

Synergies and co-benefits of climate change response measures

SYNERGIES AND CO-BENEFITS

MAIN CONTENTS

1. Policy review;

2. Assessment framework;

3. Co-benefits of the CC response measures to socio-economic development

4. Co-benefit of the adaptation and mitigation measures

5. Synergies and co-benefits of the CC response measures

6. Benefits of the CC response measures to sustainable development

General comments.

1. Policy review

**National Strategy on
Climate Change**

**Vietnam Green Growth
Strategy**

NTP-RCC

NTP-GG

SP-RCC

**National Action Plan
on CC**



**Renewable Energy
Development Strategy**

**Agriculture Sector
Development Strategy**

**Forestry Sector
Development Strategy**

**Industry Sector
Development Strategy**

REDD +

Strengthening the adaptation capacity, mitigating the impacts of climate change and mitigating GHG emissions

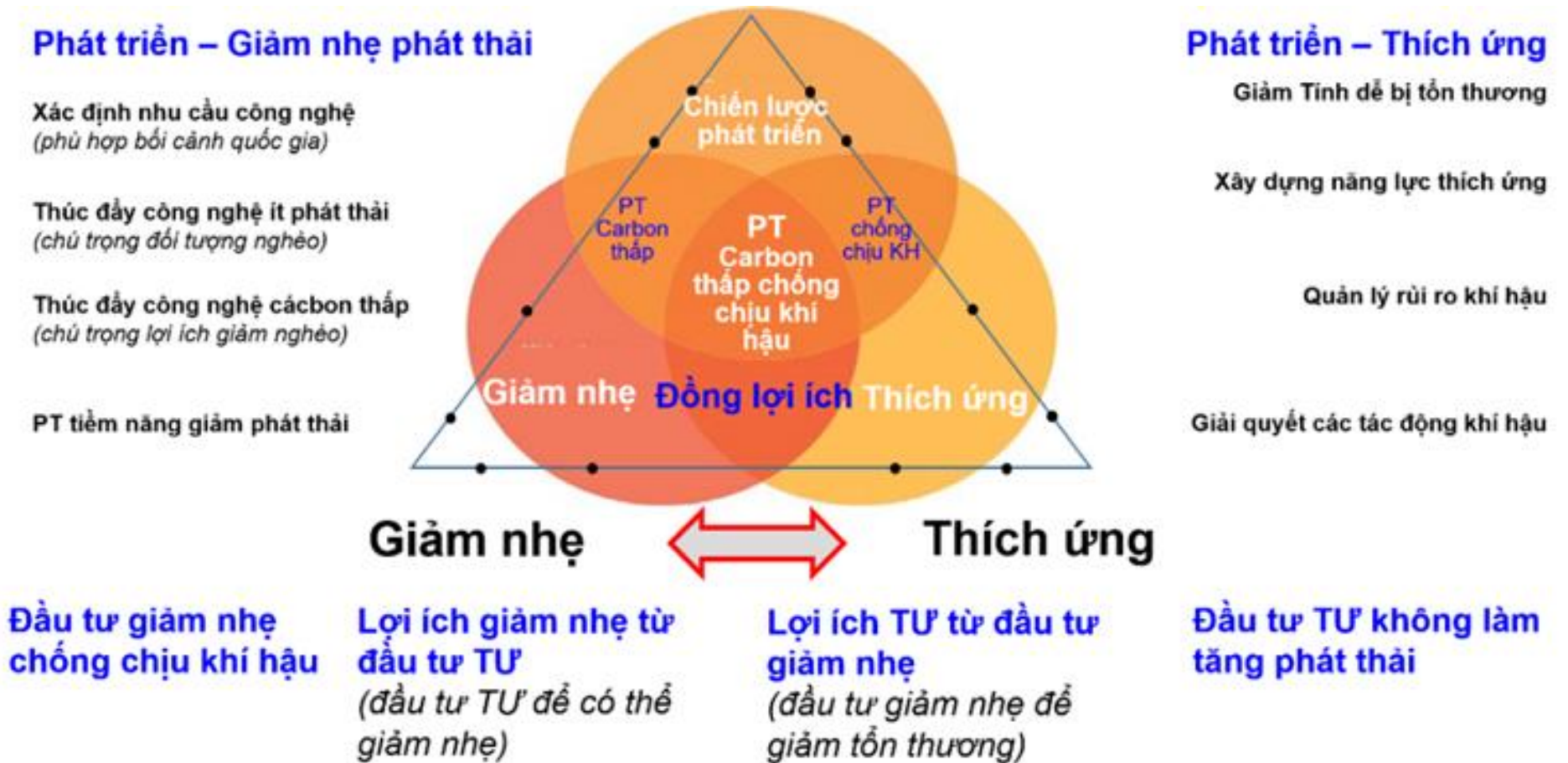
Socio-economic and environmental benefits and institutional strengthening:

- Promoting sustainable development, towards low carbon economy, green growth;
- Job creation, poverty eradication, equality; improvement of environmental quality
- Development of national defense and security; harmonious development between agriculture and industry;
- Encouraging the development of the private sector and foreign investment.

2. Methodology

(Climate change adaptation and GHG mitigation activities)

Make recommendation on the areas with the potential to achieve co-benefits across sectors, measures to strengthen harmony in coping with climate change, especially in the development of socio-economic development plans



A framework for assessing co-benefits between CC mitigation and adaptation activities

2. Methodology

(Assessment of the benefits of the climate change response measures)

S1

- Review all climate change adaptation (CCA) and GHG mitigation measures in NDC.

S2

- Identify co-impacts of adaptation and mitigation measures in NDC.

S3

- Analyze the integrated benefits of climate change adaptation and GHG mitigation measures by matrix filtering method.

S4

- Develop indicators for assessment of co-benefits of climate change adaptation and GHG mitigation measures identified in the NDC of Vietnam.

S5

- Apply a set of indicators to assess the co-benefits of mitigation and adaptation measures within the NDC of Vietnam

S6

- Consolidate results and rate the measures: The results of the climate benefit and co-benefit assessment are rated: 0 ÷ 1: very low; 1 ÷ 2: low; 2 ÷ 3: medium; 3 ÷ 4: high; very high: 4 ÷ 5

2. Methodology

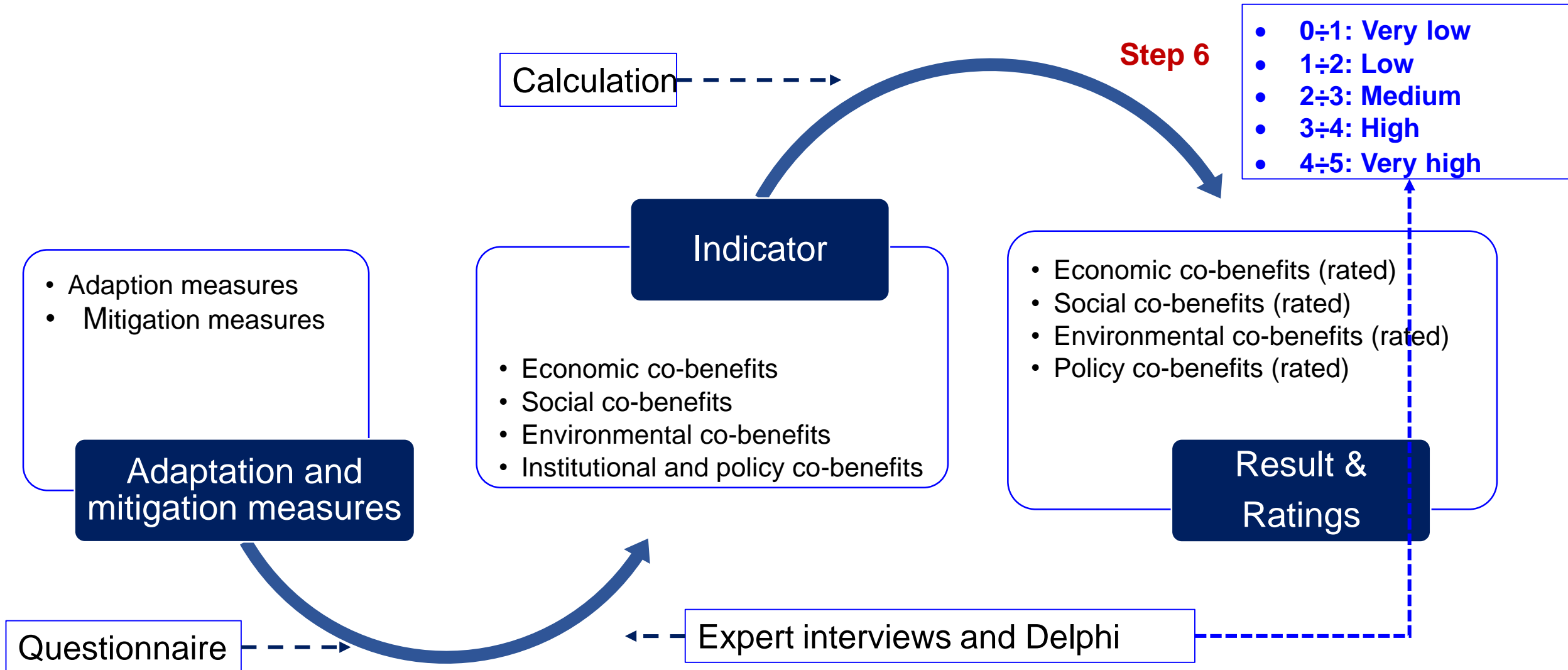
(Assess the benefits of the climate change response measures)

