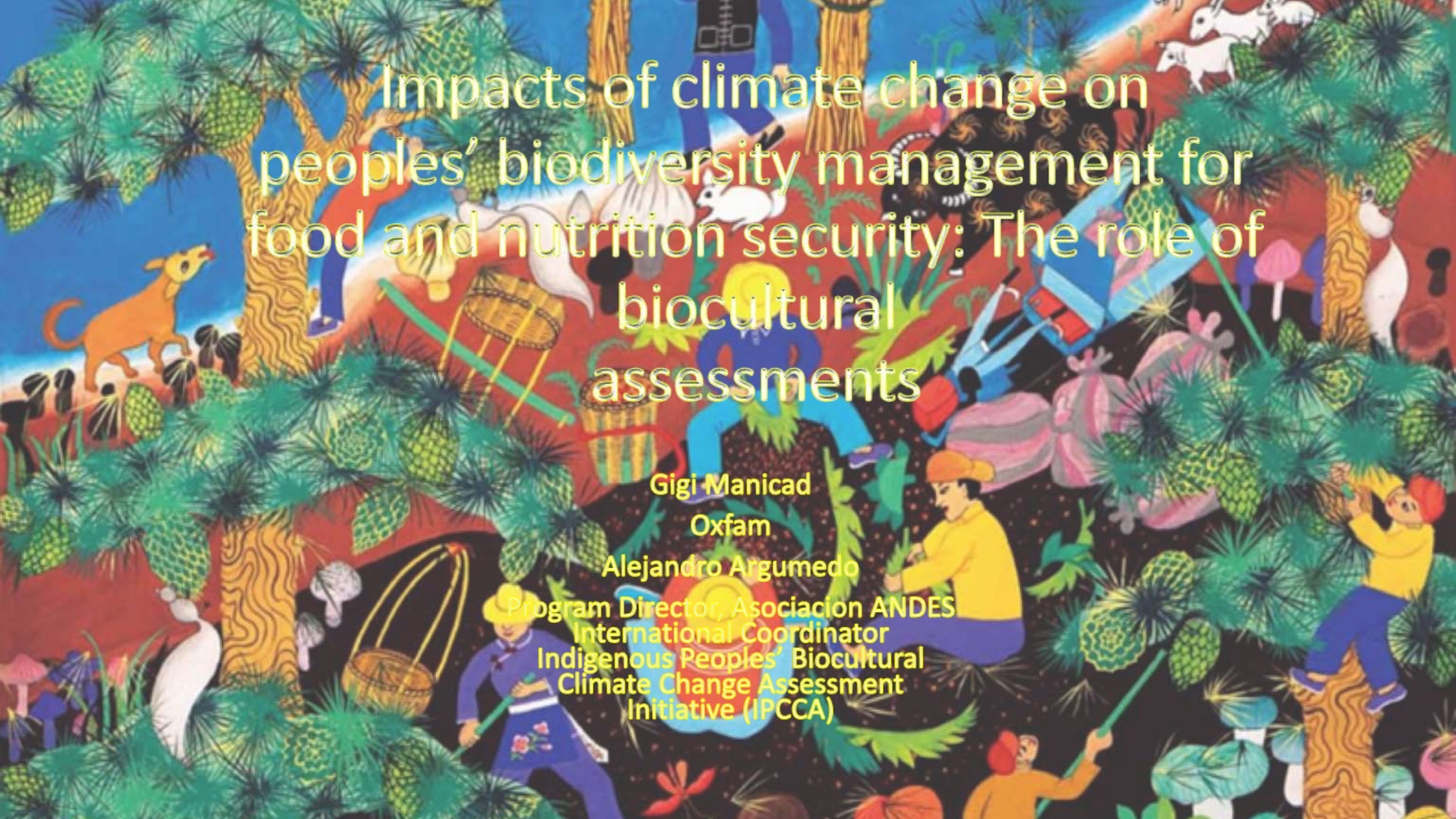




Impacts of climate change on peoples' biodiversity management for food and nutrition security: The role of biocultural assessments

