



Food Security, Agri-business Promotion and Environment Division
Ministry of Agriculture Development
Government of Nepal

UNFA/GLO/616/UND:


Supporting Nepal to Integrate Agricultural Sector(s) into National Adaptation Plans (NAPs)

Project Technical Taskforce (PTT) Meeting

MoAD Meeting Hall, Singhadarbur

02 May, 2017



Supported by:
 Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety

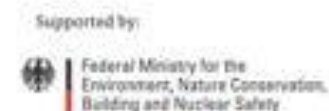
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Food Security, Agri-business Promotion and Environment Division
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THE MEETING AGENDA

1. Review till date progresses
2. Build synergy with NAP-Process regarding Climate Vulnerability and Risk Assessments
3. Relevant updates in the project implementation
4. Other project related issues



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NAP-Ag Progresses Structure of the Presentation

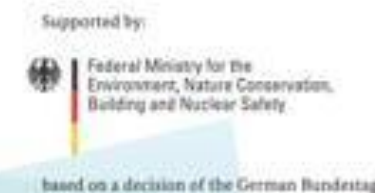
- PTT meeting (16 December 2016) resolutions
- Project updates (Key features, objective, outcomes, outputs, activities and organizational structure)
- Till date progresses
- Planned activities for the second quarter in 2017 (April- June)

Previous PTT Meeting Resolutions

- The meeting was held on 16th Dec. 2016 (jointly with NAP-TWG for AFS)
- The meeting agreed to:
 - request coordinator to invite from GIZ, DoI and GESI focal person;
 - share the TWG-Stocktaking Report with TWG members for their comments and suggestions within two weeks;
 - share with TWG members the presentations on conceptual framework of V/RA and proposed indicators for their inputs within two weeks; and
 - request NAP-Ag PTT-members to send their comments and inputs on the project inception report within a week.
- Mr. Chhabi Lal Adhikari (vice coordinator/chair to the TWG/ the PTT) , wrapped up the meeting thanking all members and participants.



9 May 2017



Project Updates:

Nepal has initiated NAP-Ag project (Integrating Agriculture into NAPs)

Objective

To **integrate** climate change **risks and opportunities** as they relate to **agriculture sector**-related livelihood options within **existing** national **planning** and **budgeting processes**.

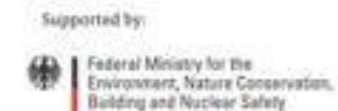
Key Features

- Funded by the German Government (BMUB, ICI)
- Joint Programme with MoAD (Agreement: 06Jun.2016)
- Implemented by UNDP and FAO
- **Duration: 3 years (2016 to 2018)**
- **National Programme Budget: US\$ 700,000**
- **Pilot districts: Mugu, Dailekh and Bardia (PSC decision 12 January 2017)**



Project Outcomes, Outputs and Activities

Outcomes	Outputs
1. Technical capacity/institutions on NAP strengthened	<ul style="list-style-type: none"> 1. Training/Institutional capacity building on VA 2. Training-Institutional capacity building on EV/EA (CBA) 3. Developed Training materials on VA, EV and EA
2. Integrated roadmaps for NAP developed	<ul style="list-style-type: none"> 1. Institutional strengthening to mainstream CCA 2. Planning process supported to mainstream CCA
3. Evidence based results for NAP strengthened	<ul style="list-style-type: none"> 1. Design and apply impact assessment framework 2. Strengthened capacity of monitoring unit
4. Advocacy and knowledge sharing on NAP promoted	<ul style="list-style-type: none"> 1. Convened exchanges of science, technology and economics of adaptation



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1. Technical capacity and institutions on NAP strengthened	2. Integrated Road Maps for NAP -(CCA planning and budgeting into ADS)
<i>1.1 Training-institutional capacity building on VA</i>	<i>2.1 Institutional strengthening to mainstream CCA</i>
1.1.1 Synthesis of VA method	2.1.1 Identify institutional gaps/ key entry points into ADS
1.1.2 CC-profile (3 districts)	
1.1.3 VA and planning case studies♥	2.1.2 TA to improve budget coding and expenditure tracking
1.1.4 Document lessons learned	
1.1.5 Conduct regional training*	
1.1.6 Conduct national training*	
<i>1.2 Training-institutional capacity building on EV/IA (CBA)</i>	<i>2.2 Planning processes supported to mainstream CCA</i>
1.2.1 Synthesis - EV method	
1.2.2 EV of ecosystem services case study/ training (3 dis)♥	2.2.1. TA to integrate CCA into budget guideline and proposal
1.2.3 CBA for CCA measures case-study/ training (3 dis).	
1.2.4 Conduct regional training*	2.2.2. Integrate EV and IA criteria into project preparation guideline
1.2.5 Conduct national training*	
<i>1.3 Developed training materials</i>	Project Outcomes-Outputs and Activities
1.3.1 CCA measures	
1.3.2 Economic appraisal	



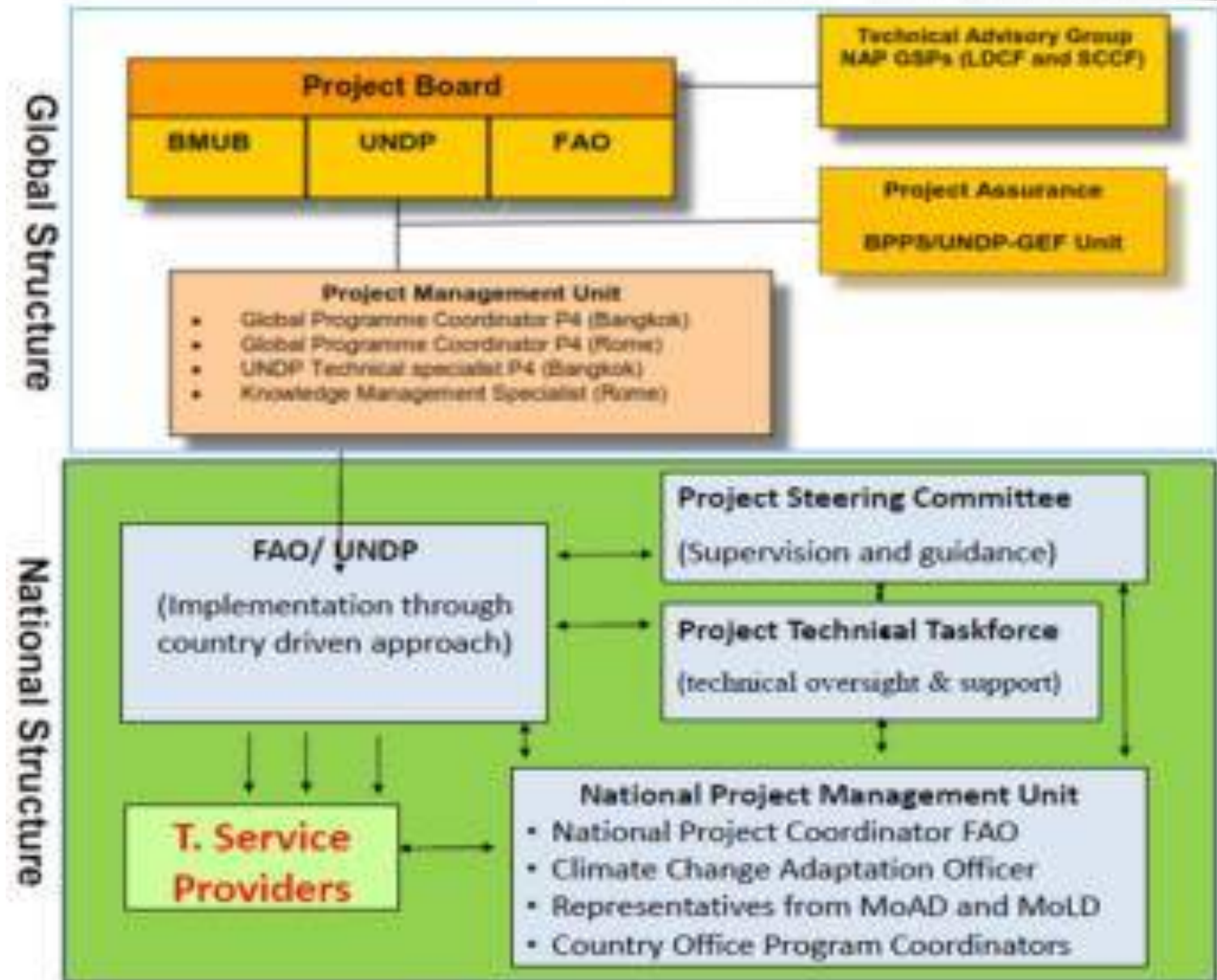
3. Evidence-based results for NAP improved	4. Advocacy and knowledge-sharing on NAP promoted
<i>3.1 Design and apply impact assessment framework</i>	<i>4.1 Convened exchanges on science, technology and economics of adaptation</i>
3.1.1 Development of M&E tools	4.1.1 Engage in broader NAP process
3.1.2 Adaptation impact case studies	4.1.2 Prepare sector contributions to NAP
3.1.3 Project monitoring framework (ADS programs).	4.1.3 Capacity building and awareness raising events
	4.1.4 Support sector decision-makers in global NAP dialogues
	4.1.5 Logistic support in NAP-AFS-TWG meetings
3.2 Capacity of monitoring unit strengthen	LEGEND
3.2.1 Training on approaches to improve climate risk analysis and related data monitoring and management*	The Project Outcomes
3.2.2 Prepare training modules and materials on CCA monitoring	The Project Outputs
	Activity under UNDP scope
	Activities under FAO scope

The activities, asterisked as ♠, ♣ and ♥, are planned to implement in association

Structural Organization of NAP-Ag project in Nepal

Members to be added in the PSC	Members to be added in the PTT
1. Two additional members from Peasant's Coalition	1. Under Secretary level from Department of Hydrology and Meteorology
2. Embassy of Germany	2. Under Secretary level from Department of Irrigation
3. Rest of the joint secretaries in MoAD	3. Chief of Gender and Social Inclusion Section, MoAD
4. Joint secretary, Ministry of Irrigation	4. Under Secretary level representation from Department of Agriculture not specified as fishery
5. Director General, DoA	
6. Director General, DoLS	

- **Project Steering Committee (PSC), 25 member, chaired by the Secretary in MoAD**
- **Project Technical Task Force (PTT), 16 members, chaired by the project's NFP**
- **NPMU (7 members) decided by PSC**
- **Service Providers**
- The project works in coordination with NAP-process (MoPE) and supports it with evidences from pilot districts, and supports the sector-based CCA planning, budgeting and implementation.



Progresses in 2016

- National project document formed
- FAO-GoN agreement to implement the project
- Project staffs (NPC/ CCAPO) hired
- Office of the NPMU established
- PSC and PTT formed
- The project inception workshop carried out
- Project launch media release (#2).
- Project inception report formed
- NFP's participation in the South-South Exchange Program
- ToR developed to hire service providers (FAO and UNDP)



Progress in First Quarter (Jan-March 2017)

- One event of PSC meeting organized on 12 Jan. 2017 that decided on pilot districts, amended representation in PSC & PTT and formed 7 NPMU
- Project Inception Report approved by MoAD (02 Feb. 2017) with Mugu, Dailekh and Bardia as pilot districts.
- Baseline report of the NAP-Ag project completed and submitted to national, regional and global stakeholders as appropriate.
- Brief fact sheet on project districts prepared and shared.
- Project fact sheet prepared and shared with FAO communication unit for further improvement and print.



Progress in First Quarter (Jan-March 2017)

- Detail of notice of 'Request for Proposal (RFP)' prepared, the notice released and the proposals from interested parties collected by FAO-Nepal and UNDP-Nepal seeking appropriate service provider carrying out selected project activities.
 - Technical and Financial evaluation of the proposals on outcome 1 (output **1.1 Training-institutional capacity building on VA** & **1.3 Developed training materials based on needs identified**) and activity 2.1.1 Identify institutional gaps/ key entry points into ADS (FAO component) completed by FAO-Nepal
 - Technical evaluation of proposals on output 1.2 **Training-institutional capacity building on EV/IA (CBA)**, 1.3 **Developed training materials based on needs identified** and activity 2.2.2- **Integrate EV and IA criteria into project preparation guideline** (UNDP component) underway in collaboration with **GCF-Readiness Programme**

9 May 2017



Progress in First Quarter (Jan-March 2017)

- Guidelines for implementation of output 3.2 *Strengthened capacity of agriculture-based monitoring units for effective monitoring and adaptation budgeting* prepared and shared with regional office for further inputs
- National Consultant taken on board to carry out activities 2.1.2 *TA to improve budget coding and expenditure tracking* and 2.2.1 *TA to integrate CCA into budget guidelines and proposals*,
- First draft baseline report on agriculture sector climate change budget coding and expenditure tracking methods submitted on 15 March, 2017.
- Quarterly progress report of the project (Q1 i.e. Jan-Mar in 2017 period) prepared, shared and submitted accordingly.

Coordination with National NAP Process Sustained

- Coordination meetings with NAP personnel;
- NAP-Ag participation in the sharing and interaction meetings organized by NAP-team
- Commonality of membership in TWG of NAP-process on AFS and PTT of NAP-Ag; organization of TWG-PTT combined meetings or sharing common forum.
- NAP-Ag materials produced in consistence with NAP-process and its guidelines;
- Sharing technical reviews and inputs;
- Cooperation in sector based CC-V/RA and identification of CCA measures.