Step 1

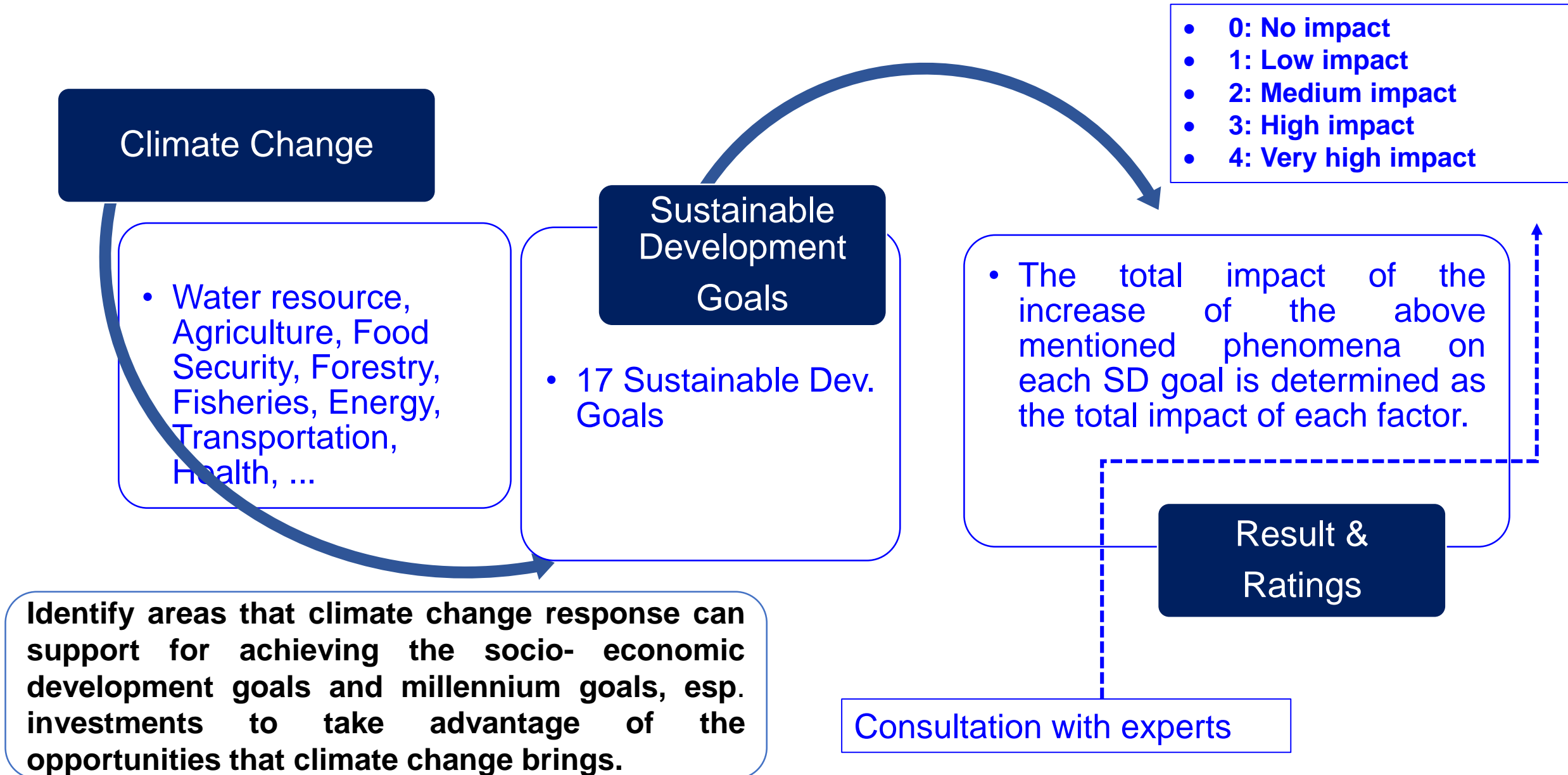
No.	Mitigation measures	No.	Adaptation measures
1	Energy	1	Natural Resources and Environment
2	Agriculture	2	Agriculture and rural development
3	LULUCF	3	Construction
4	Waste	4	Infrastructure
		5	Disaster risk reduction
		6	Health

2. Methodology

(Assess the benefits of the climate change response measures)



(Assessment of contributions of climate change response to sustainable development)



2. Methodology

(The Indicator to assessment of contributions of climate change response to sustainable development)

Climate

1. Emissions intensity reduction
2. Disaster Risk Reduction
3. Community resilience enhancement

Economic

1. Increase productivity
2. Facilitate the development of new technologies
3. Facilitate to the business and investment activities

Social

1. Increase employment opportunities
2. Improve health
3. Enhance community awareness to respond to climate change and sustainable development in society
4. Reduce poverty, and Ensure food and livelihoods security
5. Increase social equity
6. Improve the skills and capacity of employees

2. Methodology

(The Indicator to assessment of contributions of climate change response to sustainable development)

Environment

1. Reduce pollution and Improve the quality of air
2. Reduce pollution and Improve the quality of soil
3. Reduce pollution, support regulation and Improve the quality and quantity of water resources
4. Improve the quality of ecosystem services
5. Biodiversity Conservation

Institution and Policy

1. Support policies related to climate change
2. Support policies related to socio-economic development
3. Promote participatory and coordination mechanism of stakeholders in responding to climate change

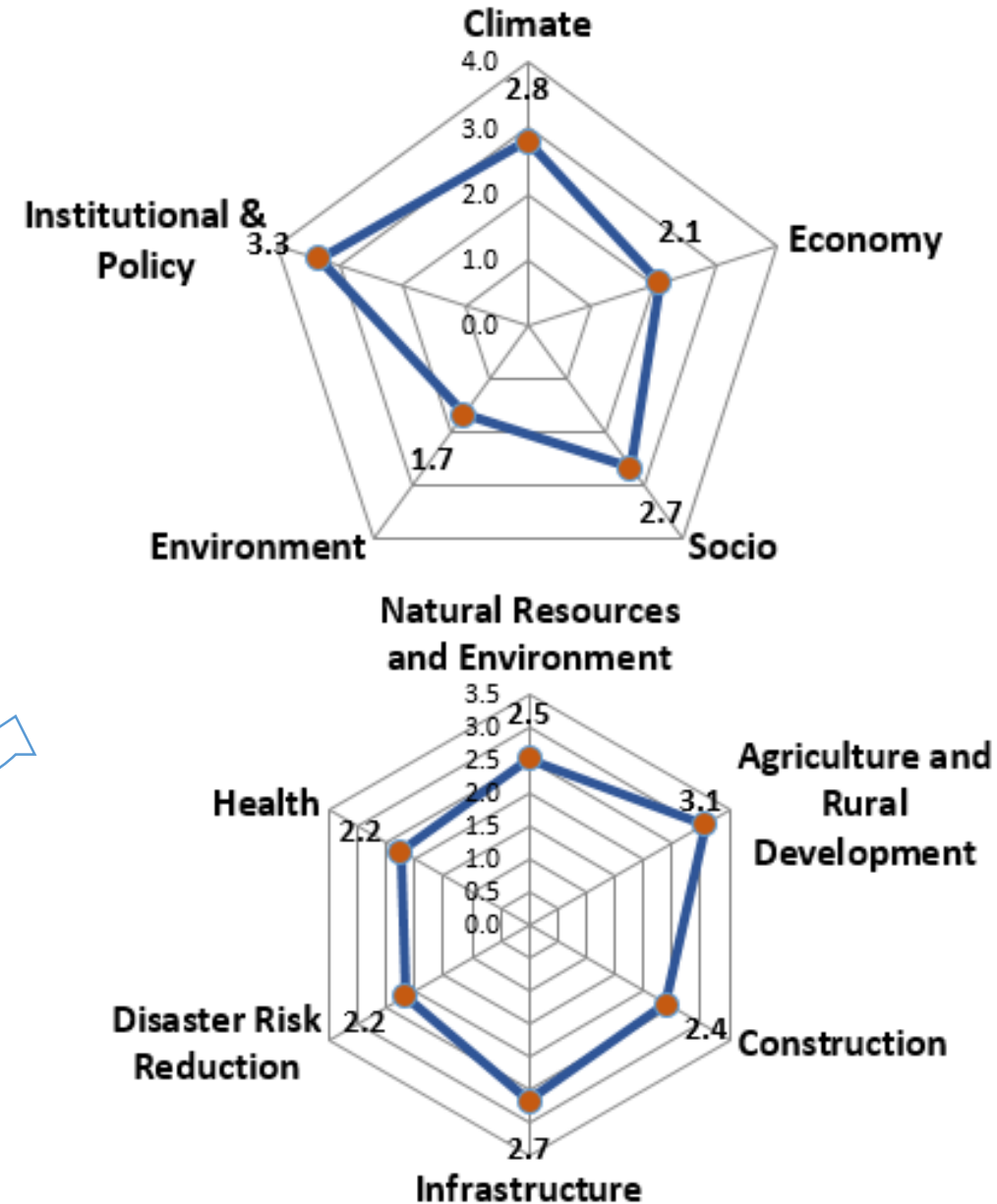
3. Co- benefits between CC Response and socio-economic development

Adaptation

Benefits of Institutional and policy from CC adaptation activities are rated the highest compared to other indicators (3.3). The benefits from CC adaptation activities in climate is rated at 2.8, economic term at 2.1, social terms at 2.7, and institutional at 1.7.

CC adaptation in field of Agriculture and rural development are rated the highest (3.1).

