actionable** and **measurable** actions that address the emerging opportunity in Step 2 in green
- ❑ Discuss how you will monitor that those actions are implemented
- ❑ What is the current baseline?

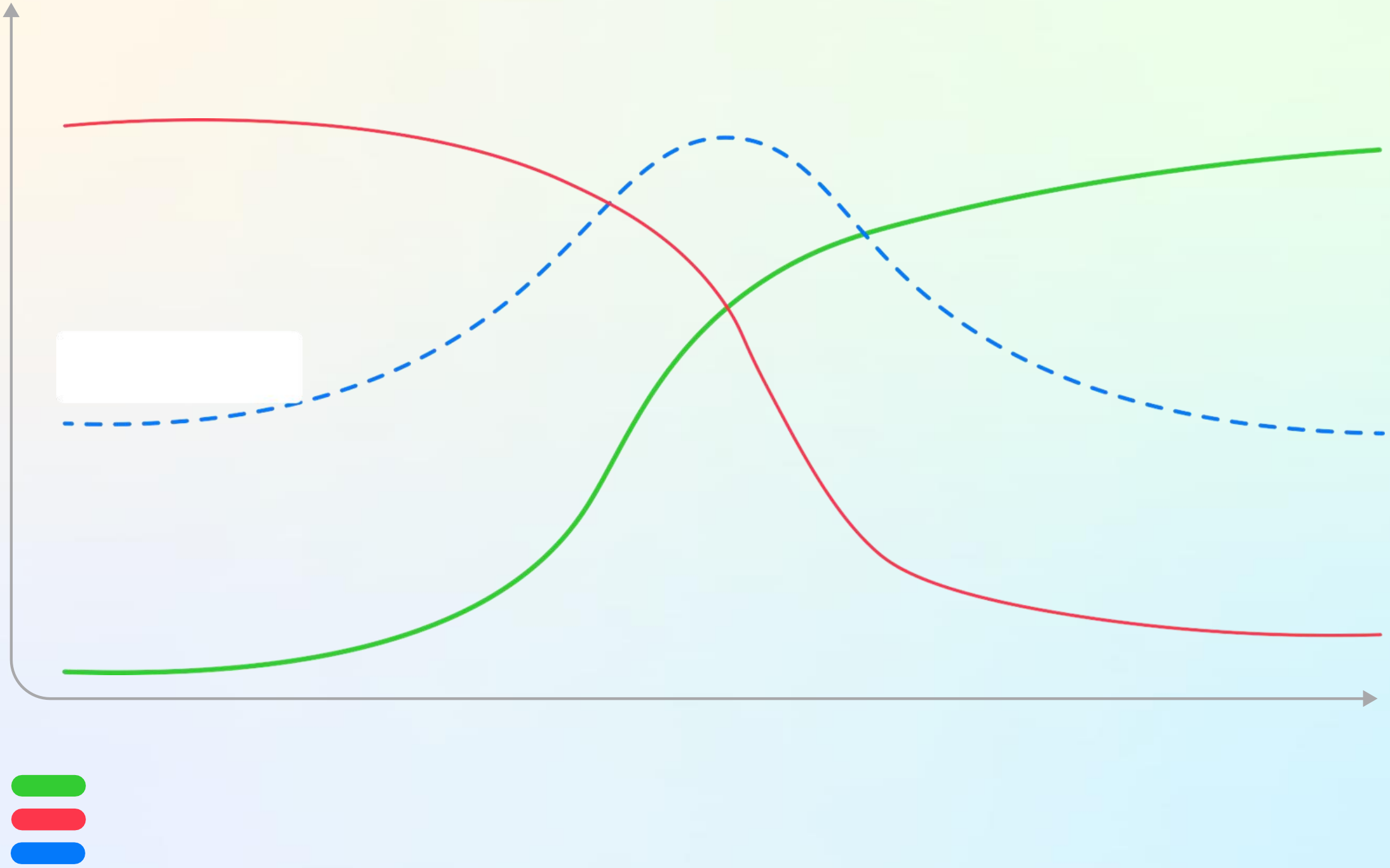


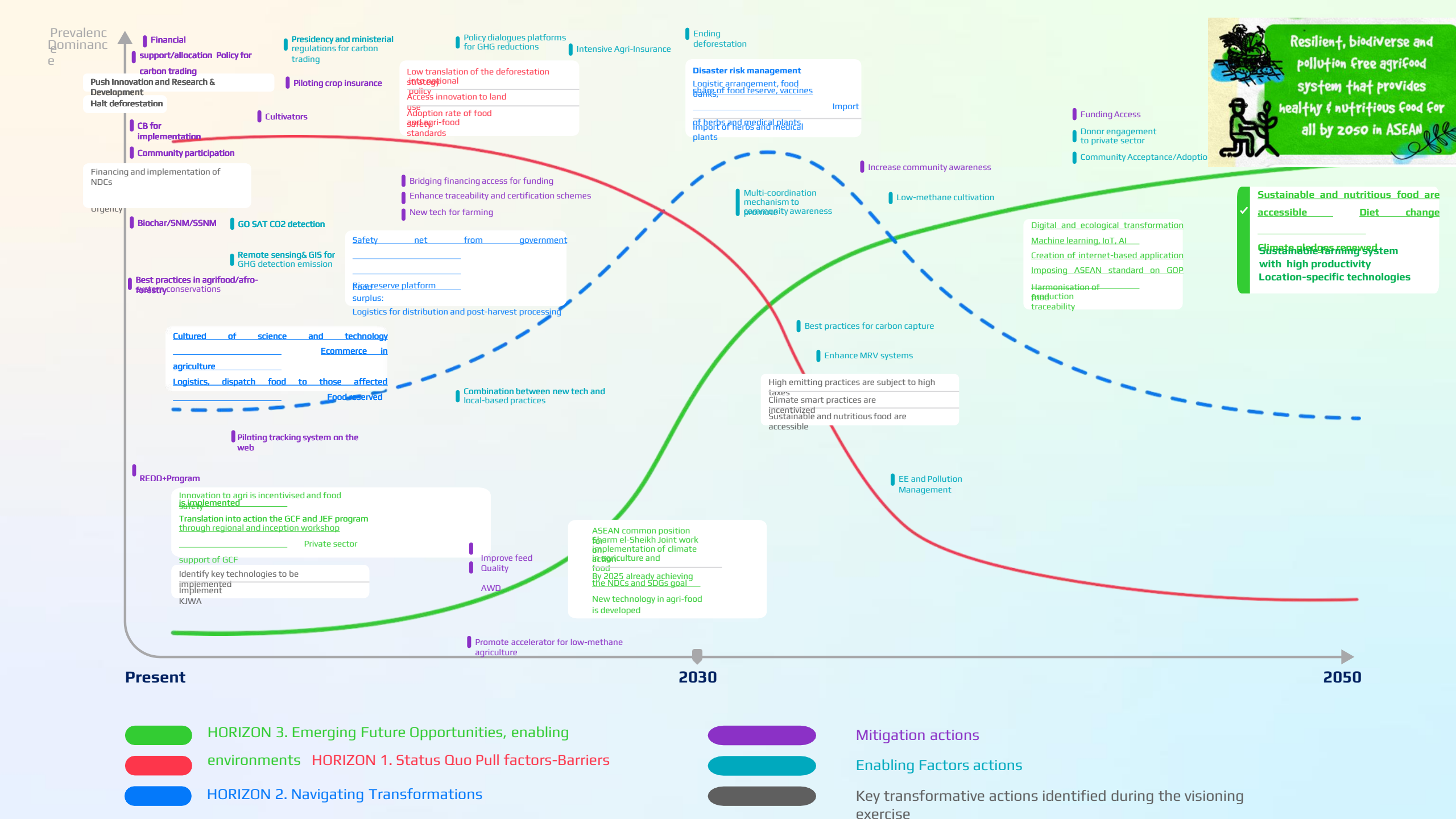

Prevalence/ dominance
-Push Innovation and Research & Development
-Halt Deforestation
Resilient biodiverse and pollution free agri-food systems that provide healthy and nutritious food by 2050
-Financing and implementation of NDCs
-Governments to recognize the role of Agriculture in Climate Urgency
✓ - Sustainable and nutritious food are accessible
✓ - Diet Change
✓ - Climate Pledges renewed
-High emitting practices are subject to high taxes
-Climate smart practices are incentivized
-Sustainable and nutritious food are accessible
-Identify key technologies to be implemented
-Implement KJWA
Present
2030
2050
Time