Gigi Manicad
Oxfam

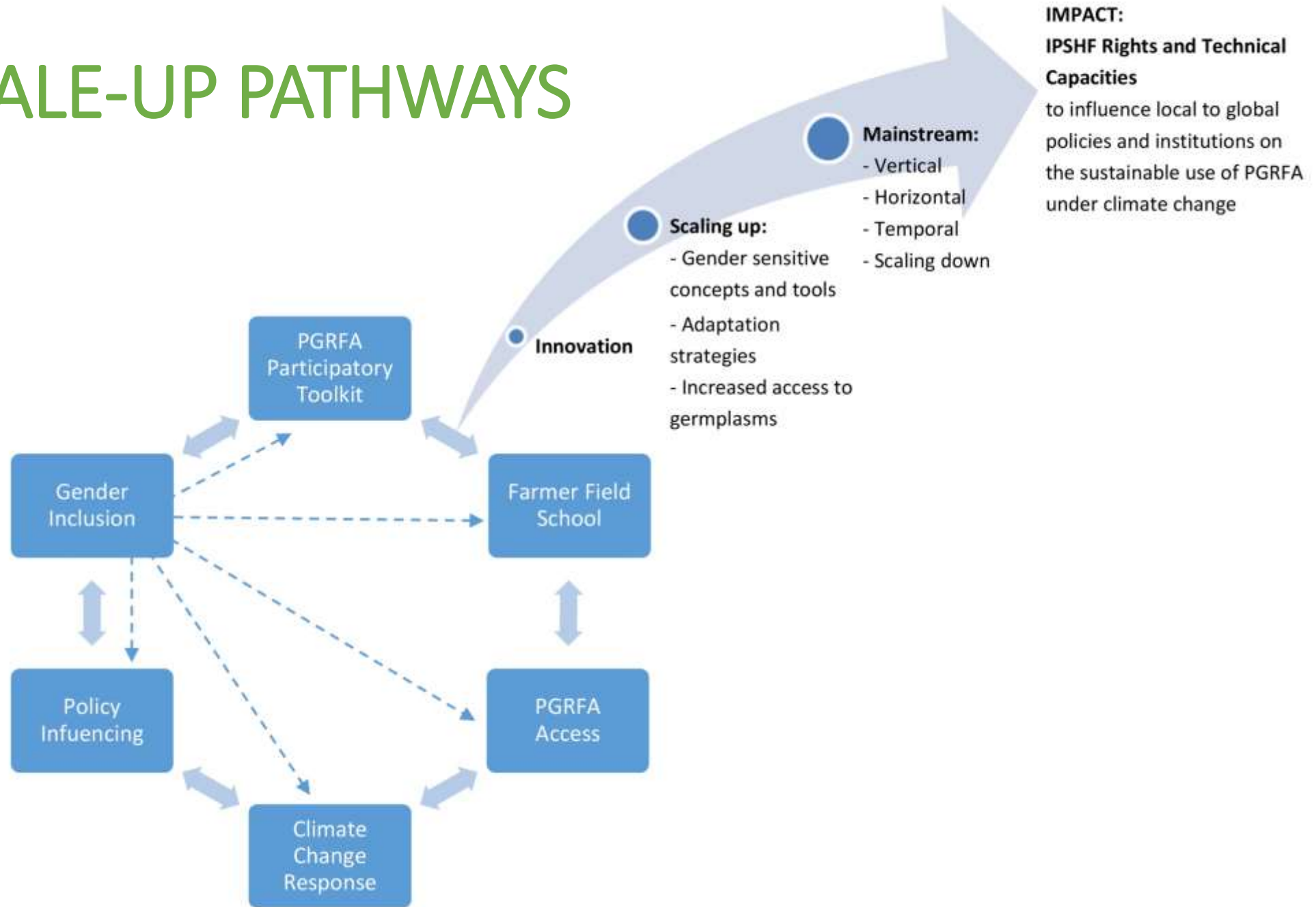
Alejandro Argumedo

Program Director, Asociacion ANDES
International Coordinator
Indigenous Peoples' Biocultural
Climate Change Assessment
Initiative (IPCCA)

Sowing Diversity = Harvesting Security (SD=HS)

- Strengthen farmers' seed systems (rights & technical) for food and nutrition security for climate change adaptations,
- 5 countries: Vietnam, Laos, Myanmar, Peru, Zimbabwe, 150,000 HH, 50% women
- Low land paddy fields, high mountain altitude, semi-arid region, high and low potential areas
- 50 Partners and allies: CSOs, IPSHF, governments, universities, national and international research institutions, private sector
- Donors: Sida, IFAD, Netherlands Post Code Lottery, Dutch government
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SCALE-UP PATHWAYS



PGRFA Participatory Toolkit

- Participatory diagnostic & planning, accountability tools
- Baseline & end line surveys: PRA, questionnaires, secondary data, FFS curriculum, biocultural assessments
- analyzing crop diversity, seed security, climate change perceptions, farmers' access and diversity management. Climate change adaptation, diet diversity
- disaggregated for women's needs and roles
- SD=HS over 4200 HH



Credit : Shepherd Tozvireva/Oxfam Novib

Local Assessments

Currently there are nine IPCCa local assessments under implementation in a variety of biocultural systems worldwide. Local partners are facilitating assessments of climatic conditions and trends within local biocultural systems and their impacts on livelihoods and well-being, and are systematically documenting the role of indigenous knowledge and practices for building evidence-based community adaptation plans.