Benefits of the climate change adaptation measures



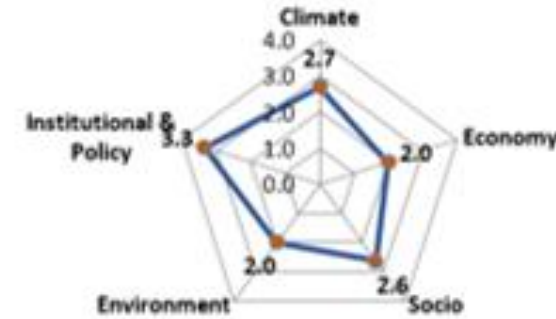
3. Co- benefits between CC Response and socio-economic development

Adaptation

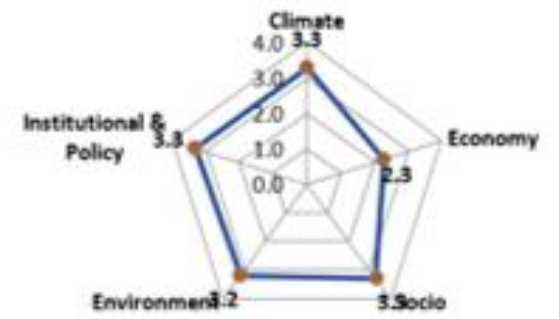
Benefits	Sector		
	Natural Resources and Environment	Agriculture and rural development	Construction
Climate	2.7	3.3	3.2
Economic	2.0	2.3	2.1
Socio	2.6	3.3	2.3
Environmental	2.0	3.2	1.6
Policy& institutional	3.3	3.3	2.8

Benefits	Sector		
	Infrastructure	DRR	Health
Climate	2.9	2.0	1.8
Economic	2.8	2.1	2.1
Socio	2.5	2.2	2.9
Environmental	1.8	2.1	0.6
Policy& institutional	3.4	1.4	3.8

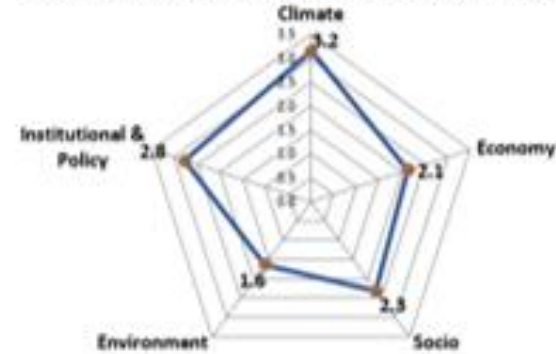
Benefits of the climate change adaptation measures for each sectors



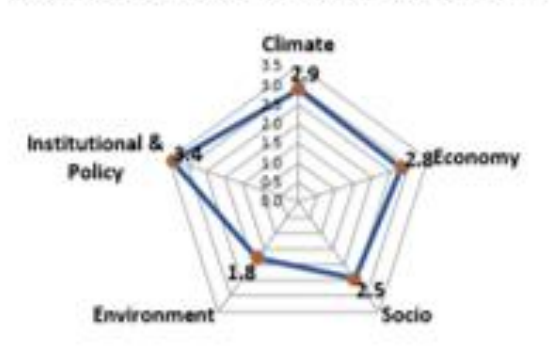
Natural Resources and Environment



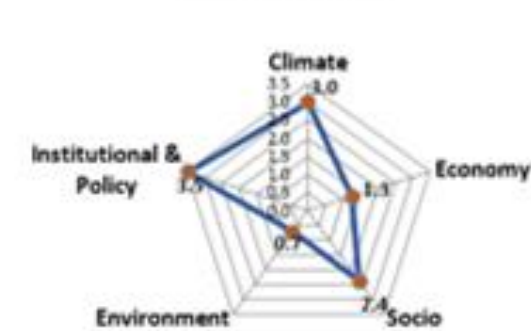
Agriculture and rural development



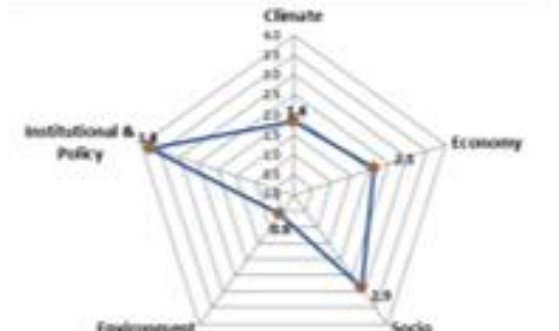
Construction



Infrastructure



DRR



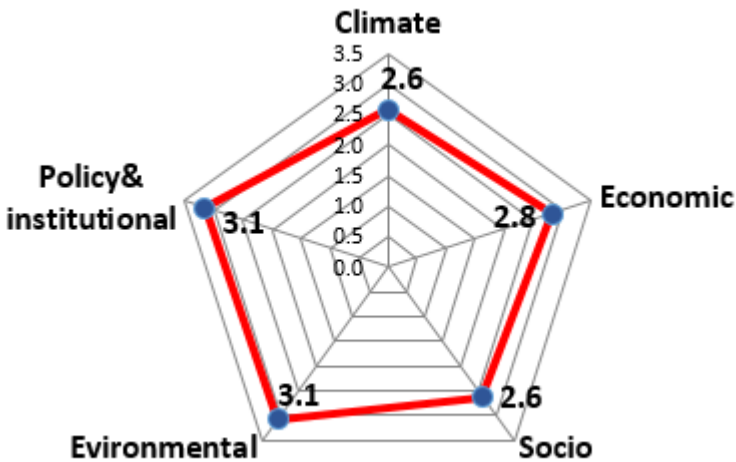
Health

3. Co- benefit between CC Response and socio-economic development

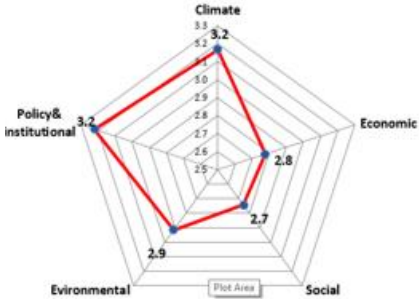
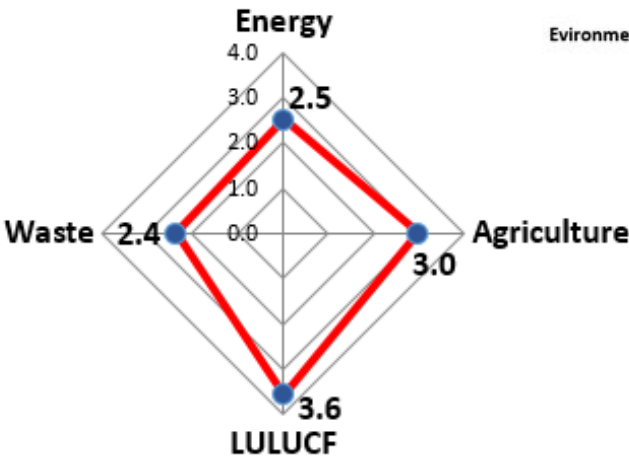
Mitigation

Benefits	Sector			
	Agriculture	Waste	LULUCF	Energy
Climate	1.6	1.8	3.8	1.6
Economic	2.8	2.5	3.3	2.8
Socio	2.3	2.4	3.1	2.3
Environmental	2.3	2.5	4.6	2.3
Policy& institutional	3.6	2.7	3.1	3.6

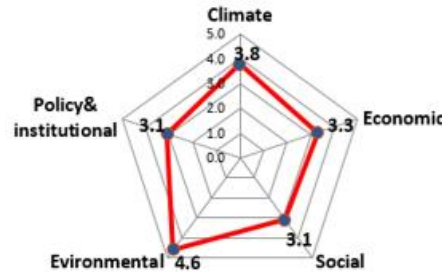
Benefits of each sector in GHG emission reduction



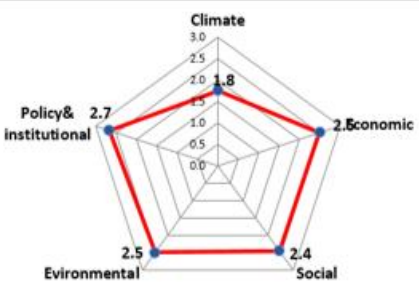
Combined benefits of GHG mitigation activities