Prevalence/ dominance
-Push Innovation and Research & Development
-Halt Deforestation
- Low translation of the deforestation strategy into national policy
- Access innovation to land use
- Adoption rate of food safety and agri-food standards
Disaster risk management
- Logistic arrangement, food banks, share of food reserve, vaccines
- Important of herbs and medical plants
- Ecological balance
Resilient biodiverse and pollution free agri-food systems that provide healthy and nutritious food by 2050
-Financing and implementation of NDCs
-Governments to recognize the role of Agriculture in Climate Urgency
Safety net from government
Establish model of collaboration
- Rice reserve platform
Food surplus: logistics for distribution and post-harvest processing
- Digital and ecological transformation
- Machine learning, IoT, AI
- Creation of internet-based application
- Imposing ASEAN standard on GOP
- Harmonisation of food production traceability
✓ - Sustainable and nutritious food are accessible
✓ - Diet Change
✓ - Climate Pledges renewed
Value chain
- Cultured of science and technology
- Ecommerce in agriculture
- Logistics, dispatch food to those affected
- Food reserved
Barriers
Opportunities, enabling environment
- Innovation to agri is incentivised and food safety is implemented
- Translation into action the GCF and JEF program through regional and inception workshop
- Private sector support of GCF
-High emitting practices are subject to high taxes
-Climate smart practices are incentivized
-Sustainable and nutritious food are accessible
-Identify key technologies to be implemented
-Implement KJWA
- ASEAN common position for Sharm el-Sheikh Joint work on implementation of climate action in agriculture and food
- By 2025 already achieving the NDCs and SDGs goal
- New technology in agri-food is developed
Present
2030
2050
Time
Reporting Template