'Pacific North Western Tribes'
Pacific North America

Assessing the environmental, cultural and socio-economic impacts of climate change and community adaptations employing traditional knowledge (TK).



'Zapara Territory' Amazonia, Ecuador

Aim is to evaluate environmental impacts of climate change on indigenous subsistence. Especially on agriculture, hunting and gathering as well as the impact of oil extraction activities and its contribution to local and global climate



'Parque de la Papa', Cusco, Peru

In the Potato Park, climate change is affecting agrobiodiversity, especially native potatoes and wild varieties, and thus food sovereignty. Therefore the delicate system with the Pacha Mama (Mother Earth) and "Buen Vivir" is endangered.

Kuna Yala, Panama

In Kuna Yala, sea level rises are threatening the food sovereignty, health and survival of the Kuna People.



'Skolt Sami Nation' Lapland, Finland

Providing adaptation and survival mechanisms for the Sami community who is endangered by melting permafrost by documenting alternative traditions reindeer herding solutions and innovative solar methods.



'Huay Manao', Thailand

In Huay Manao, Thailand, a warmer climate, decreased rainfall and reduced water levels (due to government policies) have resulted in a need to develop indigenous adaptation strategies.



Maasai, Kenya

Longer cold seasons, frequent droughts and the loss of indigenous knowledge has meant a need to create coping mechanisms among the pastoralist Maasai people in Kenya.



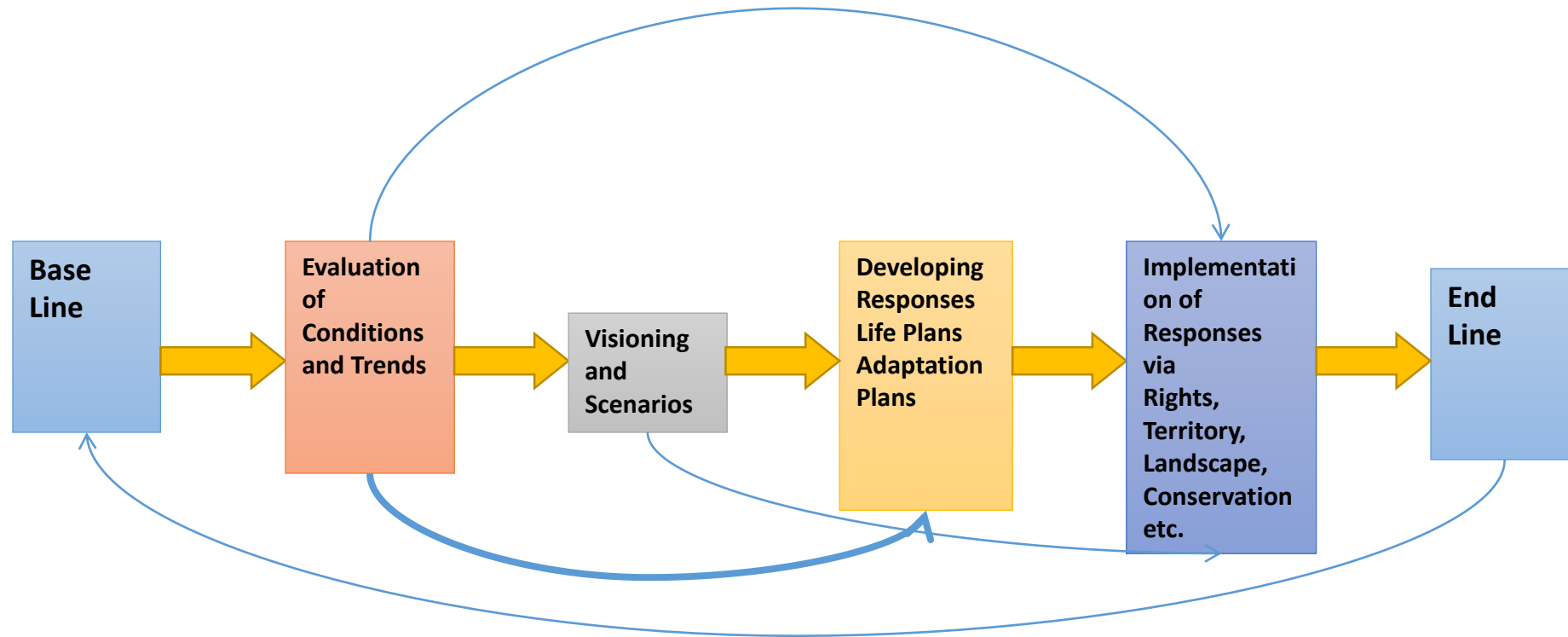
'Adivasi' Andhra Pradesh, India

In Andhra Pradesh, India, Adivasi communities aim to assess the impact of climate change and strengthen resilience by securing rights to natural resources.