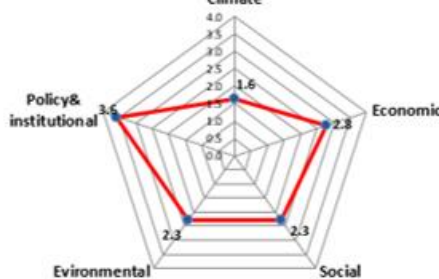
Agriculture



LULUCF



Waste

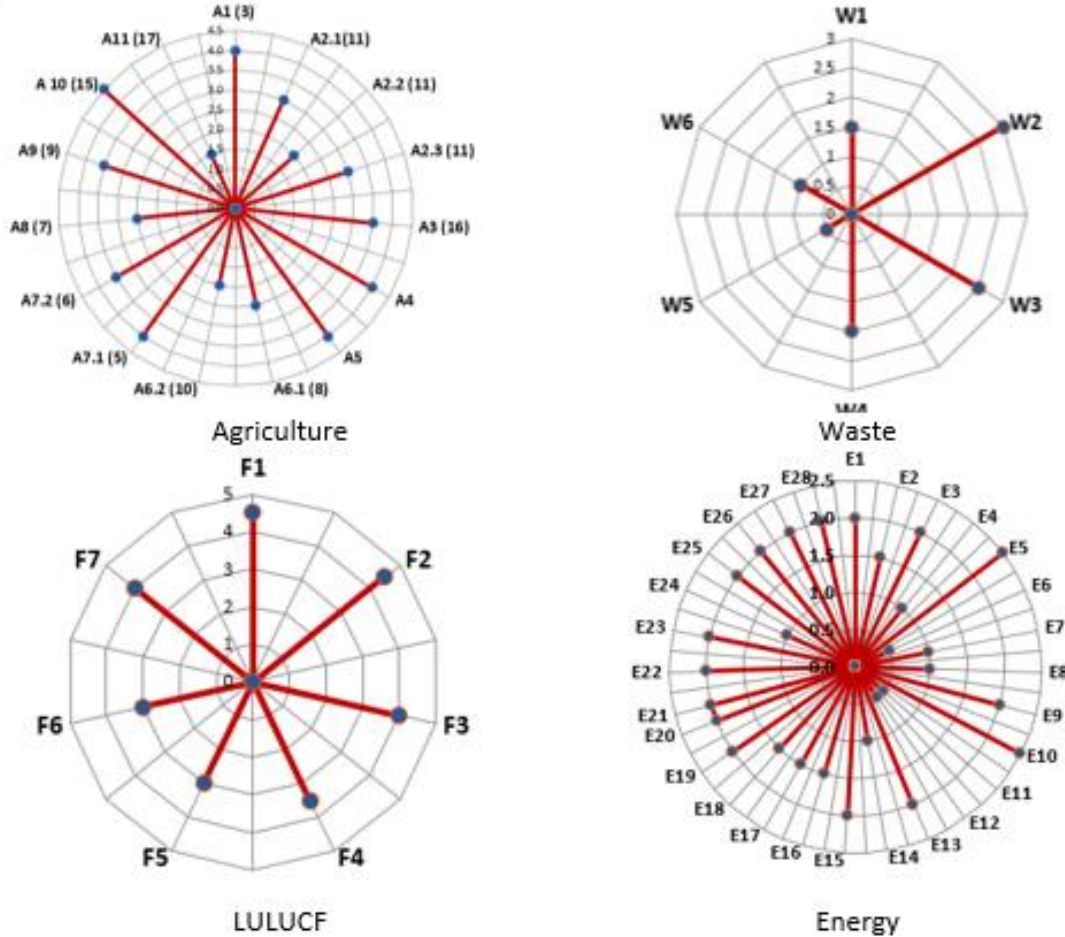


Energy

Benefits of each CC mitigation sector

4. Co-benefits between the CC adaption and mitigation (Co-benefits when implementing GHG emission mitigation)

Contribution of CC mitigation to adaptation



Contribution of climate change mitigation

+) Energy Sector: economic benefits; improvement of energy security, contribution to economic development; creation of investment environments; improvement of labor conditions, job creation and income increase, poverty reduction and social security.

+) Agriculture Sector: benefits on increased resilience to climate change of plants and animals; development of safe agriculture, diversified and sustainable goods, diversity and sustainability; job security, poverty reduction; food security and development of ecological agriculture; health benefits; reduced environmental pollution.

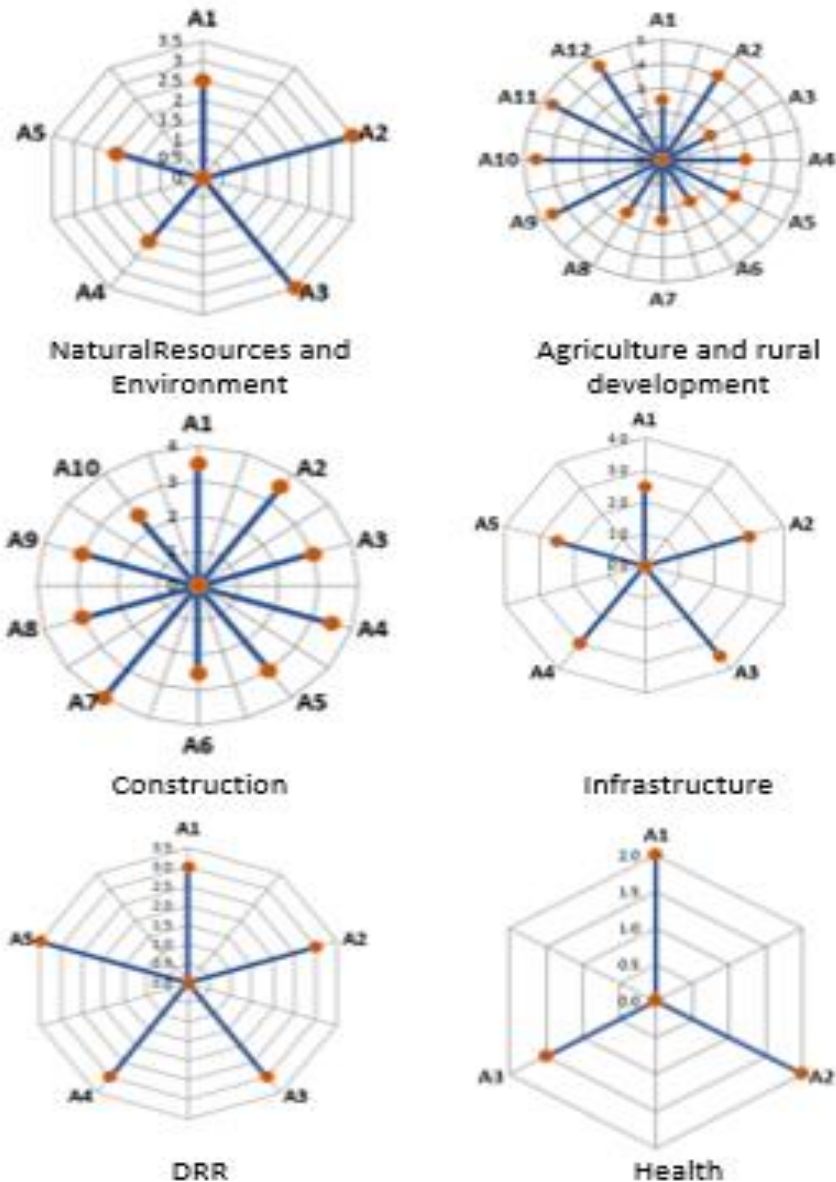
+) Waste sector: Economic benefits; Reduction of costs associated with the environment, ensured health conditions; job creation, income increase; limitation of environmental pollution.

+) LULUCF Sector: economic benefits generated by forests; creation of 80,464 jobs; maintaining ecological balance and biodiversity, regulating the climate, protecting the environment, mitigating natural disasters.

4. Co-benefits between the CC adaption and mitigation

(Co-benefits when implementing CC adaptation measures)

Contribution of CC adaptation to mitigation

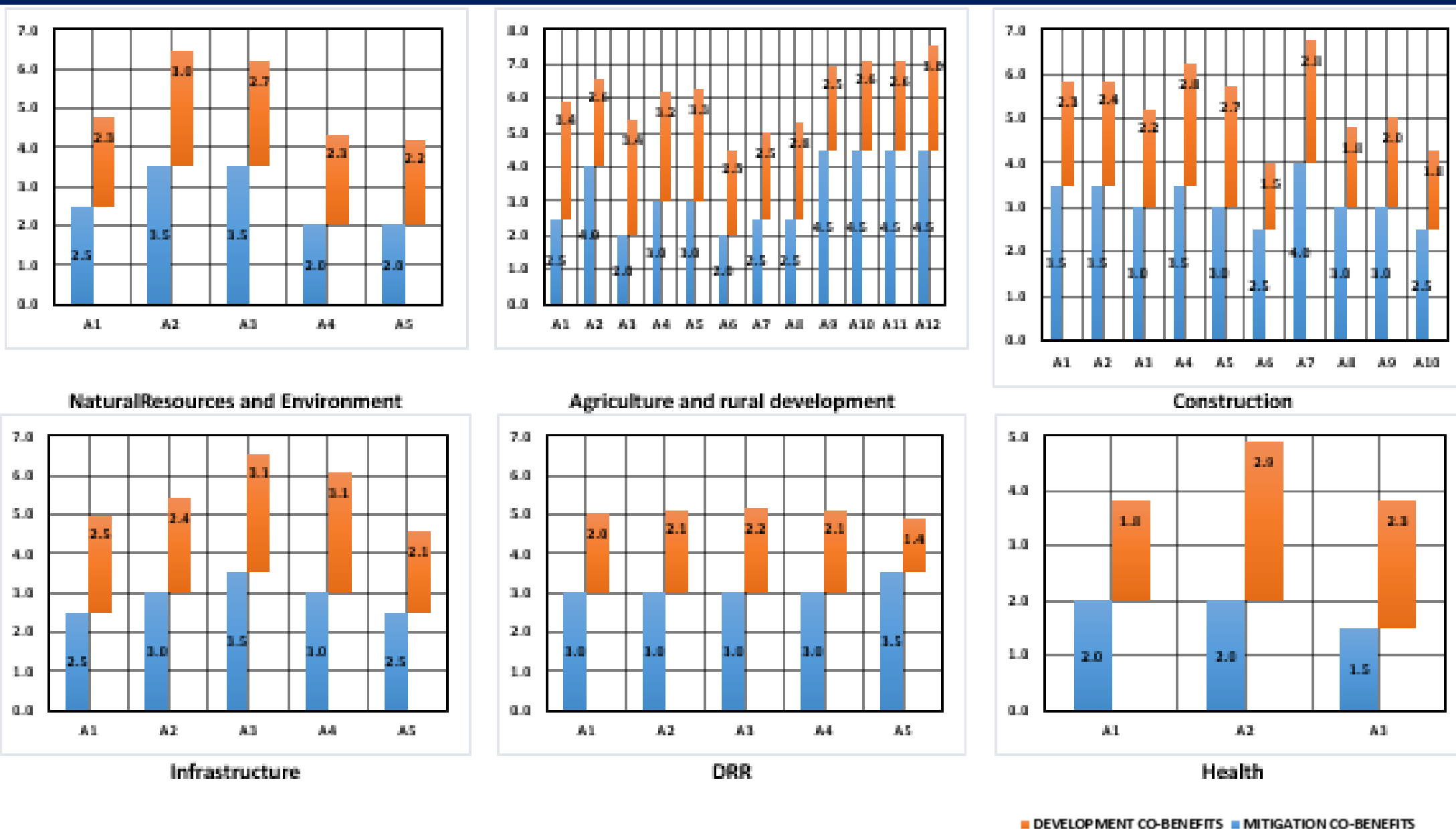


The contribution of CCA to mitigation

- The implementation of adaptation actions in the NDC brings benefits in terms of GHG mitigation, mainly related to forest plantation and restoration; reduction of deforestation and forest degradation; forest protection, restoration, and new plantation; and improvement of coastal forest quality (incl. mangroves).
- Economic co-benefits; Such as creating business and investment opportunities to attract foreign investment in CC response activities, thus promoting the development of infrastructure, economic sectors and efficient and sustainable use of natural resources.
- Some social benefits: Job creation and income increase for local people, thus contributing to poverty reduction and sustainable economic development of the country.