Planned Activities for 2rd quarter (April-June, 2017)

- PTT meeting on 02 May 2017 adjusted with regional project mission
- Agreement with respective service providers by FAO and UNDP
- NPMU meetings with respective service providers to review and develop on the proposal submitted by service providers followed by afield implementation
- PSC meeting planned for June 2017
- Develop and finalize RFP on Output 3.1 (FAO component)
- Develop sector-based methods for CC-V/RA and CCA planning/ budgeting (FAO) and, in collaboration with GCF-Readiness project, that for EV of selected ecosystem services (UNDP).
- Support NAP-Thematic Working Group;
- Engage in broader NAP formulation process.
- Review opportunities for cross sharing and learning visit for Government staffs.



THANK YOU



9 May 2017



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UNFA/GLO/616/UND:

Supporting Nepal to Integrate Agricultural Sector(s) into National Adaptation Plans (NAPs)

Improving Governance of Climate Finance in Agriculture Sector

MoAD Meeting Hall, Singhadarbur

2 May, 2017



Supported by:
Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety

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May 02, 2017

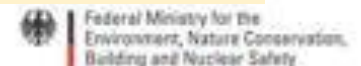


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Structure of the Presentation

- Integrating Climate Change in the planning and budgeting
- PFM as entry point
 - Introduction of the Climate Change Budget Code
 - District Climate Public Expenditure and Institutional Review
 - Climate expenditure reporting
- Climate-responsive budget of MOAD
- PETS of a climate-responsive programme of MOAD
- Collaborative Research to assess effectiveness of climate investment
- Application of CC budget integration index (CCBII)
- Coding of Agriculture Programmes

May 02, 2017



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Integrating Climate Change in the planning and budgeting

- The initiatives started with stock taking of the climate-responsive budget in the domestic budget in 2011.
- It was to Integrate climate change both into planning and budgeting across sectors.
- The CPEIR reviewed Policies, Institutions, and Budget of past 5 years.
- 83 budget heads of 8 ministries were relevant to Climate Change
- 7% of the national budget was climate-responsive
- Tracking recommended
- Climate code was developed in line with the pro-poor and gender responsive codes being used.

May 02, 2017



Couldn't capture sub-national level allocation

PFM as entry point

Climate Code to track allocation

Assess district level climate responsive budget

District CPEIR

Mainstreaming CC into planning and budgeting

PFM System

Budget Allocation

BMIS and FMIS linked to generate expenditure info

Budget Expenditure

Expenditure Effectiveness

For Agriculture Sector

Collaborative Research

PETS

Budget code help track allocation at national level

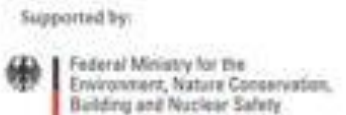
District CPEIR helped assess sub-national level CC responsive budget

Linking budget and expenditure information provides real time expenditure

Informed decision in allocating CC responsive budget can be ensured through information about effectiveness of the investment.



May 02, 2017



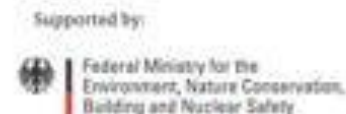
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Climate Budget Code

Fiscal Year	Climate Responsive Budget (<i>Percentage of total budget in parenthesis</i>)		
	Highly relevant	Relevant	Neutral
2012/13	18.00 (4.45)	9.28 (2.29)	377.54 (93.26)
2013/14	27.75 (5.36)	25.73 (4.98)	463.76 (89.66)
2014/15	34.98 (5.66)	31.37 (5.07)	551.75 (89.27)
2015/16	46.37 (5.66)	112.98 (13.79)	660.12 (80.55)
2016/17	61.85 (5.9)	139.76 (13.32)	847.3 (80.78)



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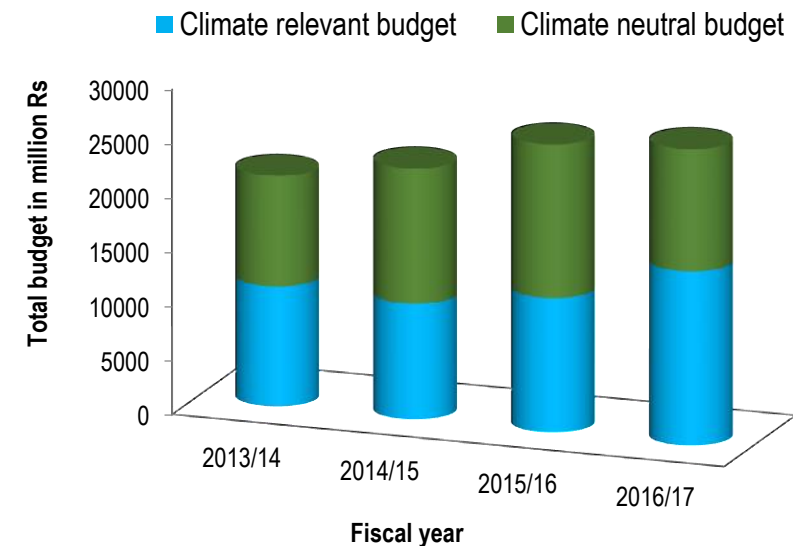


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Sectoral Budget Allocation

Ministries	Climate Responsive Budget (Percentage of total budget in parenthesis)			
	2013/14	2014/15	2015/16	2016/17
Urban Development	21.1	19.4	8.3	1.2
Agriculture Development	20.8	16.2	7.2	8.0
Irrigation	18.1	19.2	9.5	10.8
Science, Technology and Environment	9.3	8.7	4.5	
Forests and Soil Conservation	7.4	8.1	4.4	3.6
Finance (financing)	0	14	57.6	46.9

MOAD's share of climate relevant budget in its total budget

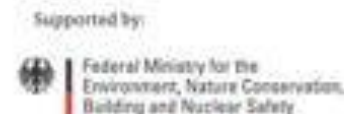


Climate Budget Expenditure

CC budget and expenditure MOAD					
FY 2014/15		%	FY 2015/16		%
10,551,809,000	9,415,940,879	89	12,463,560,000	10,834,639,672	86



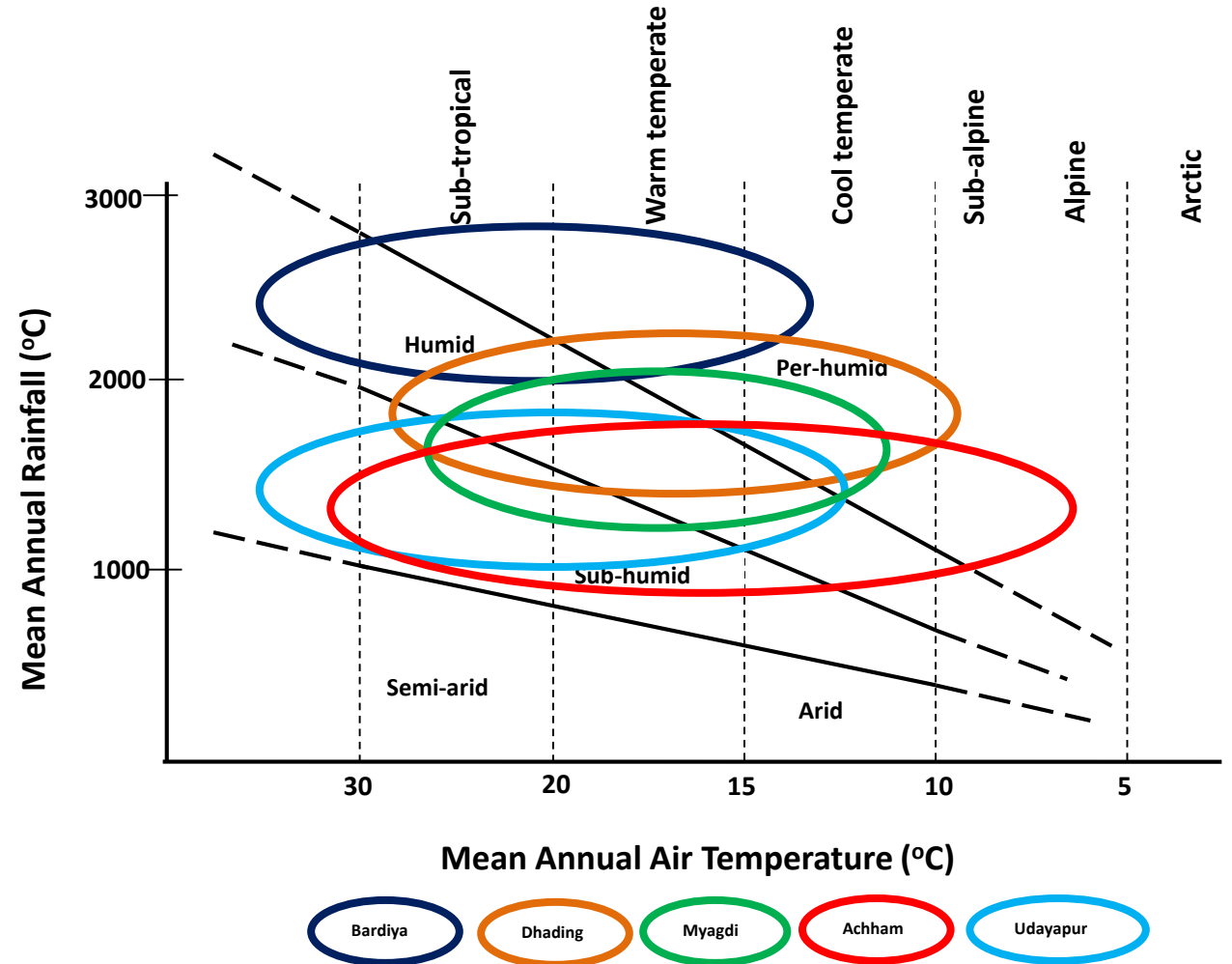
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District CPEIR (d-CPEIR)

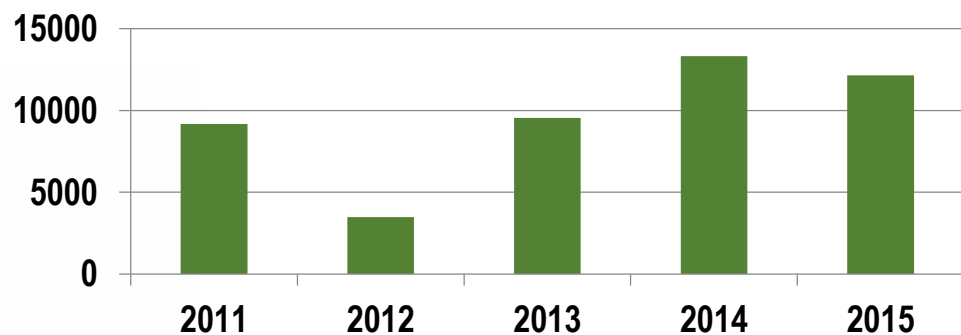
- Climate Budget code did not fully capture the sub-national level climate responsive budget.
- District level CPEIR (d-CPEIR) was conducted in 5 districts to assess climate responsive budget at the district level.
- The districts represented varied climate, ecological zones, and multiple micro-climatic conditions within.
- Slight change in ppt or temperature or both would affect a large area in Achham than in Bardiya



Results of the d-CPEIR

	d-CPEIR Districts									
	Achham		Bardiya		Dhading		Myagdi		Udayapur	
Agriculture related CC risks	Reduced river flow; Inadequate rain since 2015; widespread drought		Grasshopper infestation in paddy; long period of drought; declining groundwater table; increased floods.		Drying of water sources; increased landslide events; drying pastures.		Drying of springs and traditional ponds; increased landslide events.		Declining water sources; increased flash floods; shifting of citrus.	
CC responsive budget	Amt	CC%	Amt	CC%	Amt	CC%	Amt	CC%	Amt	CC%
	2,40,00	36.7	2,90,00	33.8	3,20,00	53	4,70,00	14.5	2,70,00	16.7

Trend of CC responsive budget of DADO



No convergence of National Climate Policy with sector policies at to guide sub-national level planning and budgeting

Public Expenditure Tracking Survey (PETS)

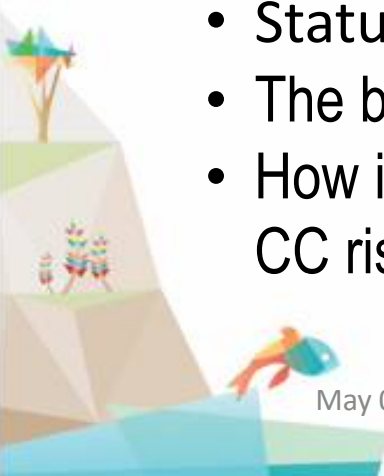
Small Irrigation programme of the Cooperative Farming, Small Irrigation and Transportation of Seeds & Fertilizers Programme was selected for PETS in Bardiya (10 groups) and Udayapur (10 groups).