STEP 4

- ❑Stress tested the pathways
- ❑Event- Cart – Black Swan




Prevalenc
Dominanc
e
Financial
support/allocation Policy for
carbon trading
Push Innovation and Research &
Development
Halt deforestation
Presidency and ministerial
regulations for carbon
trading
Piloting crop insurance
Cultivators
CB for
implementation
Community participation
Financing and implementation of
NDCs
urgency
Biochar/SNM/SSNM
GO SAT CO2 detection
Remote sensing& GIS for
GHG detection emission
Best practices in agrifood/afro-
forestry
forest conservations
Piloting tracking system on the
web
REDD+Program
Policy dialogues platforms
for GHG reductions
Intensive Agri-Insurance
Low translation of the deforestation
international
strategy
policy
Access innovation to land
use
Adoption rate of food
safety
and agri-food
standards
Ending
deforestation
Disaster risk management
Logistic arrangement, food
share of food reserve, vaccines
banks,
Import
of herbs and medical plants
Import of herbs and medical
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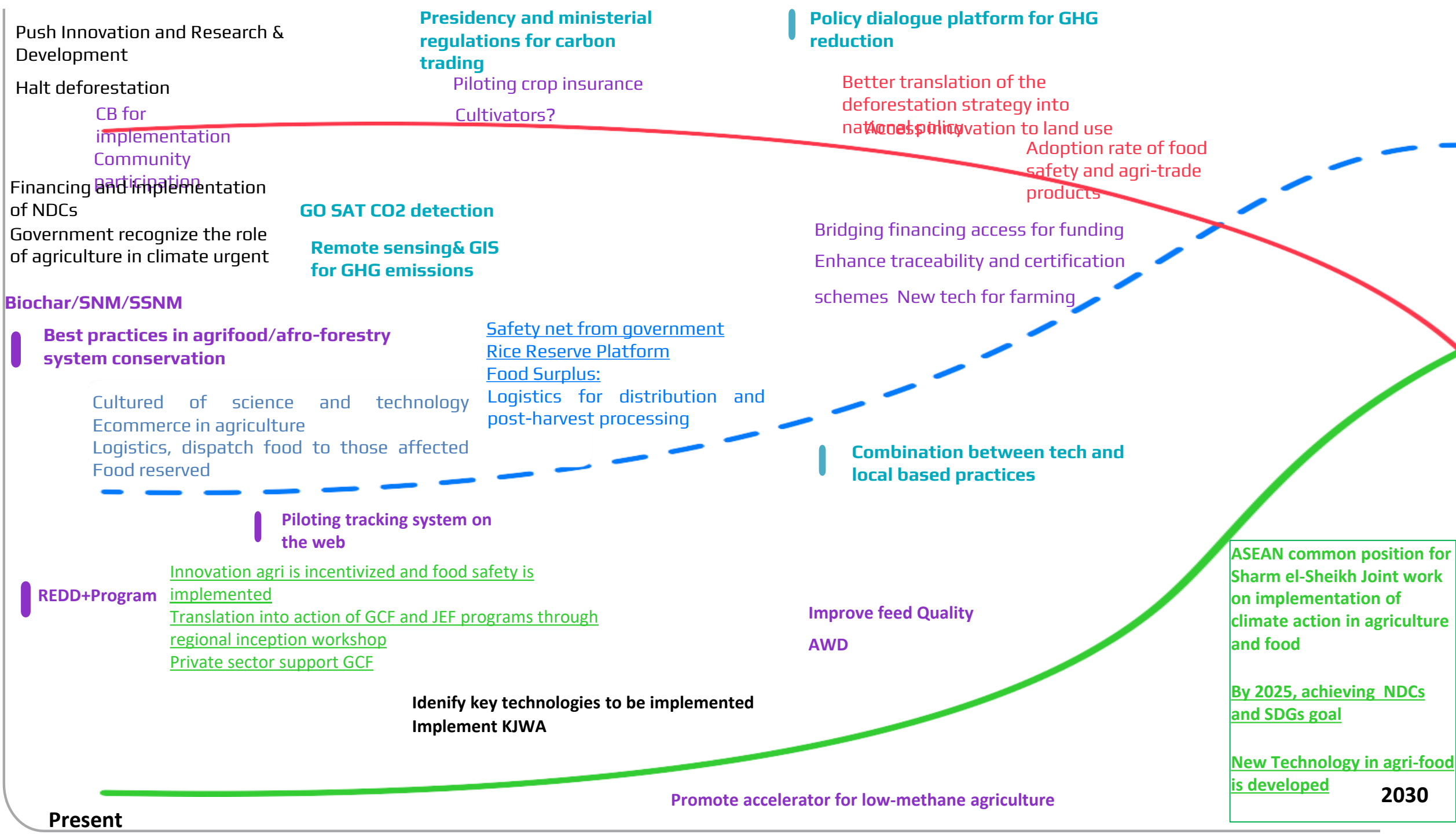
Funding Access
Donor engagement
to private sector
Community Acceptance/Adoptio
Resilient, biodiverse and
pollution free agrifood
system that provides
healthy & nutritious food for
all by 2050 in ASEAN
Bridging financing access for funding
Enhance traceability and certification schemes
New tech for farming
Safety net from government
Rice reserve platform
Food
surplus:
Logistics for distribution and post-harvest processing
Cultured of science and technology
Ecommerce in
agriculture
Logistics, dispatch food to those affected
Food reserved
Combination between new tech and
local-based practices
Increase community awareness
Multi-coordination
mechanism to
community awareness
promote
Low-methane cultivation
Digital and ecological transformation
Machine learning, IoT, AI
Creation of internet-based application
Imposing ASEAN standard on GOP
Harmonisation of
food
production
traceability
Sustainable and nutritious food are
accessible
Diet change
Climate pledges renewed
Sustainable farming system
with high productivity
Location-specific technologies
Best practices for carbon capture
Enhance MRV systems
High emitting practices are subject to high
taxes
Climate smart practices are
incentivized
Sustainable and nutritious food are
accessible
EE and Pollution
Management
Innovation to agri is incentivised and food
is implemented
safety
Translation into action the GCF and JEF program
through regional and inception workshop
Private sector
support of GCF
Identify key technologies to be
implemented
Implement
KJWA
Improve feed
Quality
AWD
ASEAN common position
Sharm el-Sheikh Joint work
on
implementation of climate
change
in agriculture and
food
By 2025 already achieving
the NDCs and SDGs goal
New technology in agri-food
is developed
Promote accelerator for low-methane
agriculture
Present
2030
2050
HORIZON 3. Emerging Future Opportunities, enabling
environments
HORIZON 1. Status Quo Pull factors-Barriers
HORIZON 2. Navigating Transformations
Mitigation actions
Enabling Factors actions
Key transformative actions identified during the visioning
exercise