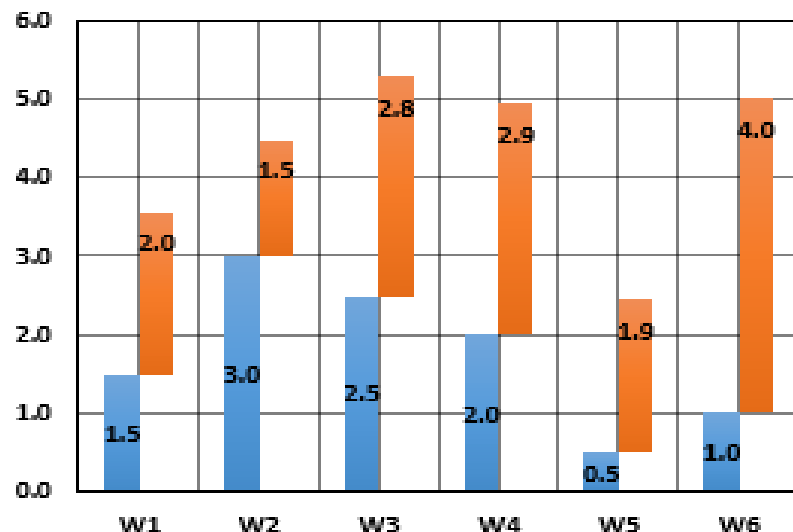
5. Synergies and Co-benefits of CC adaption

(Synergies and co-benefits when implementing CC adaptation measures)

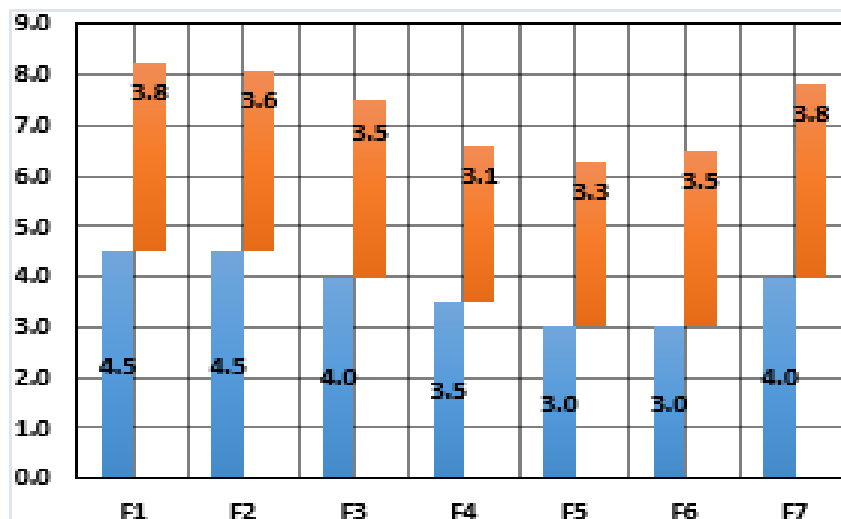


5. Synergies and Co-benefits of CC mitigation

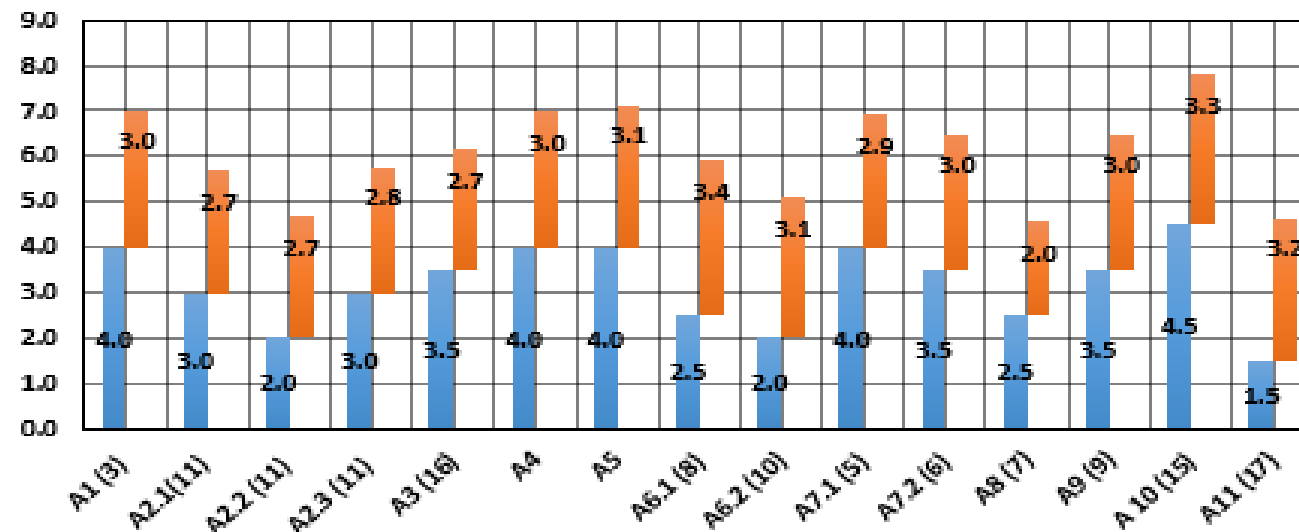
(Synergies and co-benefits when implementing CC mitigation measures)