'Ifugao' Cordillera, Philippines

Collecting traditional climate change adaptation mechanism and identifying the observed Climate Changes and the impact in recent years on community ecosystems, livelihoods and culture.



Phases developed in Toolkit:

1. Developing a Base Line
2. Evaluating Conditions and Trends
3. Engaging in Visioning and Scenarios
4. Developing Life Plans - Adaptation Plans
5. Implementing Responses
6. Evaluating with an End line

Source: ANDES

Farmer Field Schools pathway



Credit: ANDES

- School without walls, self-spreading (ToT), autonomous farmers' organization for sustainability & outreach,
- Farmers determine learning objectives for problem solving, joint experiments
- Ensure women's participation
- Individual and collective empowerment
- collaboration with public sector
- Design climate adaptations

PGRFA Access Pathway

- Additional PGRFA , formal and informal, access is a constant demand
- *In-situ* & *ex-situ* collections, segregating, stable, near stable lines for multiple land use
- Matching & selection of preferred traits by women
- Traditional & scientific knowledge for selection, breeding, regeneration, multiplication
- Independent seed banks, at districts & households
- Barter markets and local markets



Credit : Shepherd Tozvireva/Oxfam Novib

Commercialisation lead to genetic erosion?

High potential area: S. Vietnam:

- 18,900 farmers trained in FFS
- Released 328 farmer varieties +2 certified varieties, 1million ha
- Seed Clubs (2014): 30% of Mekong Delta seed requirements, about 70 rice varieties(certified and uncertified)
- % Farmers' seeds bigger than the private sector



Climate Change Response



Credit: Shepherd Tozvireva/Oxfam Novib

- Farmers perceived climate change on impacts to their farms
- Meteorological data & farmers' observation/knowledge for agricultural planning
- Selection of stress tolerant crops & varieties
- Combination of late & early maturing varieties
- Disaster response in FFS

Gender & Social Inclusion pathway



Credit: Gigi Manicad

- Guided by a gender empowerment rationale, discrimination by gender, class & ethnicity
- Mainstream in all pathways, as most tools are gender blind
- Women's agency on seeds management: access and benefit

Policy Influencing pathway

- Most of national seed policies & laws do not recognize & support farmers' seed systems
- SD=HS engages local to global policy influencing based on evidences that are grounded & validated by indigenous & farming communities
- Provides models multi-stakeholder engagement



Lessons Learnt: Importance of biocultural approaches to climate assessments

- Links global models to local models and data
- Deploy local/indigenous and scientific knowledge for increased precision and enables adaptive management
- Horizontal collaboration between decision-makers and stakeholders
- Focuses on making decisions and solving problems
- Multiple evidence base ensures TK-Science and local-global collaboration
- Communications based on cultural specificities

Lessons Learnt: Importance of biocultural approaches to climate assessments

- Local scenario development facilitate local communities to identify effective adaptation practices
- Multiple evidence base approach allows the incorporation of long-term predictive models within the immediate adaption plan.
- Combines indigenous peoples and local communities experiences and indigenous knowledge with model-based information to develop appropriate adaptation plans and actions
- Provides a framework for linking socioecological systems with the biophysical processes of climate-induced changes.

Recommendations

- Provide support for local biocultural assessments and links to scale up pathways
- A Technical Expert Meeting on Biocultural Local Assessments and Traditional Knowledge could be conducted in collaboration with the Ad-hoc Working Group on Article 8(j) and the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP).
- The Office for Traditional Knowledge of the CBD could collaborate with the UNFCCC Adaptation Committee may consider establishing a workstream encompassing:
 - Improved use of data, information and knowledge on vulnerability, impacts and adaptation by communities related to agriculture and food security
 - *Supporting* knowledge exchanges amongst communities for sharing and validation of knowledge and experiences to increase the resilience of agricultural systems to long-term climate change.
 - Periodic reviews of *local* climate change impact and vulnerability assessments on food systems, including food security and nutrition
 - Developing a guide on how to design and conduct local assessments of agriculture, fisheries or forest systems to climate change, which could further support implementation of the Aichi targets

"Crops are not just expression
of genes but are also the
expression of spirits"

(FFS Lares 2015)