Push Innovation and Research & Development
Halt deforestation
CB for implementation
Community participation
Financing and implementation of NDCs
Government recognize the role of agriculture in climate urgent
Biochar/SNM/SSNM
Best practices in agrifood/afro-forestry system conservation
Cultured of science and technology
Ecommerce in agriculture
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Food reserved
REDD+Program
Piloting tracking system on the web
Innovation agri is incentivized and food safety is implemented
Translation into action of GCF and JEF programs through regional inception workshop
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Idenify key technologies to be implemented
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Promote accelerator for low-methane agriculture
Present
Presidency and ministerial regulations for carbon trading
Piloting crop insurance
Cultivators?
GO SAT CO2 detection
Remote sensing& GIS for GHG emissions
Safety net from government
Rice Reserve Platform
Food Surplus:
Logistics for distribution and post-harvest processing
Policy dialogue platform for GHG reduction
Better translation of the deforestation strategy into national policy
Access to innovation to land use
Adoption rate of food safety and agri-trade products
Bridging financing access for funding
Enhance traceability and certification schemes
New tech for farming
Combination between tech and local based practices
Improve feed Quality
AWD
ASEAN common position for Sharm el-Sheikh Joint work on implementation of climate action in agriculture and food
By 2025, achieving NDCs and SDGs goal
New Technology in agri-food is developed
2030

Completing the seeds pathways (Now to 2030)

1. Innovation in agriculture is incentivized and food safety is implemented
2. Translation into actions of GCF and JEF programs through regional inception workshops
3. Private sector support GCF
4. ASEAN common position for Sharm el-Sheikh Joint work on implementation of climate action in agriculture and food
5. By 2025, achieving NDCs and SDGs goal
6. New Technology in agri-food is developed
7. Cultured of science and technology Ecommerce in agriculture
8. Logistics, dispatch food to those affected Food reserved
9. Safety net from government
10. Rice Reserve Platform
11. Food Surplus managed:
12. Logistics for distribution and post-harvest processing

- Discuss how you will monitor that those actions are implemented ***Can you set a target at the ASEAN level and national level?***
- What is the current baseline?

Completing the seeds pathways (Now to 2030)

Go to www.menti.com and use the code 8133 7598

Ending Deforestation

Disaster risk management
share of food reserve, vaccines
Import of herbs and medical plants

Increase community awareness

Low-methane cultivation

Funding Access

Donor engagement to Private Sector

Community Acceptance/Adoption

Best practices for carbon capture

Enhance MRV systems

Digital Machine learning, IoT, AI, Creation of internet-based application

Imposing ASEAN standard on GOP

Harmonization of food production traceability
al and ecological transformation

Sustainable and nutritious food are accessible Diet change

Climate pledges renewed

Sustainable farming system with high productivity
Location-specific technologies

High emitting practices are subject to high taxes

Climate smart practices are incentivized

Sustainable and nutritious food are accessible

2031

2050

HORIZON 3. Emerging Future Opportunities, enabling environments

HORIZON 1. Status Quo Pull factors-Barriers

HORIZON 2. Navigating Transformations

Mitigation actions

Enabling Factors actions

Key transformative actions identified during the visioning exercise

Completing the seeds pathways (2030-2050)

1. Disaster risk management
2. Share of food reserve, access of vaccines
3. Import of herbs and medical plants
4. High emitting practices are subject to high taxes
5. Sustainable and nutritious food are accessible
6. Digital Machine learning, IoT, AI, Creation of internet-based application
7. Imposing ASEAN standard on GOP
8. Harmonization of food production traceability
9. AI and ecological transformation
10. Sustainable and nutritious food are accessible Diet change
11. Climate pledges renewed
12. Sustainable farming system with high productivity
13. Location-specific technologies
14. Funding Access

- Discuss how you will monitor that those actions are implemented- ***Can you set a target at the ASEAN level and national level?***
- What is the current baseline?


Thank you!

Wrap-up and Closing of Day 2

Reminders for Day 3

Dinner

Thank you very much.