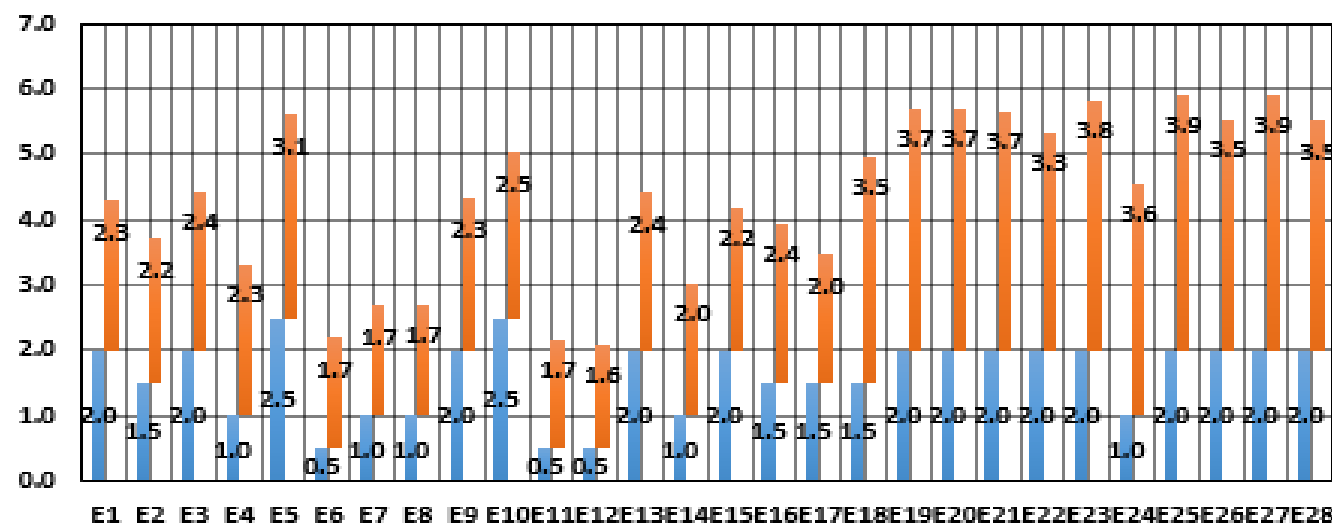
Waste



LULUCF



Agriculture

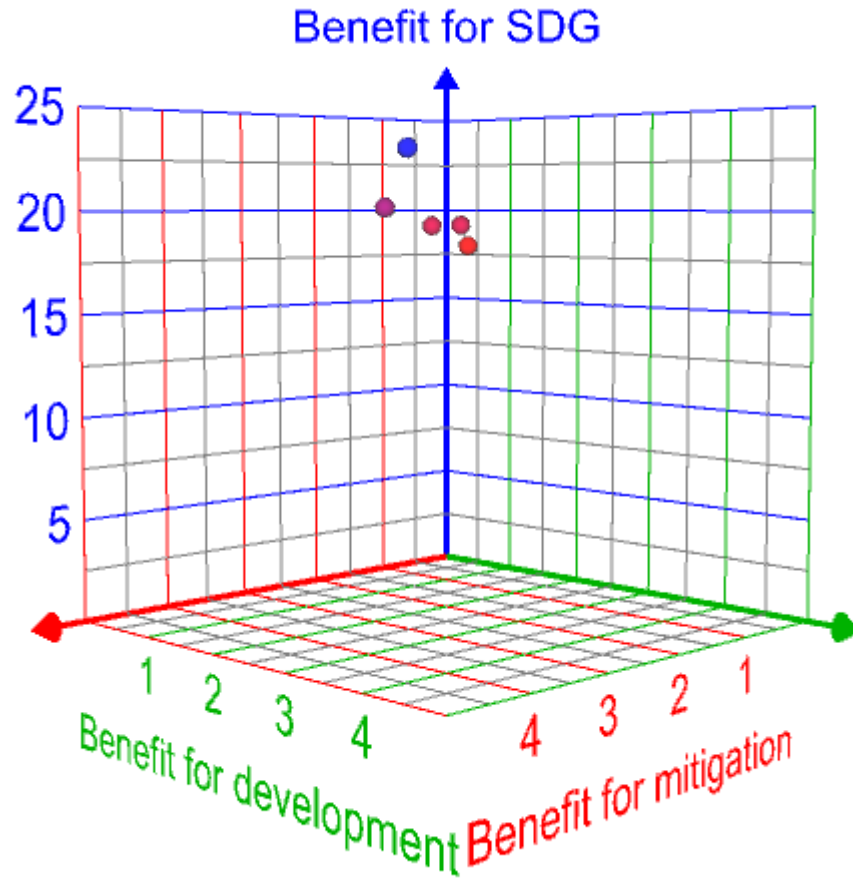


Energy

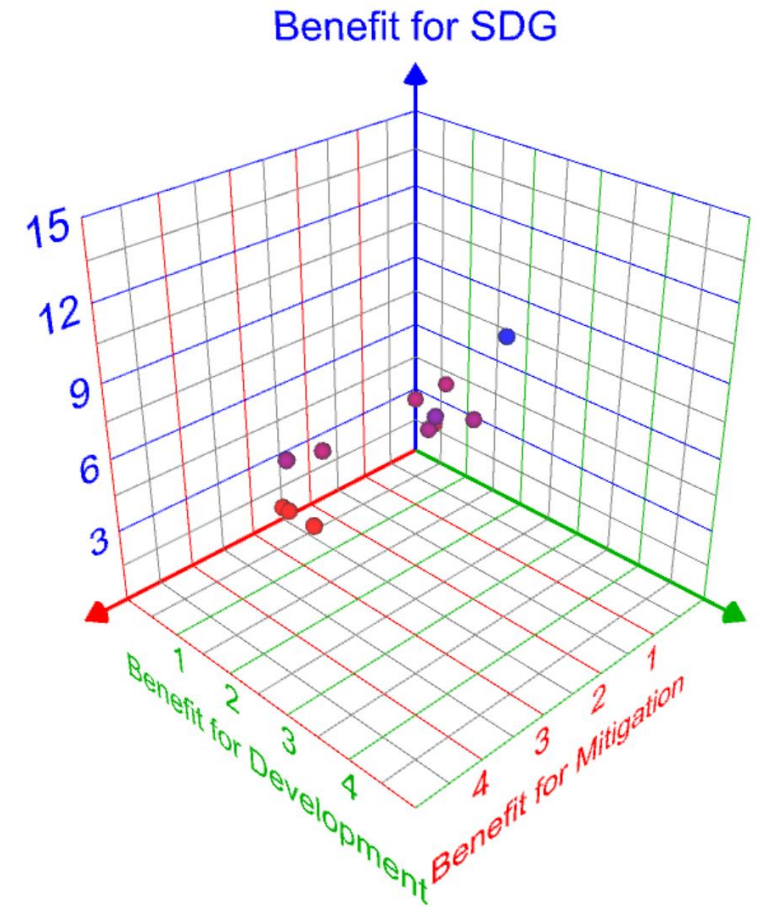
DEVELOPMENT CO-BENEFITS ADAPTATION CO-BENEFITS

5. Synergies and Co-benefits of CC mitigation

(Synergies and co-benefits when implementing CC mitigation measures)



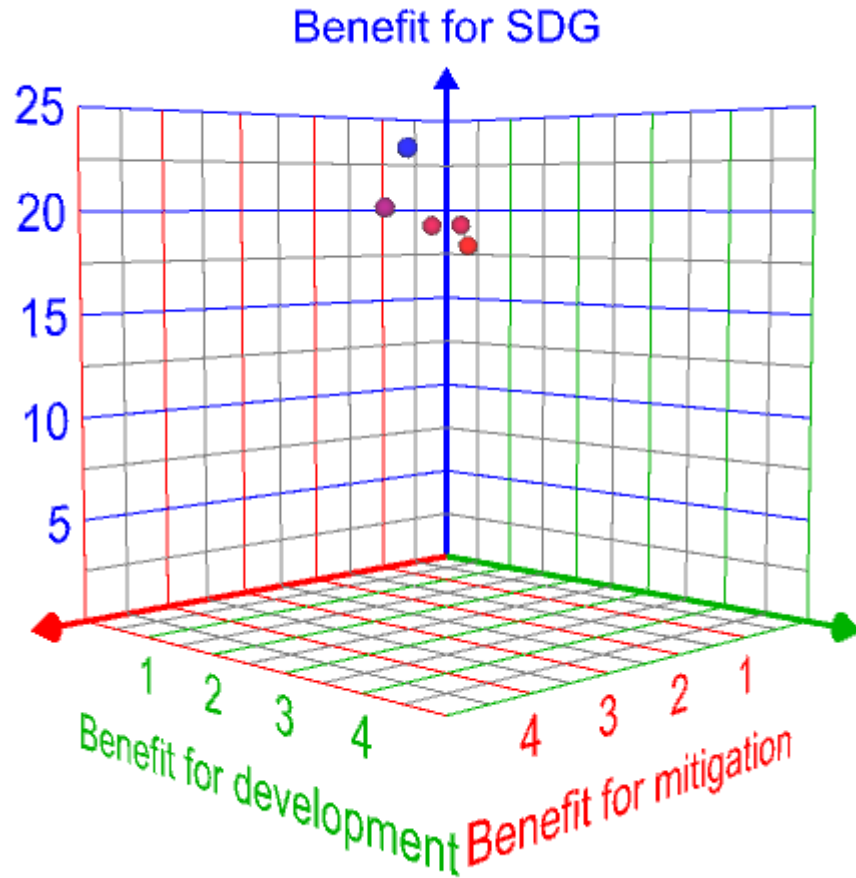
**Synergies and Co-benefits
when implementing the CCA
in Natural resources and Environment**



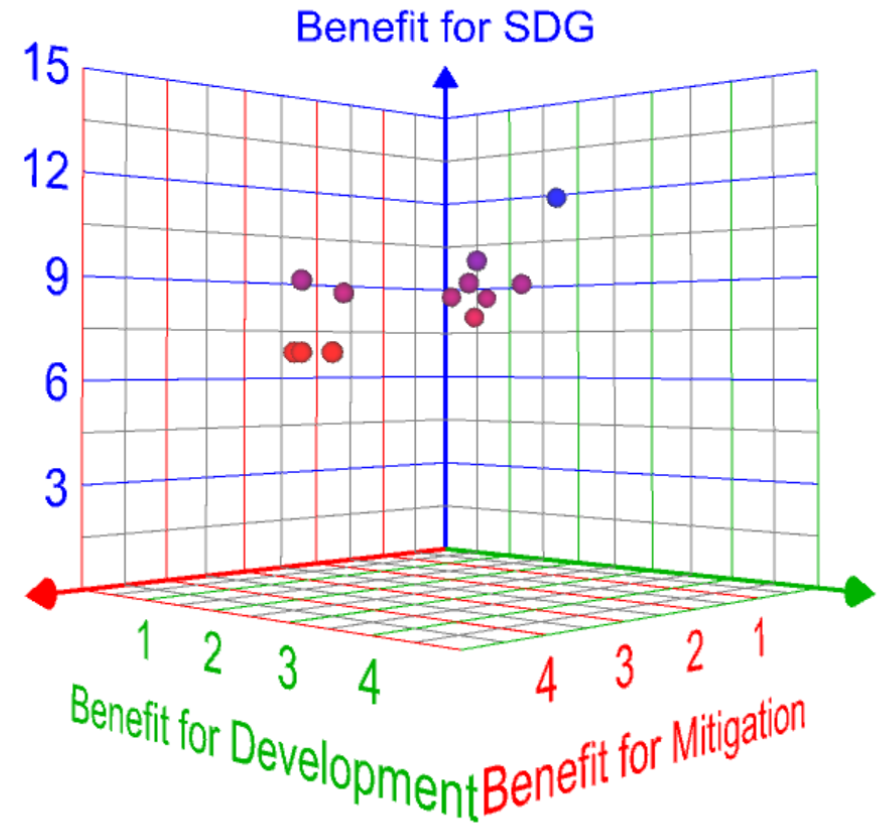
**Synergies and Co-benefits
when implementing the CCA
in Agriculture and Rural development**

5. Synergies and Co-benefits of CC mitigation

(Synergies and co-benefits when implementing CC adaptation measures)



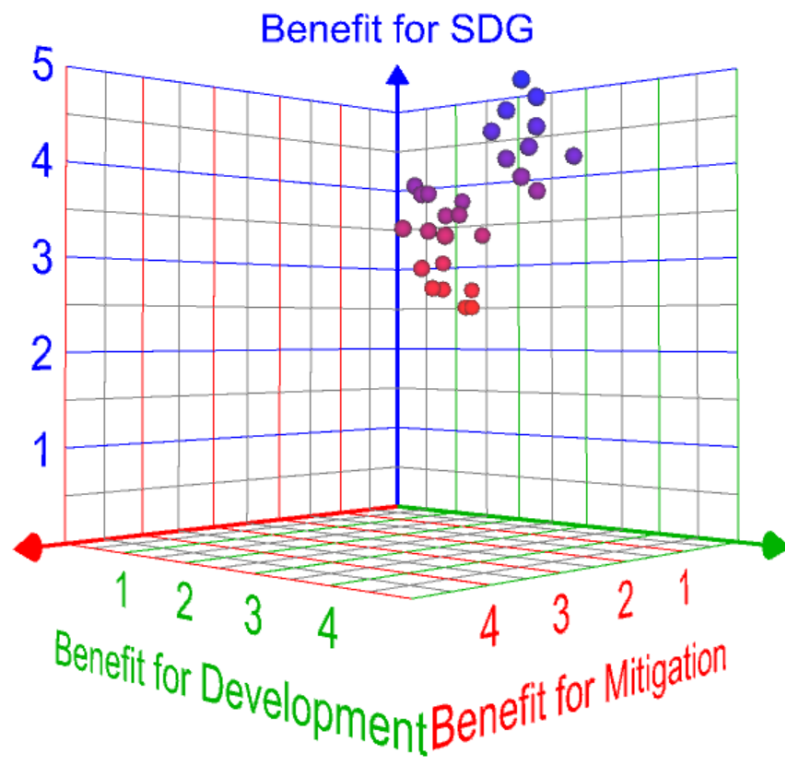
**Synergies and Co-benefits
when implementing the CCA
in Natural resources and Environment**