❖ To assess

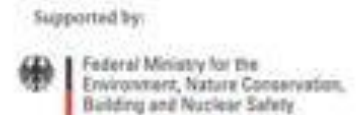
- Knowledge of the programme among farmers
- Trend of money flow
- Status of compliance to the guidelines
- The benefits
- How it has helped farmers respond to the CC risks

Types of Projects
Canal maintenance
Pump-set/pipe
Water lifting motor/pipe
Water harvesting pond

District	Fiscal year	Allocation	Expenditure (%)
Bardiya	2013/14	48,86,000	98
	2014/15	61,71,000	99
Udayapur	2013/14	35,70,000	100
	2014/15	58,79,000	97



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Benefits of the programme

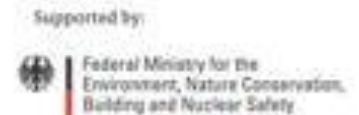
- Very encouraging results

- Service delivery: Effective 65%, Moderate 25%
- Transparency in budget use: Proper 55%, Moderate 35%
- Increase in food production: 90%
- Increase in crop intensity: 80%
- Crop switching : 60%
- Increased income : 60%

System to Ensure Irrigation Equity	
Stated hourly system in proportion of land area	18
Ad hoc basis	1



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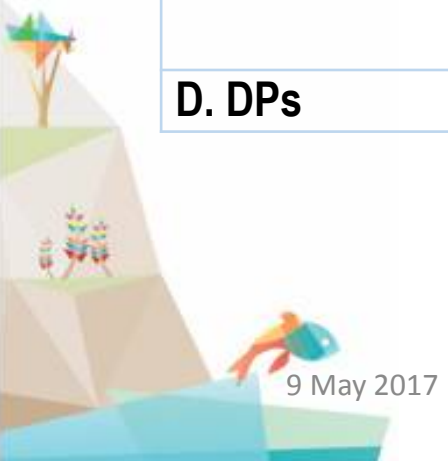
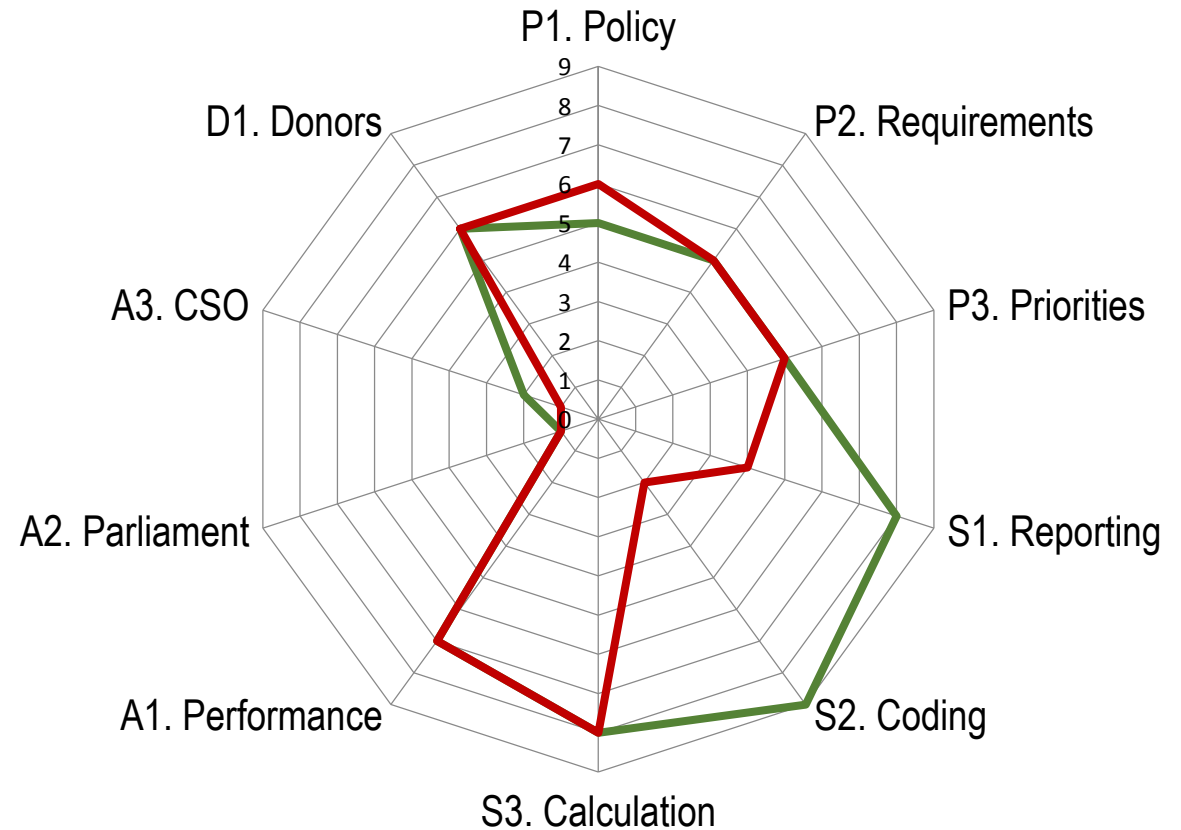
Collaborative research

- To analyse the factors that determine decisions on where resources are allocated
- To assess the impact of climate change investments on the poor who are climate vulnerable
- To provide recommendations on how vulnerability assessments can be systematized to be a critical part of budget decision-making.

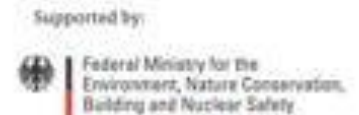
CC Budget Integration Index

<i>Dimension</i>	<i>Category</i>
P. Policy	P1. Policy
	P2. Requirements
	P3. Priorities
S. System	S1. Reporting
	S2. Coding
	S3. Calculation
A. Accountability	A1. Performance
	A2. Parliament
	A3. CSO
D. DPs	D1. Donors

— 2017 Assessment — 2015 Assessment



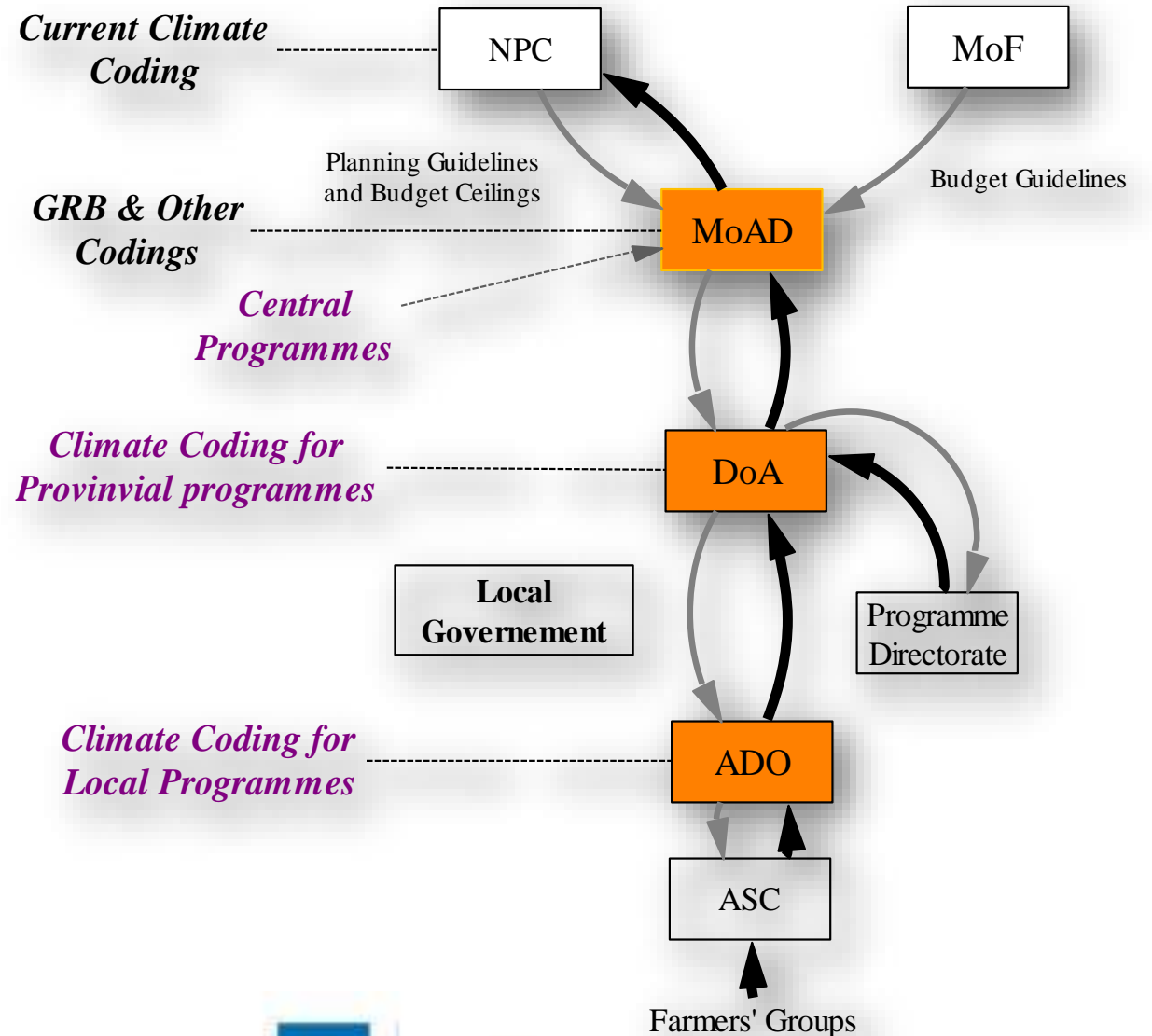
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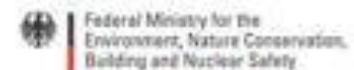
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Coding of Agriculture Programmes

- Coding is not done by those who are involved in the planning process, it is done at NPC.
- Only central or national level programmes are coded, the sub-national level programmes, which are planned and implemented at the local level, are not.
- The common criteria used to identify climate-relevant programmes fails to address sectoral nuances. Guidelines needed.
- No officials have been trained on using climate code.



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नेपाल सरकार

जनसङ्ख्या तथा वातावरण मन्त्रालय

राष्ट्रिय अनुकूलन योजना तर्जुमा प्रक्रिया

Conceptual Framework on Vulnerability Assessment and Risk Assessment and indicators of Agriculture and food security for Nepal's NAP Process

Gyanendra Karki, Thematic Lead-FBD

Shree Bhagavan Thakur, Thematic Lead-AFS

NAP Team

2 May 2017 Kathmandu

National Adaptation Plan (NAP)



Oxford Policy Management



NAP Objectives:

- (a) To reduce vulnerability to the impacts of climate change, by building adaptive capacity and resilience;
- (b) To facilitate the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate.

Approaches

country-driven, gender sensitive, participatory and fully transparent, taking into consideration the vulnerable groups, communities and ecosystems.

equally consider the best available science as appropriate, traditional and indigenous knowledge, not prescriptive, avoid duplication of efforts and rather facilitate country-owned and country-driven actions.

Elements of NAP Process

Element A. Lay the groundwork and address gaps

1. Initiating and launching of the NAP process
2. Stocktaking: identifying available information
3. Addressing capacity gaps
4. Assessing development needs and climate vulnerabilities



Element B. Preparatory elements

1. Analyzing current climate and future CC scenarios
2. Assessing climate vulnerabilities and identifying adaptation options
3. Reviewing and appraising adaptation options
4. Compiling and communicating NAP
5. Integrating CC adaptation into national and subnational and sectoral planning



Element C. Implementation strategies

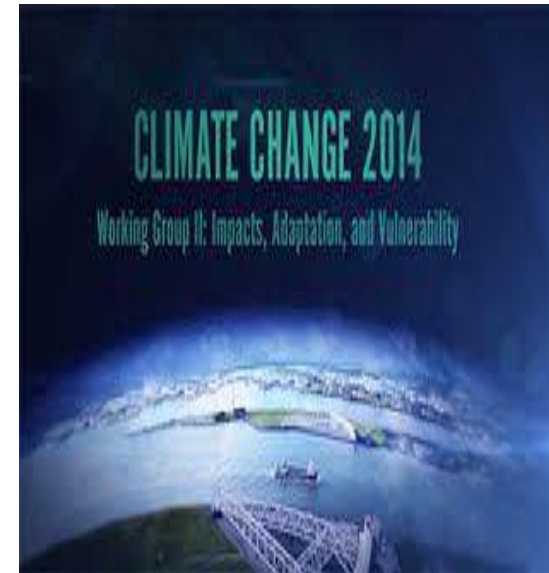
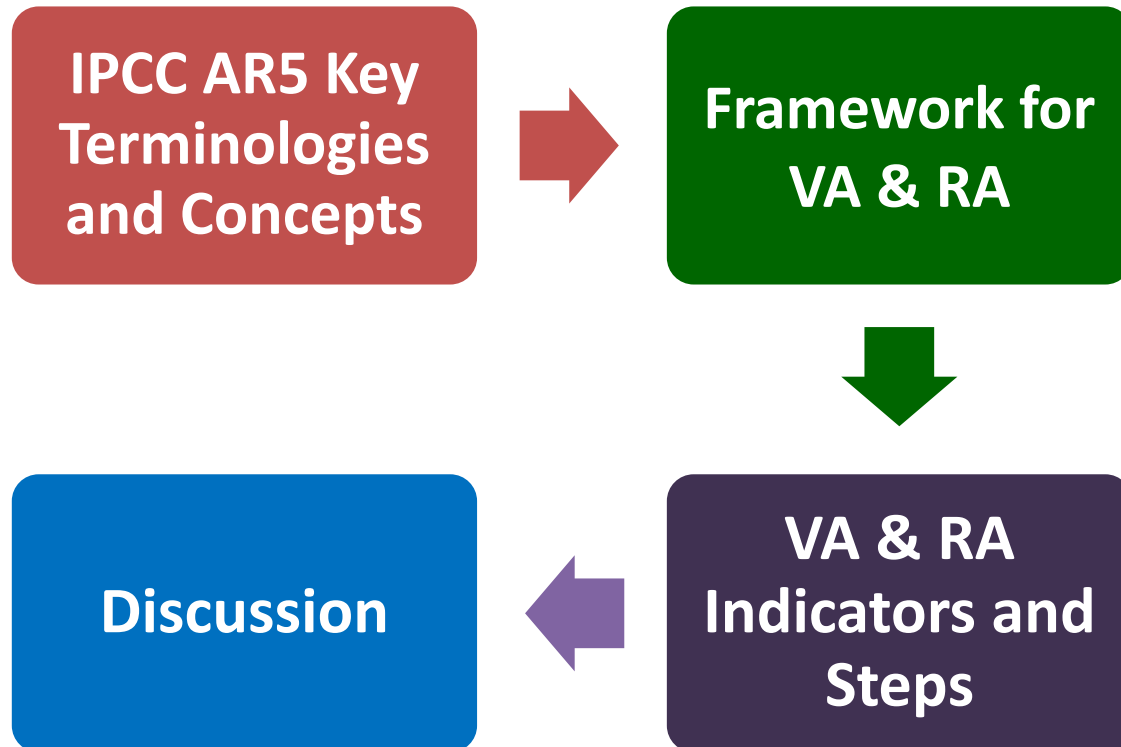
1. Prioritizing CC adaptation in national planning
2. Developing implementation strategy
3. Enhancing capacity
4. Promoting coordination and synergy at the regional level and with other environmental agreements



Element D. Reporting, monitoring and review

1. Monitoring the NAP process
2. Reviewing the NAP process
3. Updating the NAP
4. Outreach on the NAP process and reporting on progress and effectiveness

Menu

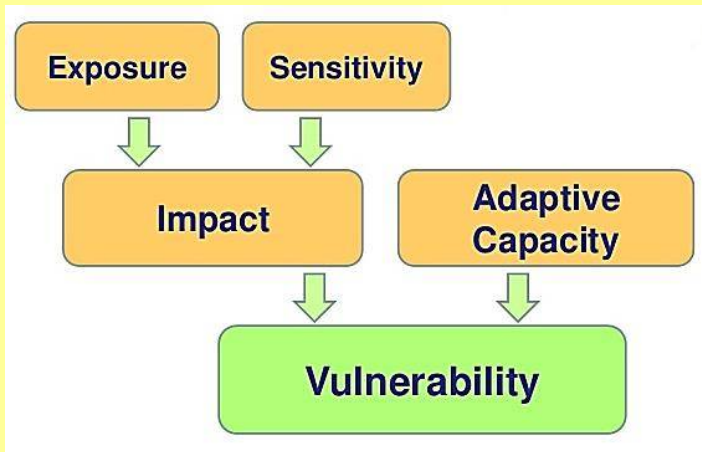


Vulnerability and Risk: Concepts

VA Approach [IPCC AR4 (2007)]

Vulnerability

$= f(\text{Exposure}, \text{Sensitivity}, \text{Adaptive Capacity})$



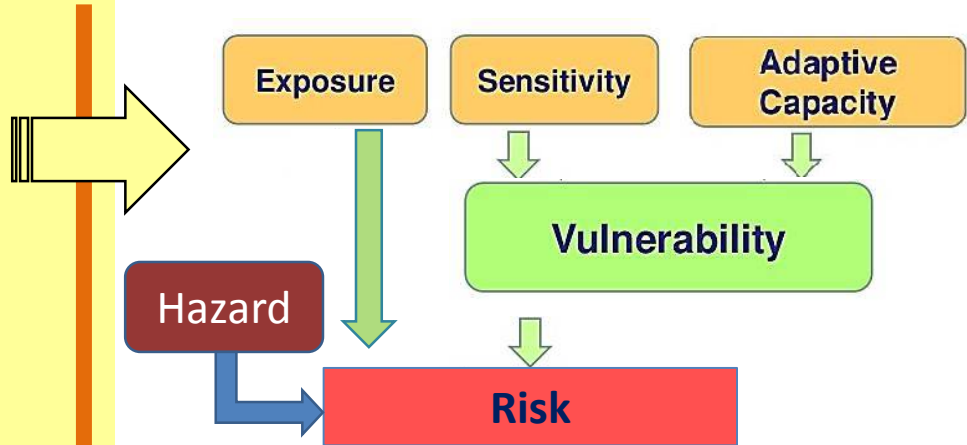
Vulnerability: “the degree to which a system is susceptible to and unable to cope with adverse effects of climate change, including climate variability and extremes.

Physical causes and their effects are an explicit aspect of vulnerability while the social context is encompassed by the notions of sensitivity and adaptive capacity.

Risk Approach

[IPCC SREX (2012), AR5 (2014)]

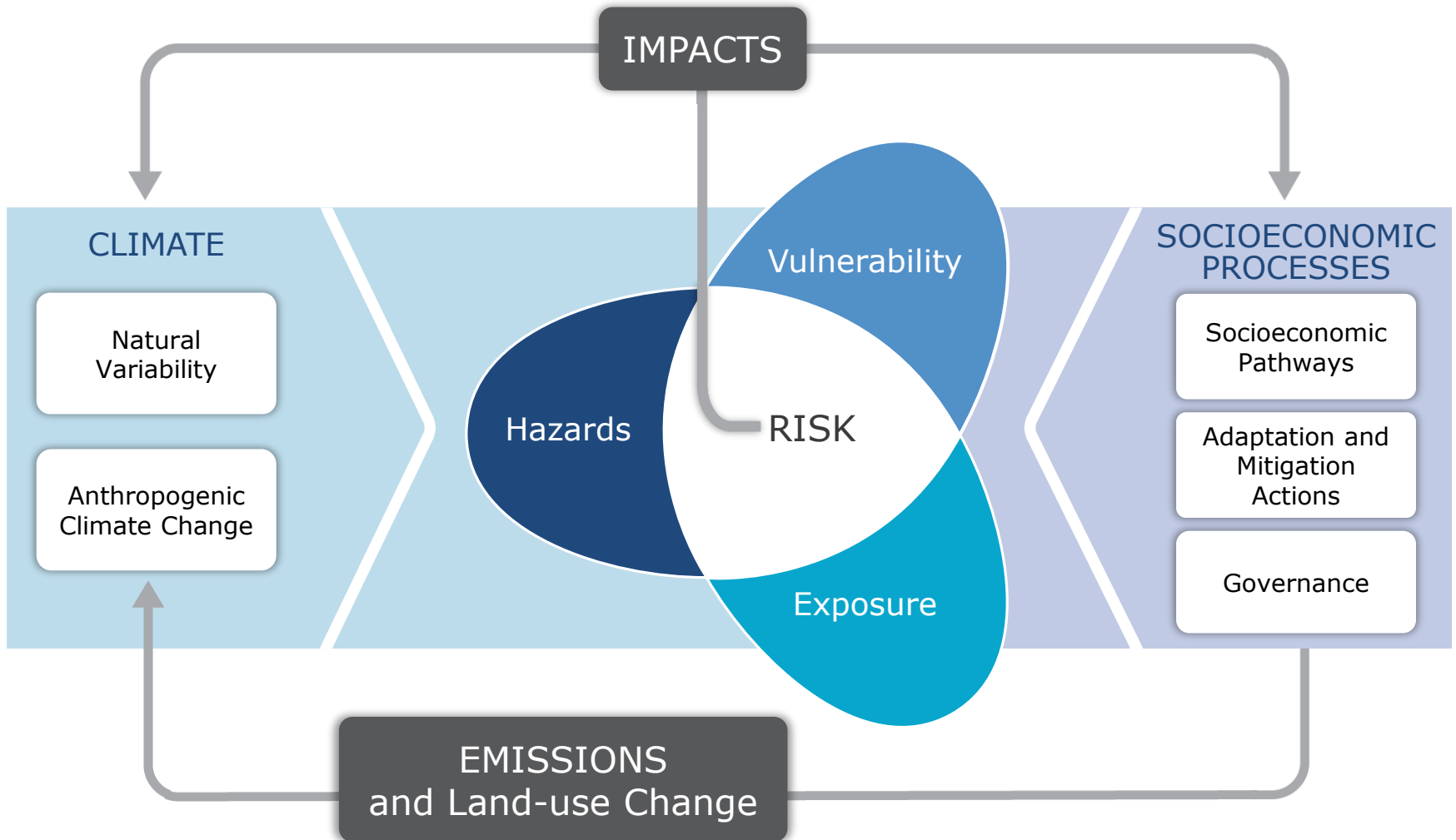
$\text{Risk} = f(\text{Hazard}, \text{Exposure}, \text{Vulnerability})$



Vulnerability: the propensity or predisposition to be adversely affected. Such predisposition constitutes an internal characteristic of the affected element.

The social context is emphasized explicitly, and vulnerability is considered independent of physical events.

IPCC AR5 (2014)



Key Definitions

Risk: The potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values. Risk is often represented as probability of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur.

Hazard: The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources.

Exposure: The presence of people, livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected.

Causal Factors of Vulnerability

❑ **Susceptibility/fragility or sensitivity:**

(Inherent including Physical/environmental component of vulnerability)

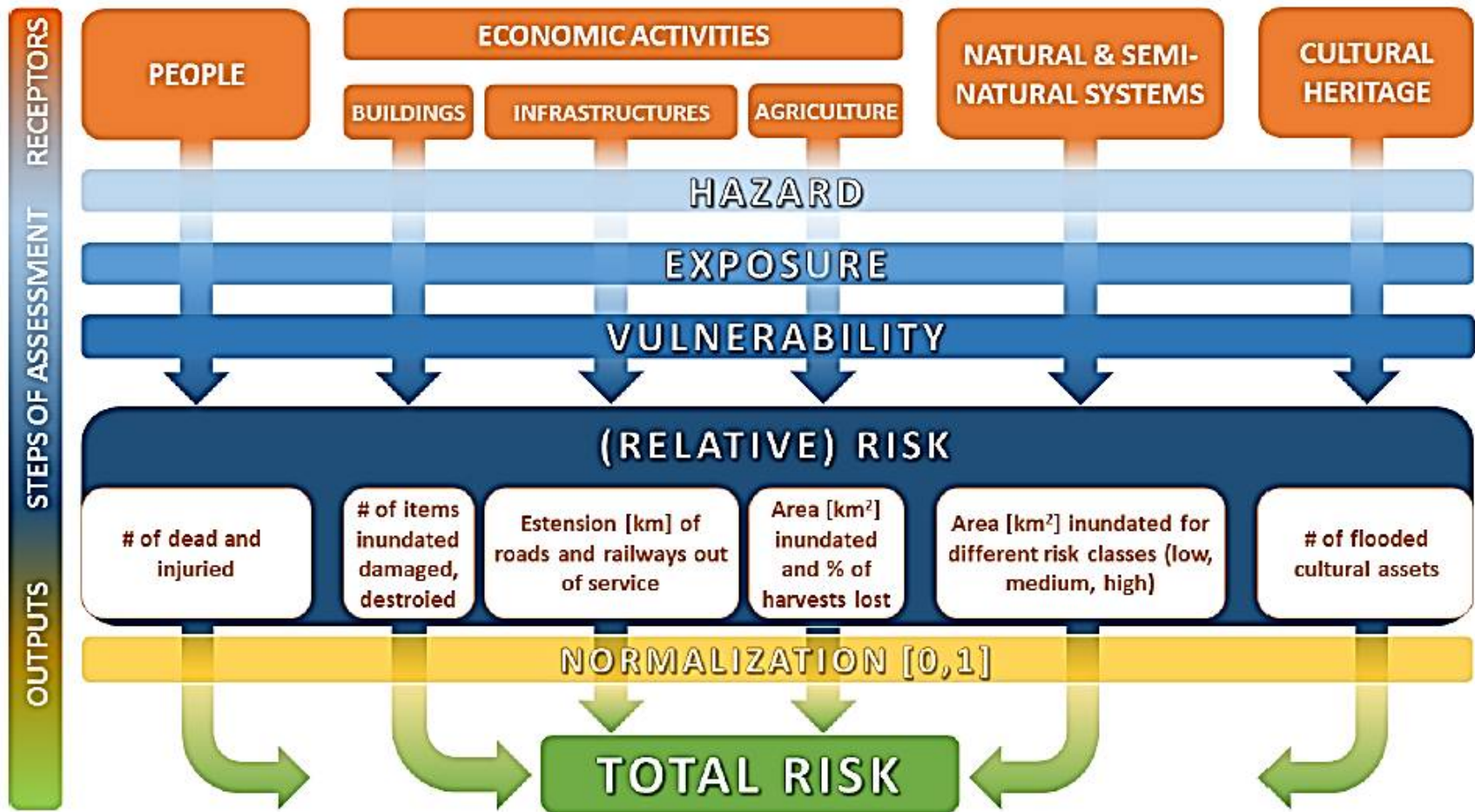
- physical predisposition of human beings, infrastructure, and environment to be affected by a dangerous phenomenon due to **lack of resistance**
- predisposition of society and ecosystems to suffer harm as a consequence of intrinsic and context conditions making it plausible that such systems once impacted will collapse or experience major harm and damage due to the influence of a hazard event.