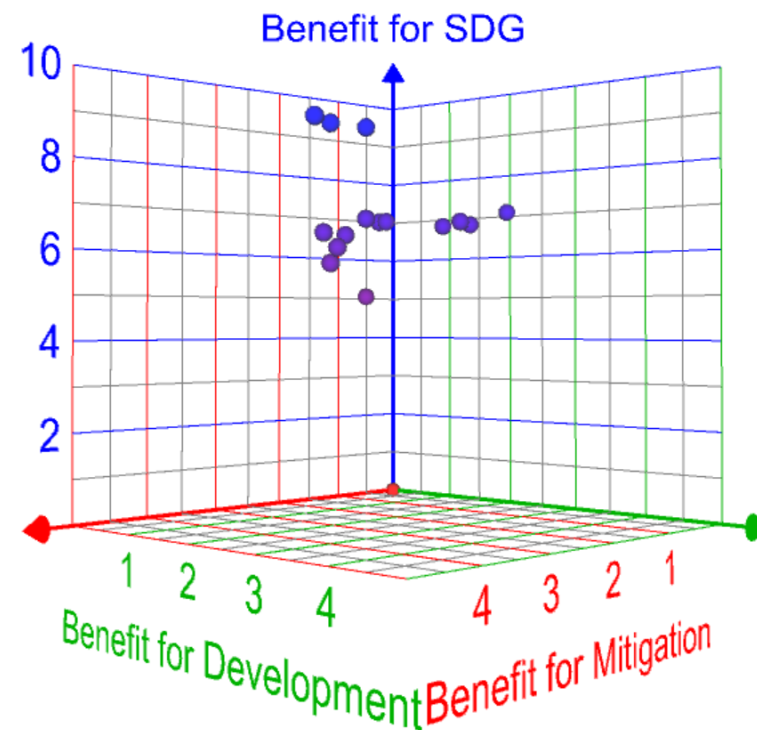
**Synergies and Co-benefits
when implementing the CCA
in Agriculture and Rural development**

5. Synergies and Co-benefits of CC mitigation

(Synergies and co-benefits when implementing CC mitigation measures)



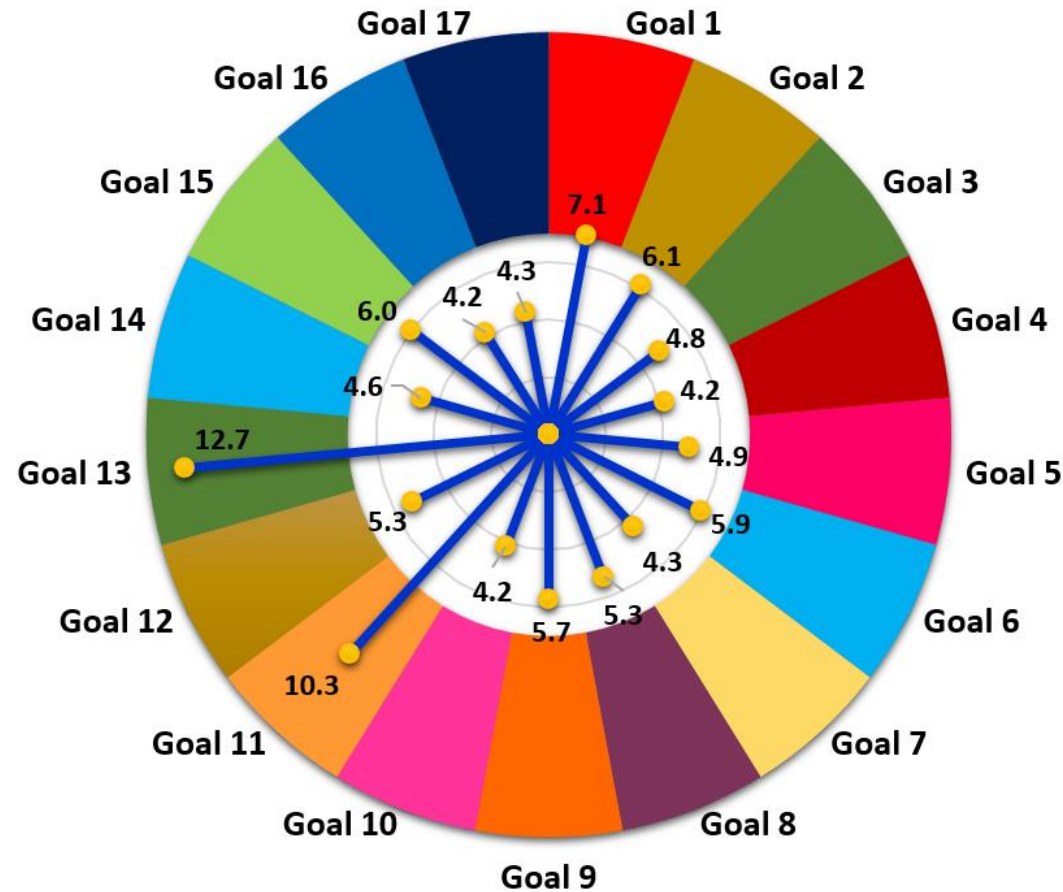
**Synergies and Co-benefits
when implementing the CC mitigation
in Energy sector**



**Synergies and Co-benefits
when implementing the CC mitigation
in Agriculture sector**

6. Contribution of CC response to sustainable development (The contribution of CC adaptation to sustainable development)

Adaptation

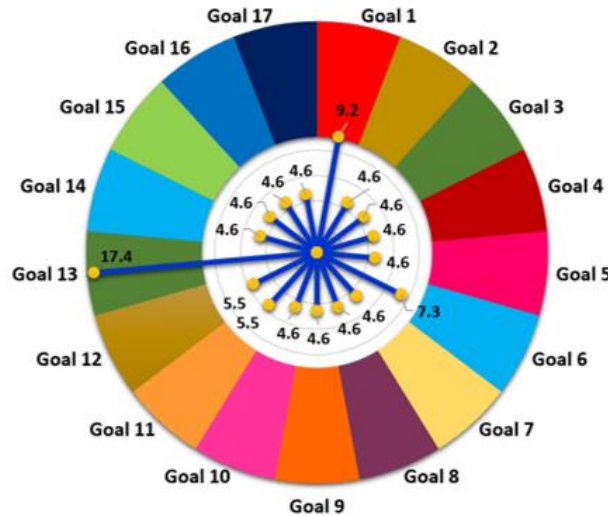


CCA measures in the NDC have the largest contribution to Goal 13 on "*Response to climate change and natural disasters*" and Goal 11 on "*Sustainable urban and rural development*".