❑ **Lack of resilience or adaptive capacities:**

(Institutional, infrastructural, Socio-economic component of vulnerability)

- Limitations in access to and mobilization of the resources of the human beings and their institutions, and incapacity to anticipate, adapt, and respond in absorbing the socio-ecological and economic impact.

IPCC AR5 (2014) Approach : An example



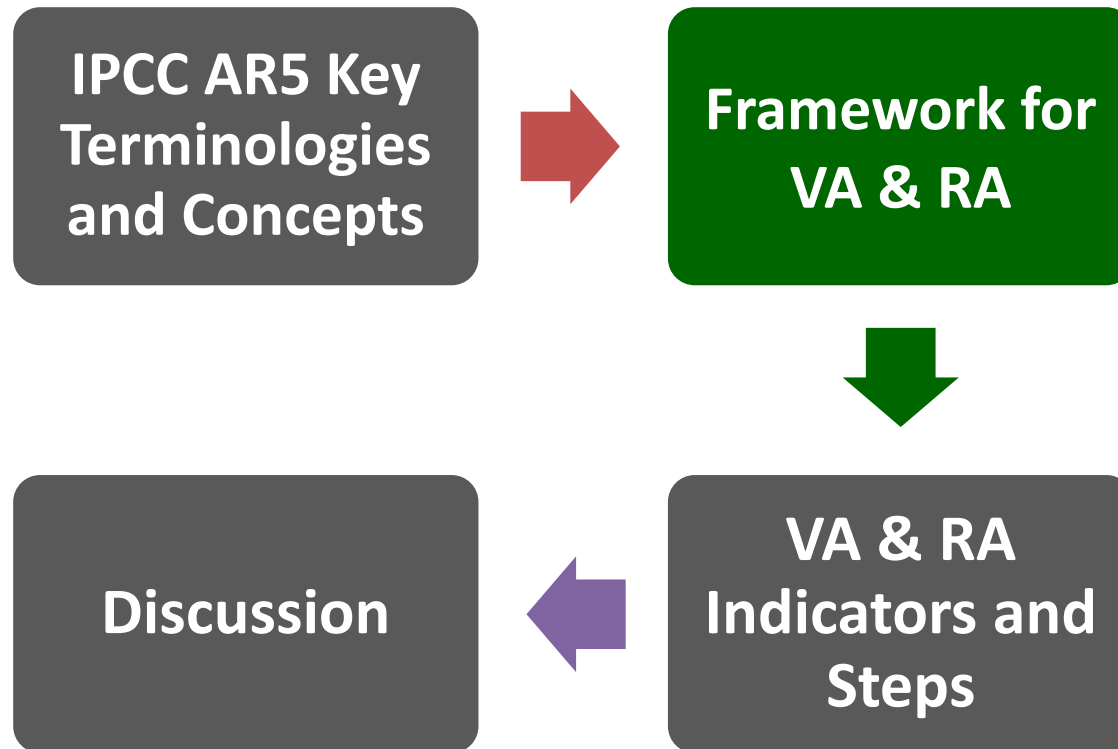
Key Propositions

- **Definitions of exposure, sensitivity, extreme events, vulnerability, adaptive capacity and risk etc. adopted from IPCC AR5**
- **Vulnerability is considered as a function of sensitivity of exposed system and adaptive capacity**
- **Hazard, exposure and sensitivity (including sensitive systems and services) are different for different thematic areas**
- **Adaptive capacity will be assessed for particular sensitive system e.g. Irrigation facility for agriculture**
- **Overall adaptive capacity will be assessed as an accumulation of the determinants like socio-economic, institutional, infrastructural, governance and environmental conditions**
- **Determinants/data sets will not be double counted in same form.**

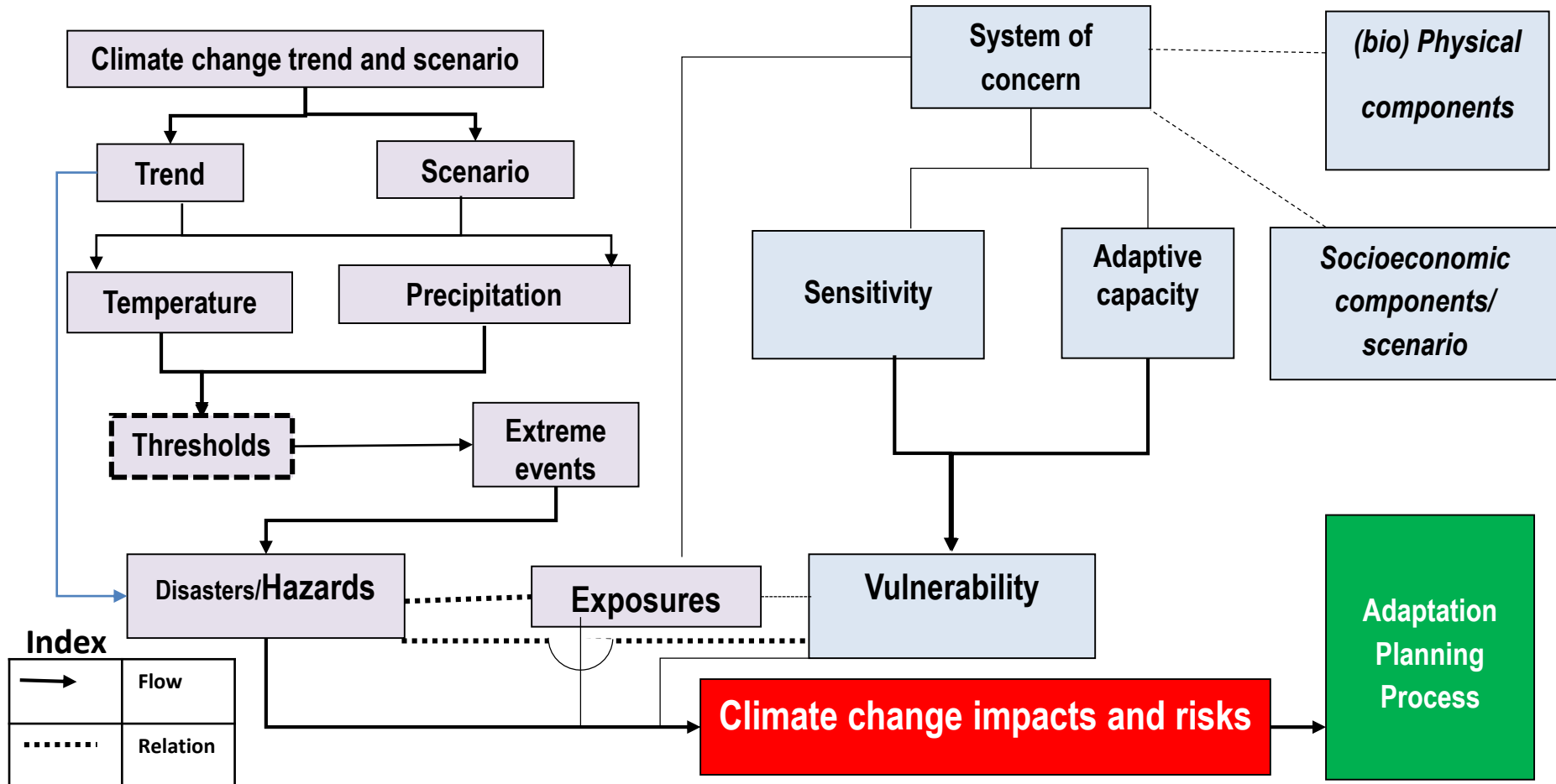
Key Propositions

- **Data on indicators will be drawn from national repository such as CBS, specialized organizations, concerned ministries etc.**
- **Data gaps for critical indicators will be supplied through different level of consultations, literatures and field observations**
- **Data based analysis will be verified through consultations and field triangulation**
- **Common indicators will be assessed at one point and used in different thematic assessment such as hazard related data and indicators**
- **Typical indicators for cross-cutting areas will be streamed in concerned themes to the extent practical**
- **Weightage for indicators will be decided on the basis of international practice and expert judgement**
- **All data will be normalized with standard statistical formula and results will be ranked**

Menu



Climate Change Vulnerability Assessment and Risk Assessment Framework



Opportunities and Challenges

Challenges

- ❖ **Transition from AR4 to AR5 concepts/methods**
 - **IPCC does not provide clear-cut assessment framework**
 - **Even causal relationships between exposure, vulnerability and hazard are not articulated.**
- ❖ **Formulating a generic framework to suit different sectors is challenging**
 - **NAP includes 7 thematic sectors and 2 cross-cutting sectors → sectoral sensitivity to climate change is different between/among sectors**
 - **Infrastructure needs special treatment: as a part of a system *and* as an isolated entity.**
- ❖ **Compatibility with pre-AR5 studies may be an issue.**
- ❖ **Data availability and formats used will affect development of model.**

Opportunities and Challenges

Opportunities

- ❖ Literature based on AR5 is growing (e.g., Giupponi et al., 2014; Ronco et al., 2014; RESIN, 2015).
- ❖ NAP provides an opportunity for all CC researchers in Nepal to be on same page.
- ❖ NAP also provides an opportunity to ‘craft’ a model for VARA to suit Nepal’s contexts.



नेपाल सरकार

जनसङ्ख्या तथा वातावरण मन्त्रालय

राष्ट्रिय अनुकूलन योजना तर्जुमाको लागि प्रस्तावित सङ्कटासन्नता र जोखिम लेखाजोखाको मस्यौदा प्रारूपमा सुझाव सङ्कलनको लागि

सार्वजनिक सूचना

प्रथम पटक प्रकाशित २०७३।०३।१८

जलवायु परिवर्तन सम्बन्धी संयुक्त राष्ट्रसंघीय खाका महासन्धिको मेक्सिकोको क्यानकुन्मा सम्पन्न पक्ष राष्ट्रहरूको १६ औं सम्मेलनको निर्णय बमोजिम नेपालले सन् २०१५ को सेप्टेम्बरमा बहुसरोकारवालाहरूको सहभागितामा भएको एक कार्यशाला मार्फत राष्ट्रिय अनुकूलन योजना (National Adaptation Plan, NAP) तर्जुमा शुभारम्भ गरेको थियो। नेपालमा सन् २०१६ में महिनादेखि न्याप तर्जुमाको लागि आवश्यक जनशक्ति सहित महासन्धिको पक्ष राष्ट्रहरूको निर्णयमा उल्लेखित प्रारम्भिक निर्देशिका र सो बमोजिम तयार भएको न्यापको प्राविधिक निर्देशिकालाई आधार मानी विभिन्न कार्यहरू अघि बढाइएको छ। यसै सन्दर्भमा मध्यकालीन र दीर्घकालीन अवधिका लागि उपयुक्त जलवायु अनुकूलन सम्बन्धी कार्यहरू पहिचान गर्नका लागि 'सङ्कटासन्नता र जोखिमको लेखाजोखा' को प्रारूप तयार गरिएको छ। यो प्रारूप Intergovernmental Panel on Climate Change (IPCC) को Fifth Assessment Report मा आधारित छ। यस मस्यौदा प्रारूपमा बहुसरोकारवालाहरूसँग सुझाव संकलन गर्ने उद्देश्यले यो सूचना प्रकाशन गरिएको छ।

यो सूचना प्रथमपटक प्रकाशित मितिले १५ दिन भित्र यस मन्त्रालय वा तल दिइएको ठेगानामा इमेल मार्फत वा लिखित रूपमा आफ्नो राय, सुझाव पठाई राष्ट्रिय अनुकूलन योजना तर्जुमा प्रक्रियामा सहयोग गरिदिनु हुन अनुरोध छ।

राष्ट्रिय अनुकूलन योजना तर्जुमाको लागि प्रस्तावित सङ्कटासन्नता र जोखिम लेखाजोखाको मस्यौदाको प्रारूप www.mopce.gov.np बाट डाउनलोड गर्न सकिनेछ।

सुझाव पठाउने ठेगाना:

नेपाल सरकार

जनसङ्ख्या तथा वातावरण मन्त्रालय

राष्ट्रिय अनुकूलन योजना तर्जुमा प्रक्रिया

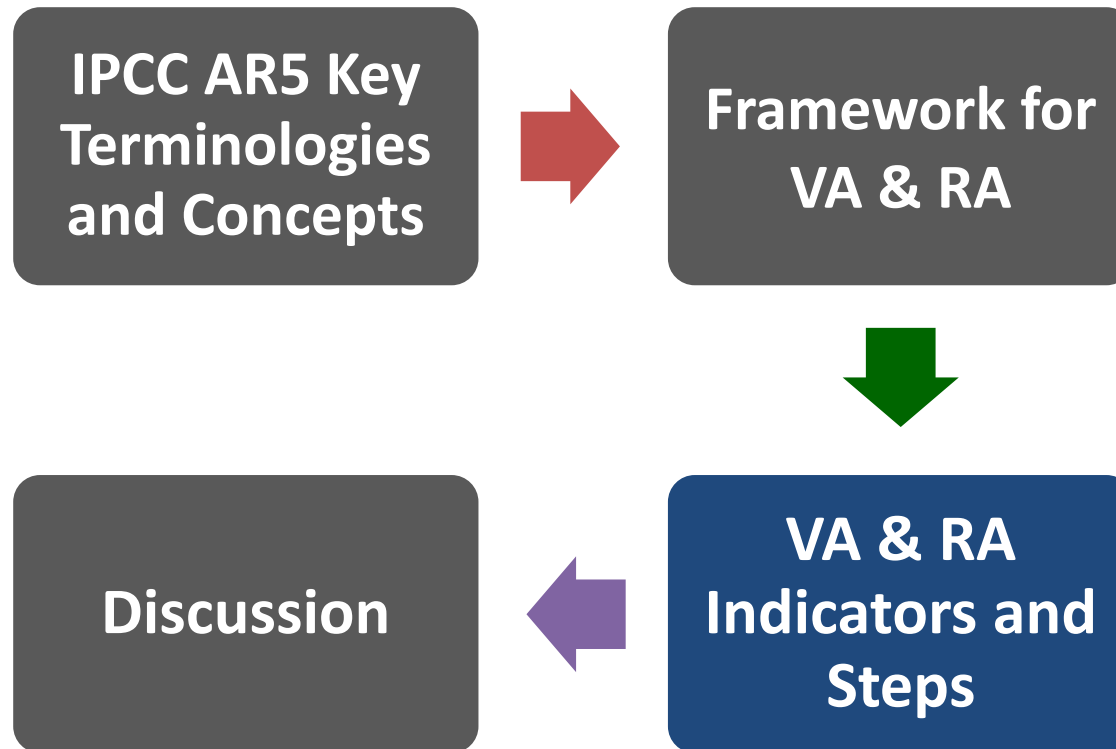
सिंहदरवार, काठमाडौं।

फोन नं: ०१ ४२००५७५

Email: nepalnag@gmail.com

- Feedback sought through public notice

Menu



Steps of VA-RA Process

Step 1. Unpacking AR5 Key concepts and terminologies, scoping



Step 2: Developing VA & RA framework

Risk=f(Hazard, Exposure, Vulnerability)

Vulnerability= f(Sensitivity, Adaptive Capacity)

$$R=H_{intensity} \times E \times V$$

$$V = S - C \text{ if } S > C \\ = 0 \quad \text{otherwise}$$

Alternatively,

$$V = S \times \hat{C} \text{ where, } \hat{C} = 1/C$$

$$R_{2016}=H_{i 2016} \times E_{2016} \times V_{2016}$$

$$R_{2030}=H_{i 2030} \times E_{2030} \times V_{2030}$$

$$R_{2050}=H_{i 2050} \times E_{2050} \times V_{2050}$$



Step 3: Identification of key indicators for Hazard, Exposure, Vulnerability (Sensitivity & Adaptive Capacity) for different themes

Steps of VA-RA Process

Step 4: Exploring data source, nature and character



Step 5: Data collection, tabulation, filter, normalization

$$R = H_{intensity} \times E \times V \dots (1)$$

H_i, E, V are all normalized (0,1)

$$V = S - C \text{ if } S > C \\ = 0 \quad \text{otherwise} \dots (2)$$

In Eq. 2, C is normalized.

In Eq. 3, \hat{C} is normalized.

Alternatively,

$$V = S \times \hat{C} \quad \dots (3)$$

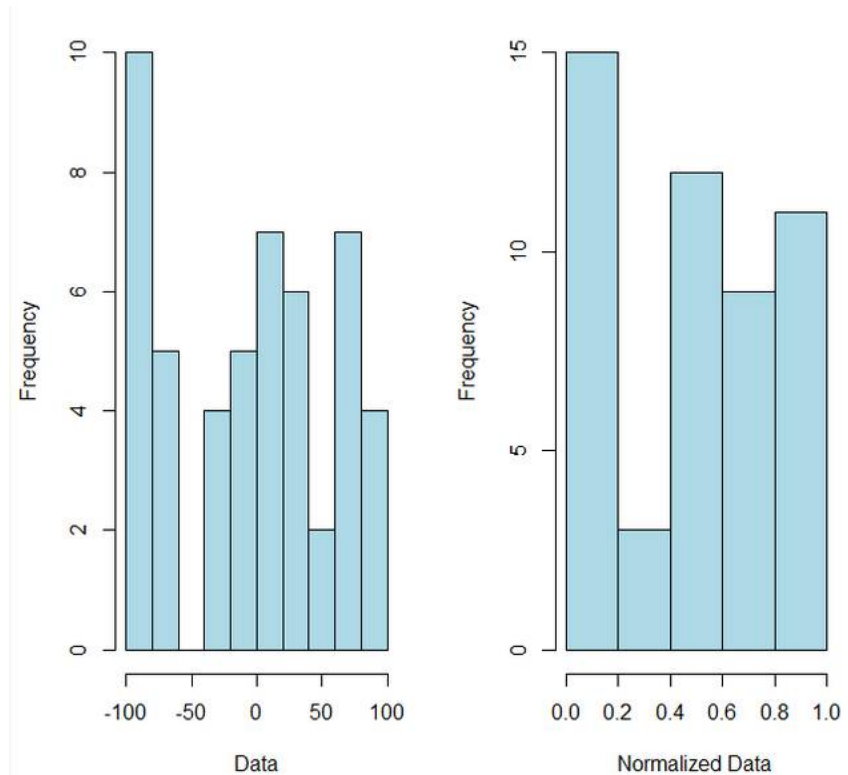
where, $\hat{C} = 1/C$

Steps of VA-RA Process

Normalization

$$z_i = \frac{x_i - \min(x)}{\max(x) - \min(x)}$$

where, z_i is the i^{th} normalized data.



Steps of VA-RA Process

Step 6: Weightage and composite value

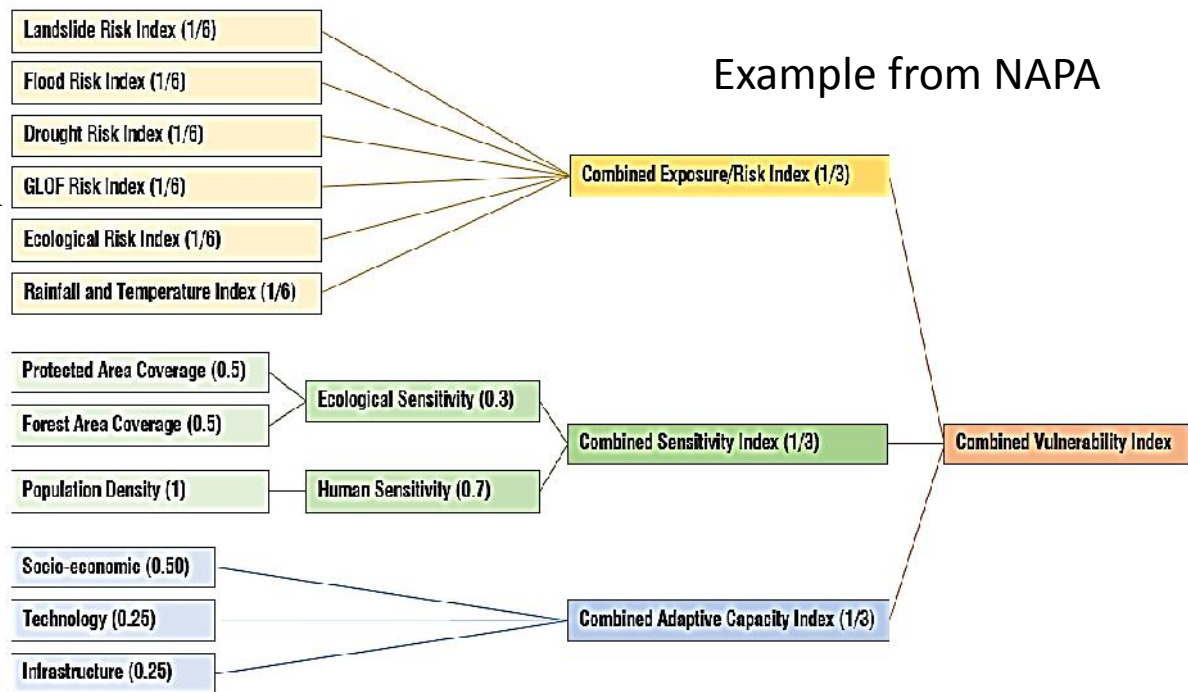


$$E = \frac{w_1 E_1 + w_2 E_2 + \dots + w_n E_n}{w_1 + w_2 + \dots + w_n} = \frac{\sum_{i=1}^n w_i E_i}{\sum_{i=1}^n w_i}$$

If E_i is already normalized,

$$E = \sum_{i=1}^n w_i E_i,$$

where, $\sum_{i=1}^n w_i = 1$



Steps of VA-RA Process

Step 7: Individual and composite maps

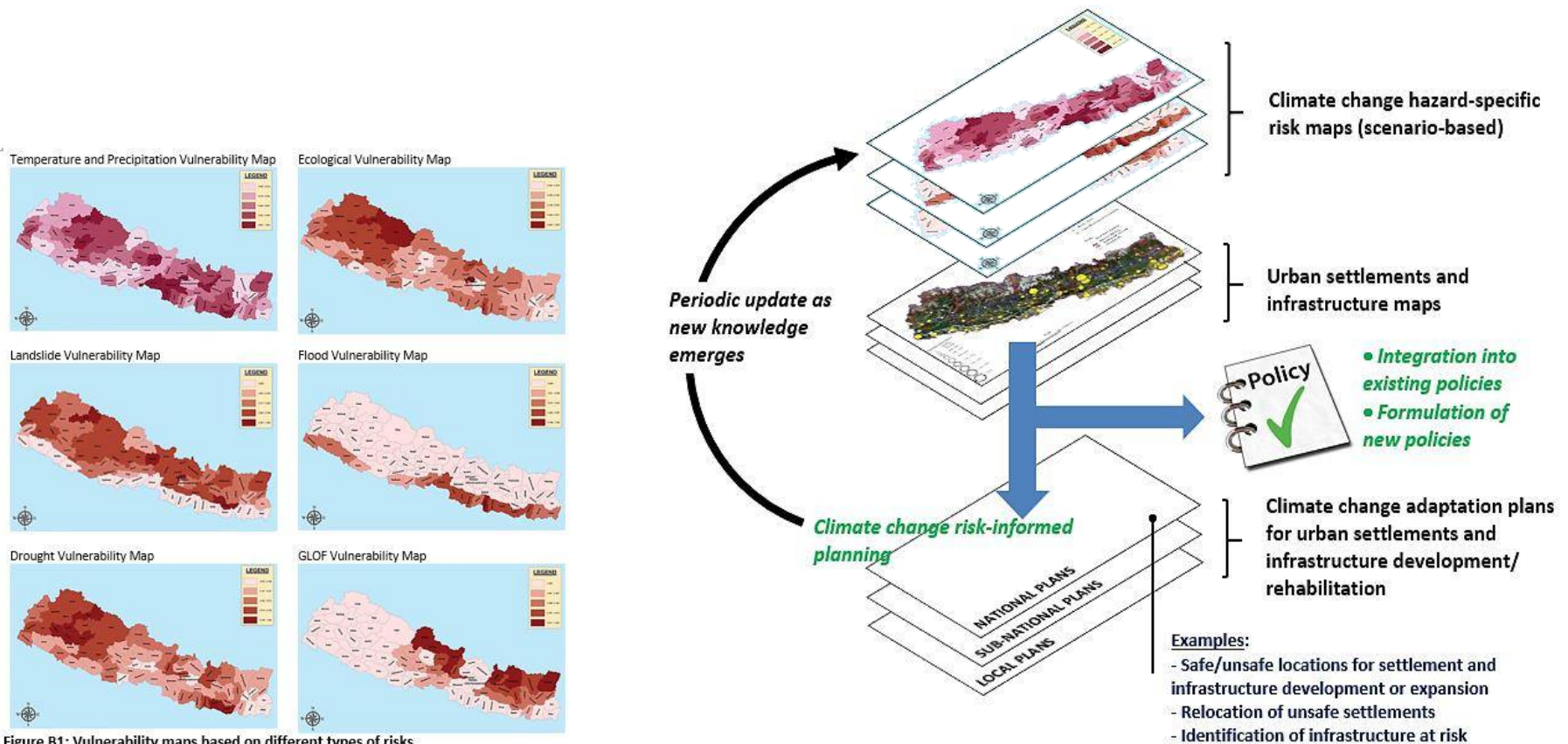


Figure B1: Vulnerability maps based on different types of risks

Examples from NAPA



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Hazards

Details	Hazards
Climatic extreme events	Extreme heat, Consecutive dry days, Consecutive cold days, Heat waves Cold waves (fog) Extreme weather variability Warm, cold, dry & wet spell
Climate-induced hazards	Floods Drought Landslides Hailstorm
Sector specific	Crop inundation Seasonal shift/temporal variability Irrigation sediments Pest and diseases outbreak





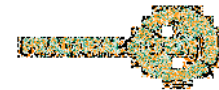
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Exposure

Exposure	Unit
Farming Population (Agri, Horti, apiculture and livestock)	HH.
Irrigation schemes	No.
Fish Farms and ponds	No. Ha
Agriculture land area	Ha
Population of livestock	No.
Poultry farms	No.
Horticulture Area	Ha.
Range land area	Ha.
Agriculture road and market network	Km., No.
Agriculture labor population	No.
Agro-ecosystems	No. , Ha.