Contribution of CC adaptation measures to sustainable development

6. Contribution of CC response to sustainable development (The contribution of CC adaptation to sustainable development)

Adaptation



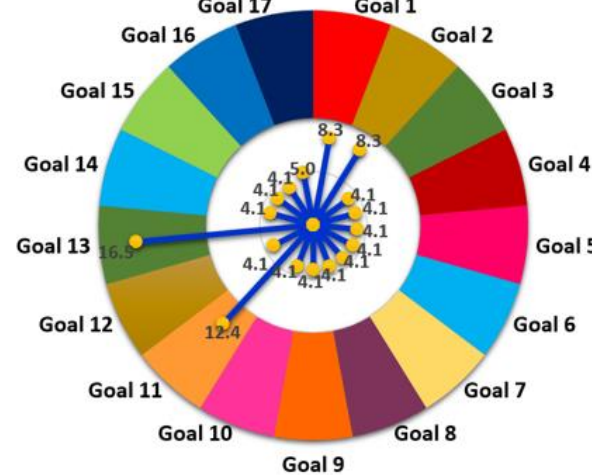
Natural Resources and Environment



Agriculture and rural development



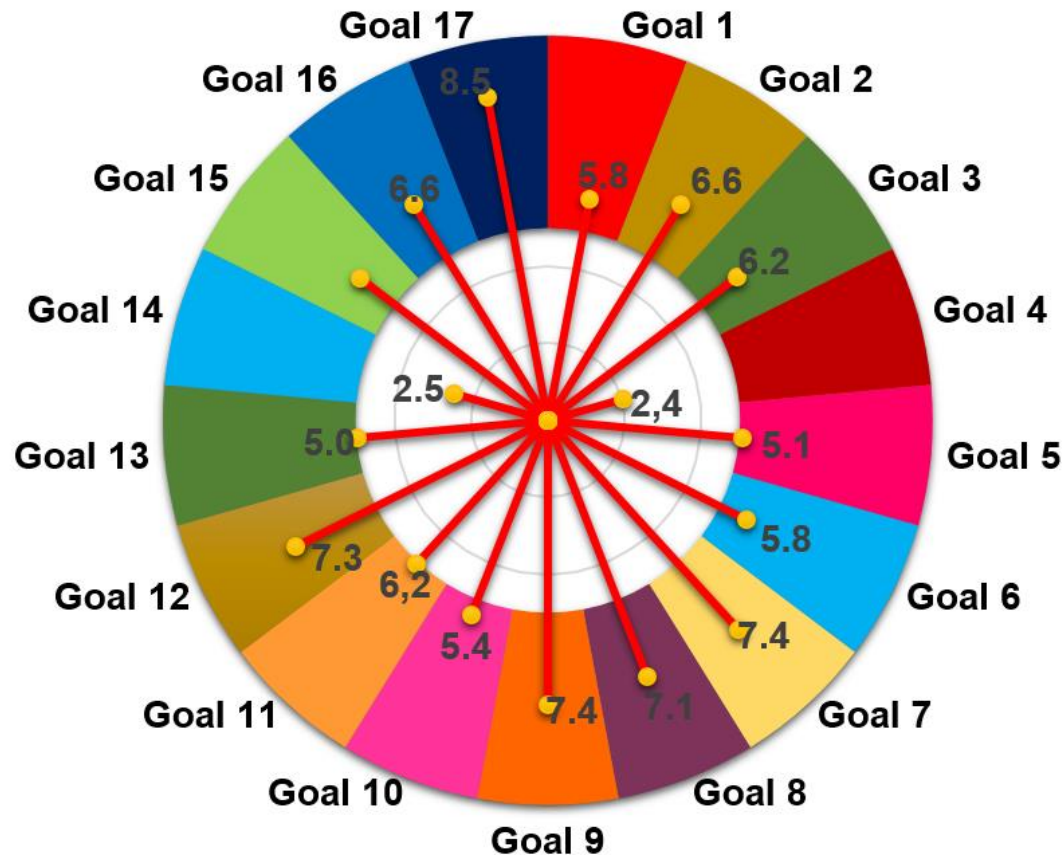
Construction



Contribution of CC adaptation measures to sustainable development

6. Contribution of CC response to sustainable development (The contribution of CC mitigation to sustainable development)

Mitigation



Overall assessment shows: The highest contribution to Goal 17 on *"Global partner"* and Goal 7 on *"Sustainable energy"* and Goal 8 on *"Sustainable economy"*

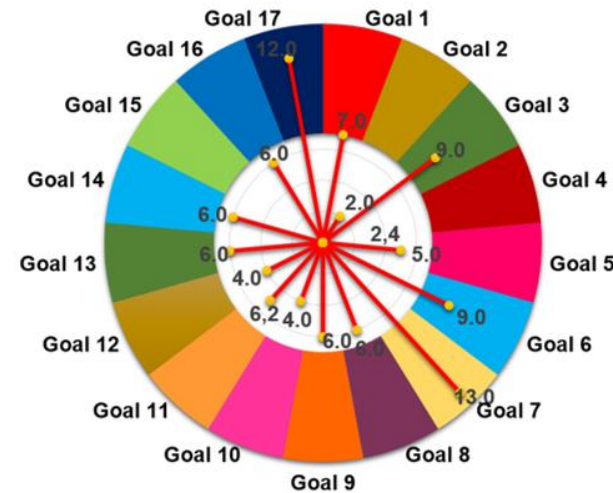
Contribution of GHG mitigation measures
to sustainable development

6. Contribution of CC response to sustainable development (The contribution of CC mitigation to sustainable development)

Mitigation

- *Energy Sector:* The highest contribution is to Goal 7 and Goal 17;
- *Agriculture Sector:* The highest contribution is to Goals 2 and 9;
- *LULUCF Sector:* The highest contribution is to Goal 15;
- *Waste sector:* The highest contribution is to Goals 7 and 17;

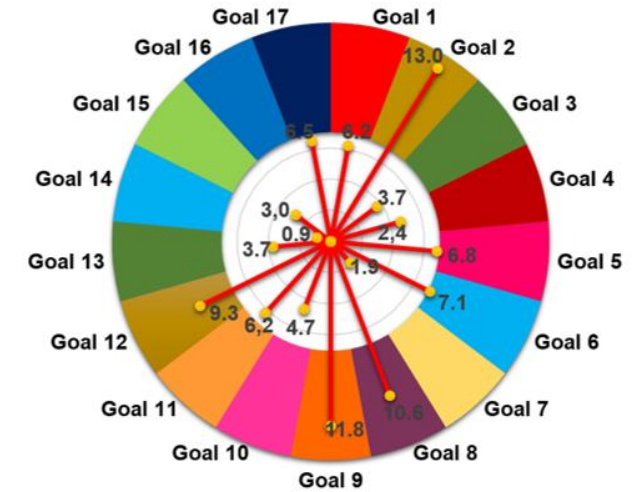
Contribution of GHG mitigation measures
to sustainable development



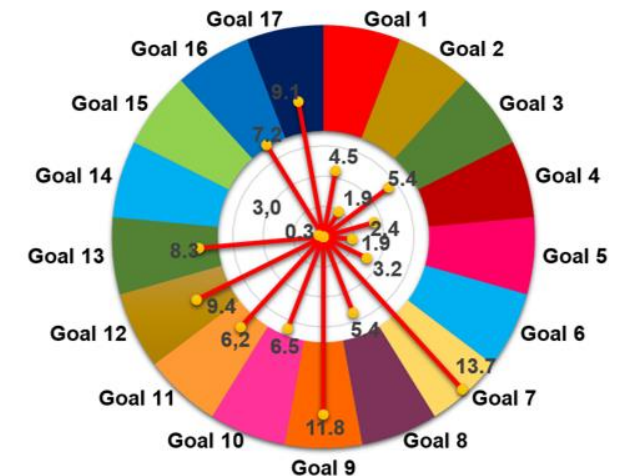
Waste



LULUCF



Agriculture



Energy

6. Contribution of CC response to sustainable development

Adaptation + Mitigation

Vietnam's sustainable development goals	Climate change adaptation					
	Natural Resources and Environment	Agriculture and Rural Development	Construction	Infrastructure	DRR	Health
Goal 1: Poverty elimination	9.2	8.7	4.3	5.0	8.3	5.1
Goal 2: Hunger eradication, food security	4.6	8.1	4.7	5.0	8.3	5.1
Goal 3: Life and welfare	4.6	3.7	4.3	7.4	4.1	15.3
Goal 4: Education	4.6	3.7	4.3	4.1	4.1	5.1
Goal 5: Gender equality	4.6	7.5	4.3	4.1	4.1	5.1
Goal 6: Water resources management	7.3	6.8	7.3	4.1	4.1	5.1
Goal 7: Sustainable energy	4.6	3.7	5.1	4.1	4.1	5.1
Goal 8: Sustainable economy	4.6	4.3	7.7	5.8	4.1	5.1
Goal 9: Infrastructure	4.6	5.3	7.3	7.4	4.1	5.1
Goal 10: Reduction of inequality	4.6	3.7	4.3	4.1	4.1	5.1
Goal 11: Sustainable urban and rural development	5.5	5.0	14.5	14.0	12.4	5.1
Goal 12: Sustainable production and consumption	5.5	6.2	5.6	5.0	4.1	5.1
Goal 13: Response to climate change and natural disasters	17.4	8.7	9.4	11.6	16.5	6.8
Goal 14: Oceans, seas, marine resources	4.6	5.9	4.3	4.1	4.1	5.1
Goal 15: Forest, biodiversity and ecosystem services	4.6	11.2	4.3	5.8	4.1	6.8
Goal 16: Peaceful and democratic society	4.6	3.7	4.3	4.1	4.1	5.1
Goal 17: Global partner	4.6	3.7	4.3	4.1	5.0	5.1

6. Contribution of CC response to sustainable development

Vietnam's sustainable development goals	Climate change Mitigation			
	Energy	Agriculture	LULUCF	Waste
Goal 1: Poverty elimination	4.5	6.2	5.7	7.0
Goal 2: Hunger eradication, food security	1.9	13.0	9.4	2.0
Goal 3: Life and welfare	5.4	3.7	6.6	9.0
Goal 4: Education	3.5	4.7	0.0	0.0
Goal 5: Gender equality	1.9	6.8	6.6	5.0
Goal 6: Water resources management	3.2	7.1	3.8	9.0
Goal 7: Sustainable energy	13.7	1.9	0.9	13.0
Goal 8: Sustainable economy	5.4	10.6	6.6	6.0
Goal 9: Infrastructure	11.8	11.8	0.0	6.0
Goal 10: Reduction of inequality	6.5	4.7	6.6	4.0
Goal 11: Sustainable urban and rural development	8.1	6.2	0.9	5.0
Goal 12: Sustainable production and consumption	9.4	9.3	6.6	4.0
Goal 13: Response to climate change and natural disasters	8.3	3.7	1.9	6.0
Goal 14: Oceans, seas, marine resources	0.3	0.9	2.8	6.0
Goal 15: Forest, biodiversity and ecosystem services	0.0	2.8	21.7	0.0
Goal 16: Peaceful and democratic society	7.2	0.0	13.2	6.0
Goal 17: Global partner	9.1	6.5	6.6	12.0

6. General comments.

- Results of co-benefit assessment among CC response activities show: mitigation policies contribute to bringing about adaptation benefits and is rated at high level. Meanwhile, the adaptation policies contributing to mitigation benefits is rated at medium level.
- There should be policies to promote investment, mobilization of resources for effective implementation of mitigation measures to help bring the benefits not only for the implementation of Vietnam's commitments on GHG mitigation, but also promoting economic development in the green and sustainable direction.
- For the adaptation measures, it is necessary to review the effectiveness of adaptation activities to make adjustment accordingly, to contribute to mitigation of risks associated with climate change, to bring about economic, social, environmental and institutional efficiency to promote the development of the country in the context of CC.

Thank you very much!