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Adaptive capacity

Sub-system	Adaptive capacity	Unit
Agriculture, apiculture and horticulture	Availability of irrigation source, coverage, type and functional structure,	No, Ha, Km.
	Agrobiodiversity pocket	No, Ha
	Use of efficient tools and implements (modern, indigenous)	No,
	Use of environment friendly technology and practices	No.
	Transportation facilities, Market structures, collection centers, go-down and network	Km, No.
	Service (extension centers) and human resource	No.
	Agriculture advisory system	
	Availability of stress tolerance genotypes, community seed bank and gene bank (indigenous and underutilized)	No.
	Insurance and financial services	No.
	Farmers group, cooperatives and network	No.
	State investment and GDP contribution *	Rs.
	Policy, Program and project support	No. HH.
	Income poverty	HH, %
Agro based industries, enterprises and employment	No	



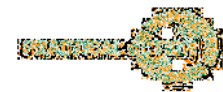


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Adaptive capacity

Sub-system	Adaptive capacity	Unit
Livestock and poultry	Availability of water facilities,	No.,
	Housing system	Type
	Use of improved breed	No
	Use of improved technologies,	No. HH.
	Service centers (Resources and infrastructure)	No
	Availability of stress tolerance genotypes of fodder	No
	Availability of fodder and forage area	Ha
	Range land carrying capacity	LSU/ha





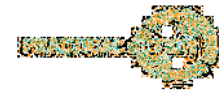
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Adaptive capacity

Sub-system	Adaptive capacity	Unit
Fisheries	Pond structure, water sources, Insurance, market, networks, hatchery, road access, adaptive breeds.	No.
Food security and nutrition	Food sufficiency, nutrition status, storage, distribution channel, food diversity, food accessibility, health and food utilization.	



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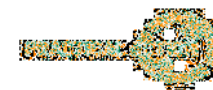




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Sensitivity

Sub system	Sensitivity	Unit
Agriculture, apiculture and horticulture	Income disparity	HH, %
	Land holding capacity, land ownership and tenure	HH, %
	Livelihood dependency on agriculture	HH, %
	Topography and access	Index
	Gender inequality index	Index
	Seasonal and out migration	No.
	Population structure (Age, gender)	No., %
	Geomorphology (edaphic factor, aspects, altitude, terrain, soil texture)	Index
	Farming system (rain-fed, single..)	Ha
	Cropping pattern	
	Land cover and land use Change	Type and Ha
	Species composition	Index
	Phenological characteristic changes	Index

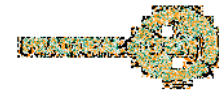




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Sensitivity

Sub system	Sensitivity	Unit
Livestock and poultry	Cattle shed	Type, No.
	Structure	Type
	Livestock rearing practices	
	Pressure on range land	Ratio
Fishery	Productivity and distribution	Mt/ha
Food security and nutrition	Living standard	Index
	Age factor	
	Food stability.	



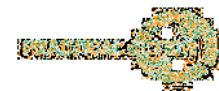
Outputs of the NAP

- **Stocktaking report**
- **Stakeholder mapping and actor profile**
- **Capacity gaps, needs and barrier analysis report**
- **Development priority & climate sensitivity report**
- **Past and future climate change scenario report**
- **Vulnerability and risk assessment report**
- **Compilation of climate change adaptation options**
- **Prioritization of adaptation options for medium and long term**
- **Climate resilient development visioning report**
- **NAP document**
 - **NAP implementation strategy framework**
 - **Framework for monitoring, evaluation and review of NAP with indicators.**



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Thanks for your kind attention.





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Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety

NAP Agriculture Project

Update

Beau Damen
FAO Regional Office for Asia and the Pacific



Integrating Agriculture in NAPs (NAP-Ag)

Objective

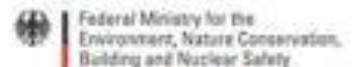
To **integrate** climate change **risks and opportunities** as they relate to **agriculture sector**-related livelihood options within **existing** national **planning** and **budgeting processes**

Key Features

- Funded by the German Government (BMUB ICI)
- FAO and UNDP Joint Programme
- **Duration:** 4 years (2015 to 2018)
- **Global Programme Budget:** €15 Million

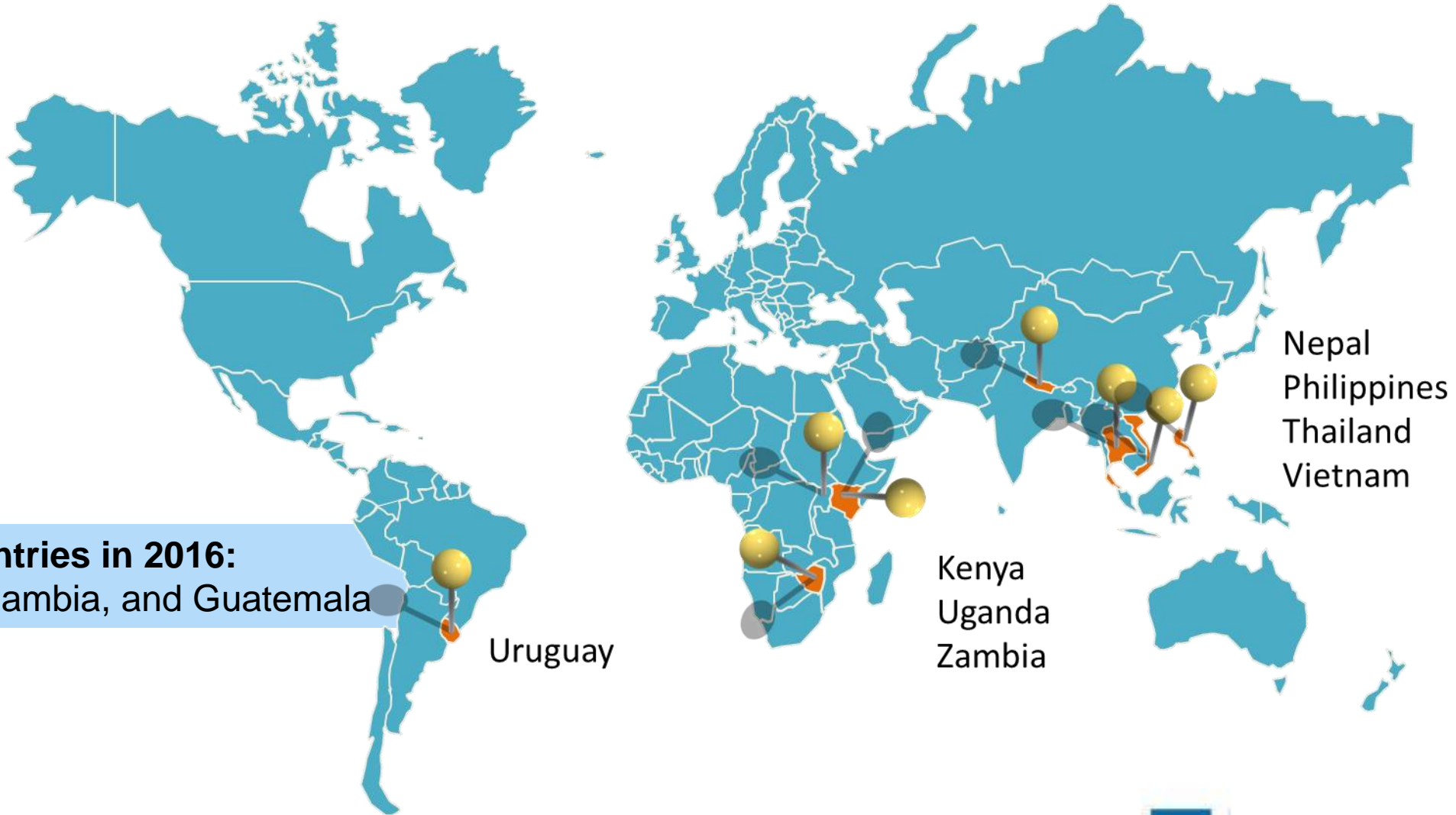


Supported by:



based on a decision of the German Bundestag

Partner Countries



Additional countries in 2016:
Colombia, the Gambia, and Guatemala

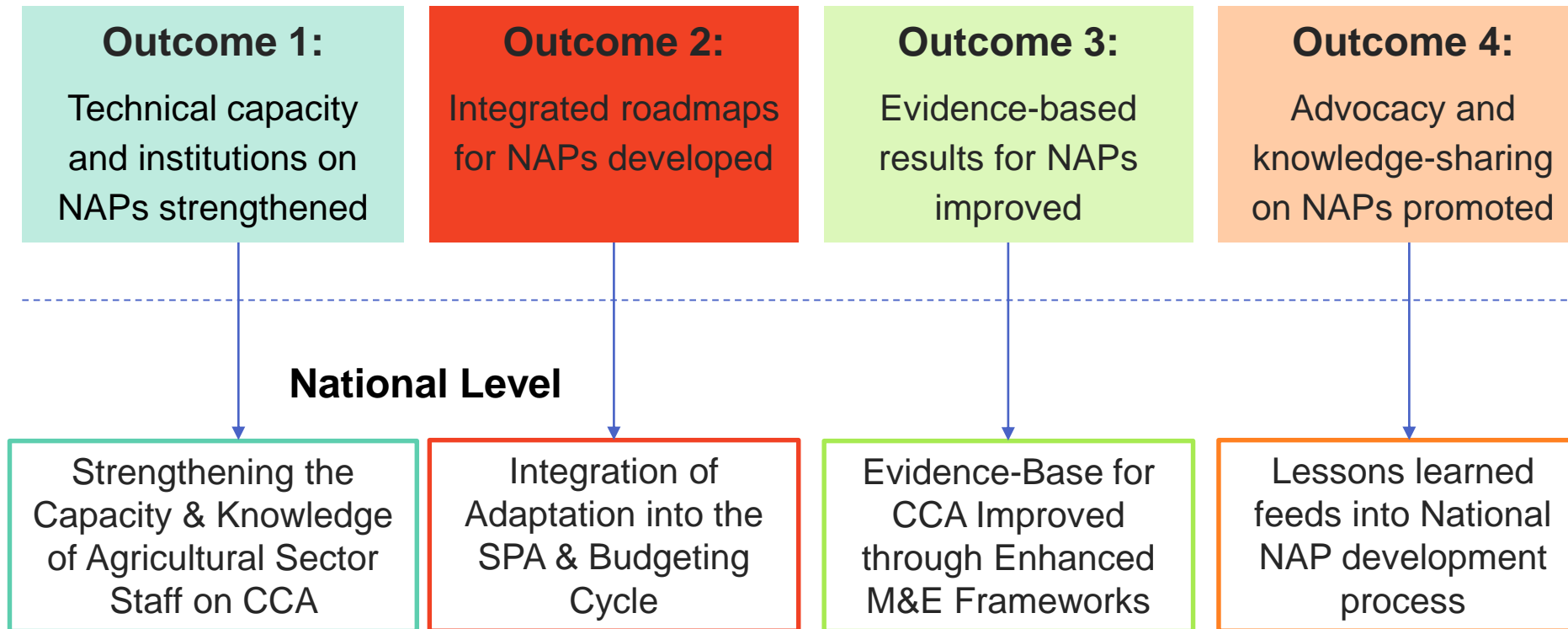
Uruguay

Kenya
Uganda
Zambia

Nepal
Philippines
Thailand
Vietnam

NAP-Ag Programme Outcomes

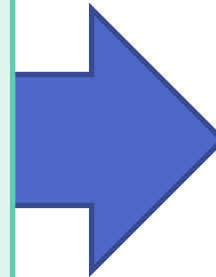
Global Level



Additional support

Global technical specialists

Agricultural economics
Climate science
Climate downscaling and
modelling
Economics of adaptation
Cost-benefit analysis
Impact monitoring
National adaptation planning
Planning and budgeting
Communications &
knowledge management



Stock-taking
Skills assessment
Policy analysis
Capacity development
Impact monitoring

Global Milestones

Output 1 Milestones 2016/17

- Five skills assessments in Uruguay, Kenya, Uganda (on gender), Vietnam, and Thailand (on planning and budgeting).
- Two trainings on NAP in Zambia in July and Vietnam in October.
- One introduction to MOSAICC in Uruguay
- One training of trainers on climate information services provisioning in the Philippines and one on developing LCCAP and developing pro-posals towards the PSF
- One training on CBA in Thailand on 23-25 November 2016
- Technical working groups were formed in all eight initial programme countries

Global Milestones

Output 2 Milestones 2016/17

- Three inception reports including basic stocktaking in Nepal, Thailand, and Philippines.
- One stocktaking report in Uruguay
- One institutional barriers assessment in Kenya
- One stocktaking report on gender in Uganda
- One rapid synthesis report of risk and vulnerability for agricultural sector in Thailand
- One report agricultural markets, gender, and climate change adaptation developed in Zambia for four agricultural value chains

Global Milestones

Output 2 Milestones 2016/17

- One project identified in Kenya
- Three NAP-GCF proposals under discussion in Kenya, Uganda and Philippines

Global Milestones

Output 3 Milestones 2016/17

- Six case studies under consideration in Uruguay, Uganda, Zambia and Vietnam
- Three to six CBA case studies of agriculture adaptation projects/options under consideration in Kenya, Uganda, Zambia .
- Additional case studies are planned in Uruguay and Vietnam with the support of local partner Institutions

Global Milestones

Output 4 Milestones 2016/17

- Compilation of adaptation good practices prepared:
 - www.fao.org/in-action/naps
 - www.adaptation-undp.org/naps-agriculture
- One side event at COP 22 in Marrakesh, Morocco in November 2016 on “Fostering climate action in the agricultural sectors through National Adaptation Plans (NAPs)”.
- One side event on “Understanding the NAP-NDC Linkages: Experiences from the Philippines” at COP 22 in Marrakesh, Morocco, in November 2016.
- Online course on integrating agriculture into NAPs under development with UNITAR.
- NAP-AG Gender video in Uganda.
- Webinars on economics of adaptation, mainstreaming gender and institutional arrangements.

Global support to country workplans continues

Four Core Areas

1. Impact Evaluation
2. Cost Benefit Analysis
3. Monitoring & Evaluation
4. Gender
5. Implementation Readiness

- Opportunity for Nepal to request additional support on these topics



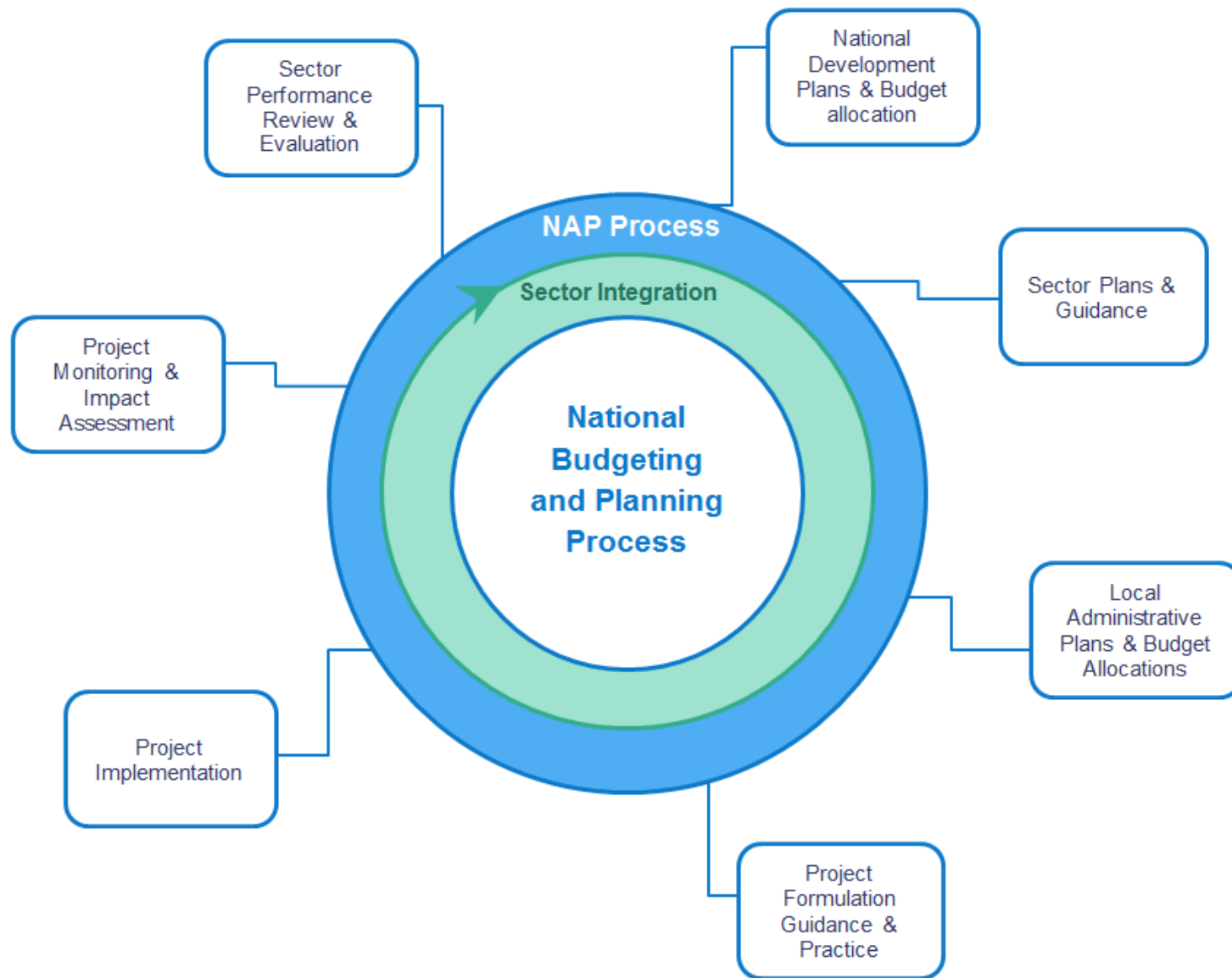
based on a decision of the German Bundestag

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Global technical support & products

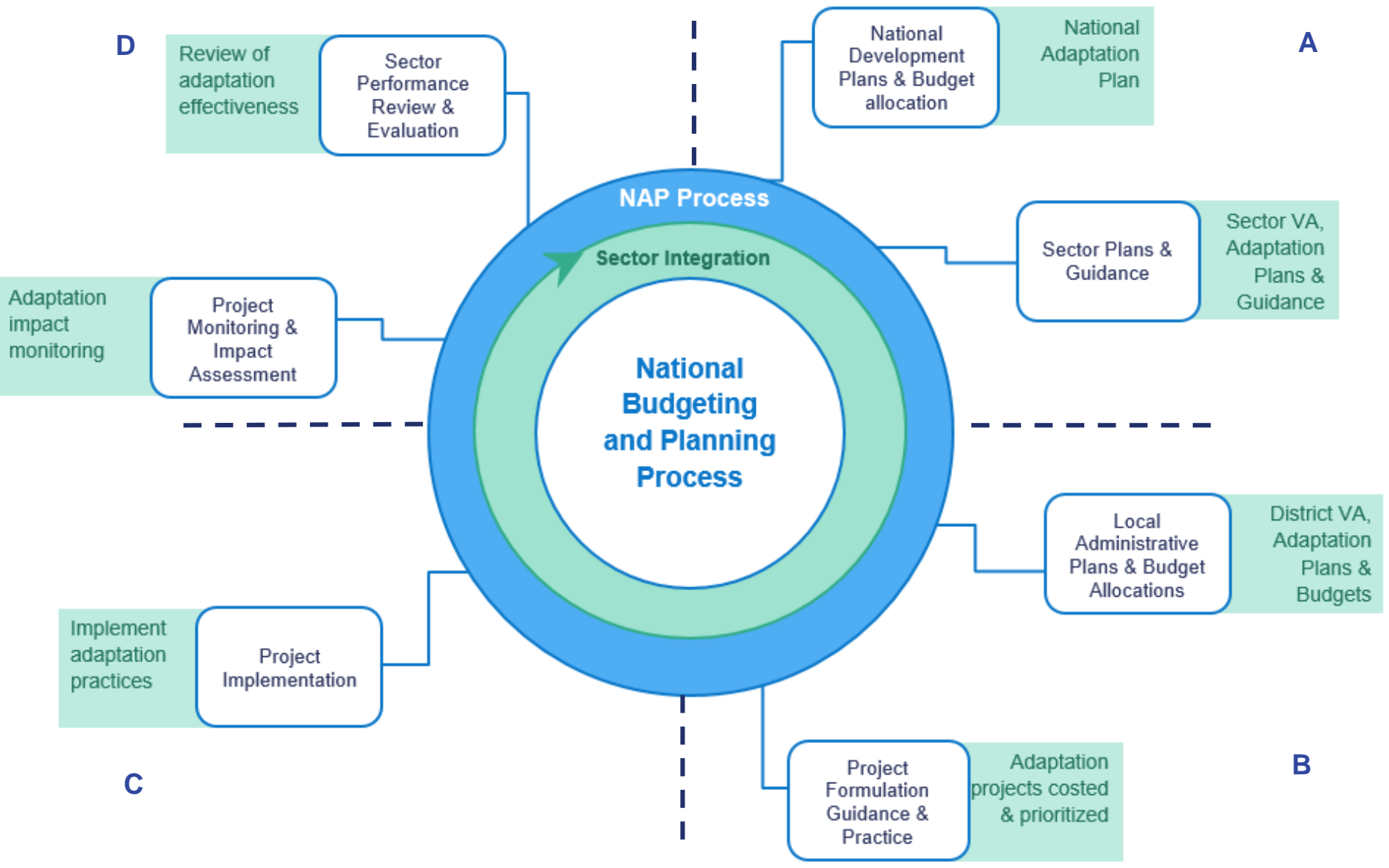
NAP LEG Agriculture Supplement

- Initial discussions held during Global NAP Agriculture meeting in FAO HQ in April 2016
- In December 2016, a Public Peer Review was launched to receive in-puts from other international institutions on an advanced version of the guidelines
- Supplement is being finalized and expected to be launched in May 2017
- Important guide for future NAP-Ag activities



- NAP process fits with the broader national development process
- Sector planning processes support national and local actions
- Sector integration is about finding entry points for sector specific adaptation actions

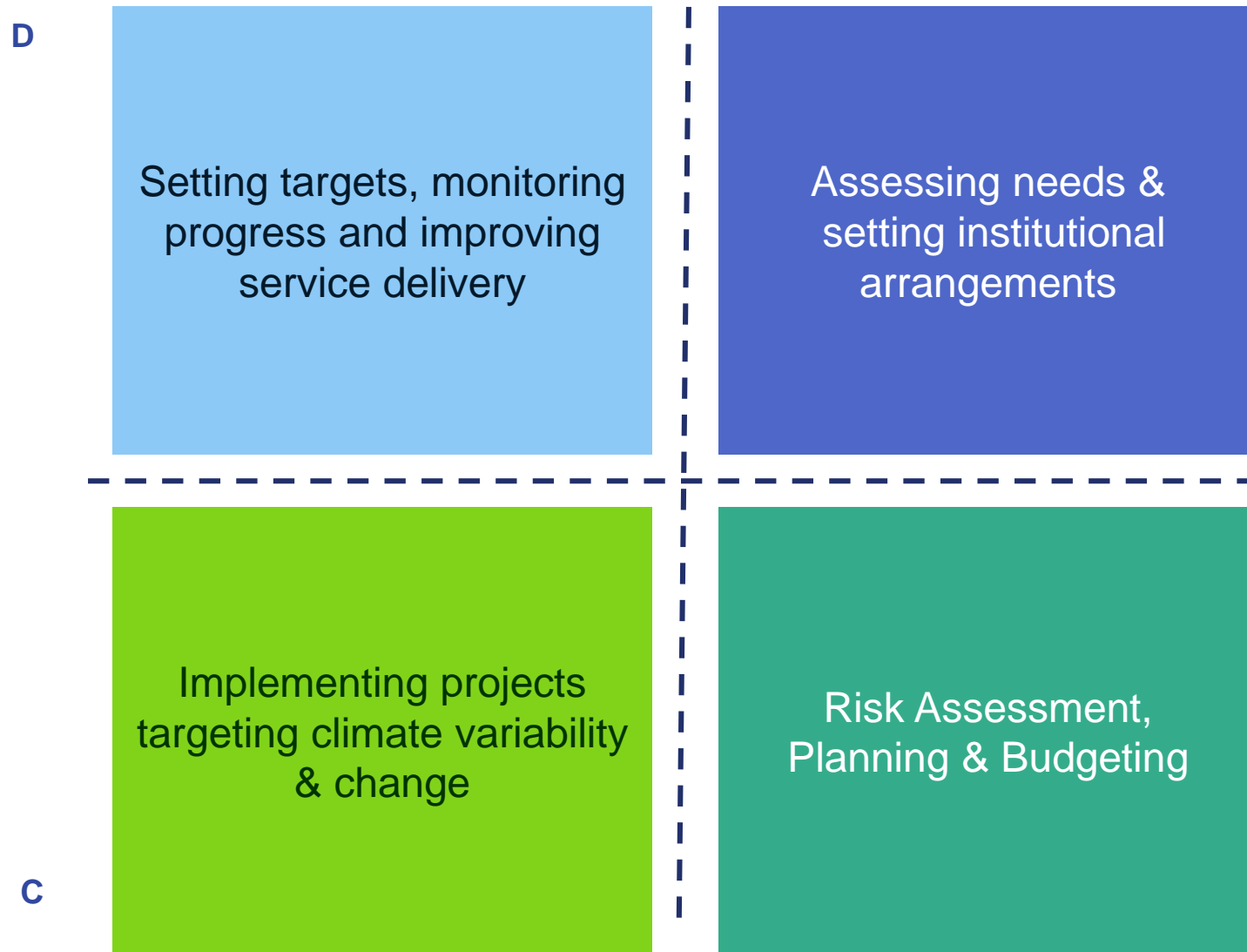
National Planning Process and NAP



- Policies, plans, procedures, regulations that can may be relevant for adaptation
- Action targeted at entry points encourages a systematic approach to adaptation planning

NAP & Sector Integration





A

- NAP LEG Guidelines provides a framework for sector integration
- This framework consists of four elements
- NAP-Ag programme has developed a set of supplement guidelines for the agriculture sector

B

- Guidelines provide sector specific entry points at each stage of the NAP LEG Guidelines

NAP & Sector Integration



Key Questions

- How to accelerate field activities during 2017?
- How can Nepal take more advantage of support available through global program?
 - Training and peer-to-peer learning
 - Awareness raising
 - Gender
 - IA and M&E
 - Implementation Readiness
- What feedback does Nepal have for the global NAP-Ag team?



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Thank You