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South Asia

# Enhancing Benefits from the Hydromet Value Chain in South Asia

South Asia Hydromet Forum III November 16, 2021



# Valuing Hydromet, Early Warning and Climate Services Motivation and Objectives

- To answer the question “***what do the hydromet investments of the future in South Asia look like?***” and provide recommendations to policymakers on how to realize the potential benefits of investing and enabling transformative hydromet services
- Case Studies in Bangladesh and Sri Lanka
- demonstrating the economic benefits of modernization and contribution to climate adaptive planning

Recommendations for modernizing the HVC at the agency and national levels

## 2. Designing for the future

- Role of national and regional collaboration and partnerships with private sector and academia in improving future hydromet services

## 3. Developing modernization scenarios

Develop concrete modernization scenarios for selected countries, with consideration of improvements at the: (i) agency level, (ii) national level, and (iii) regional level.

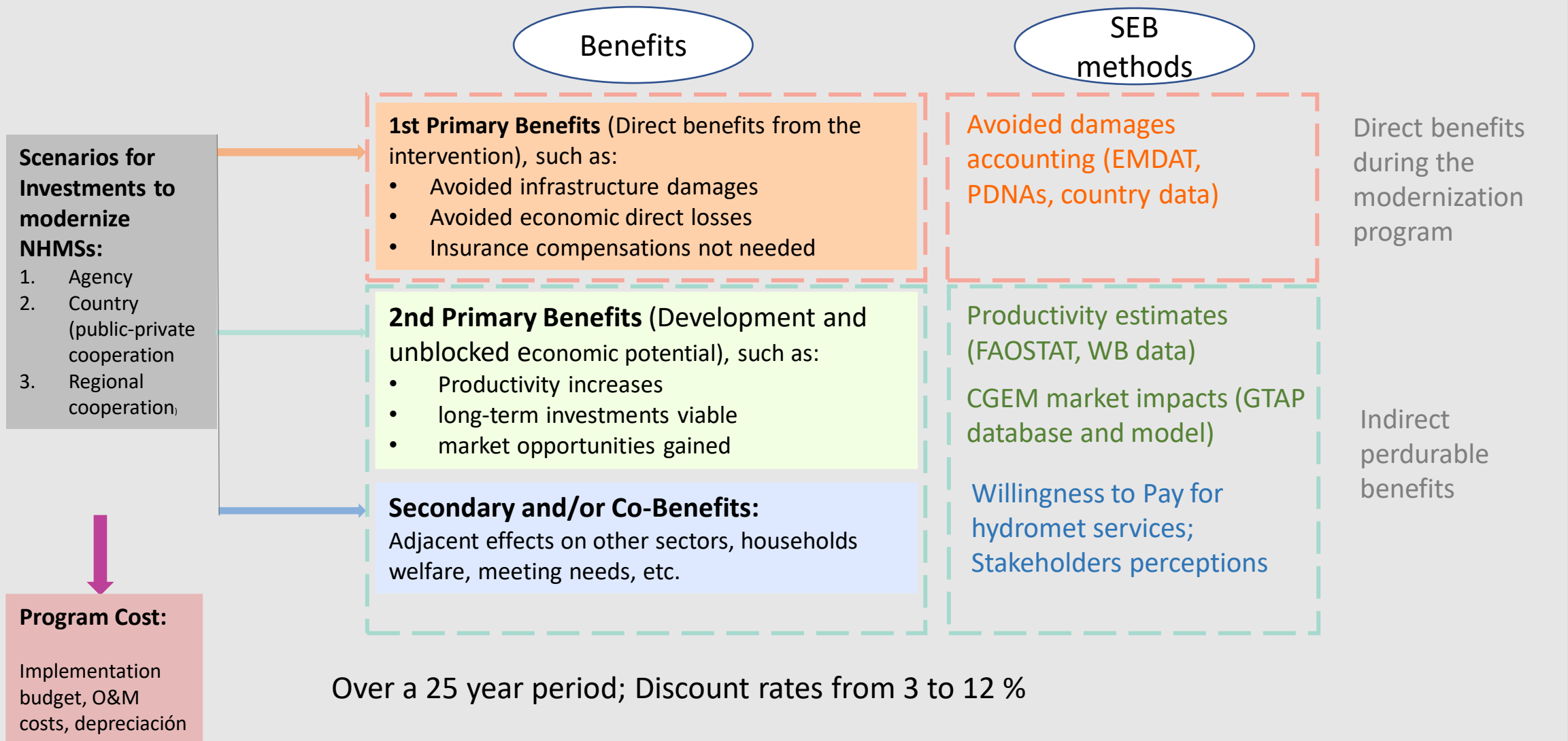
## 4. Estimating the SEB of improved HVC

- Estimate the net SEB of the proposed modernization scenarios in the selected countries.

Recommendations for modernizing the HVC at the national and regional levels



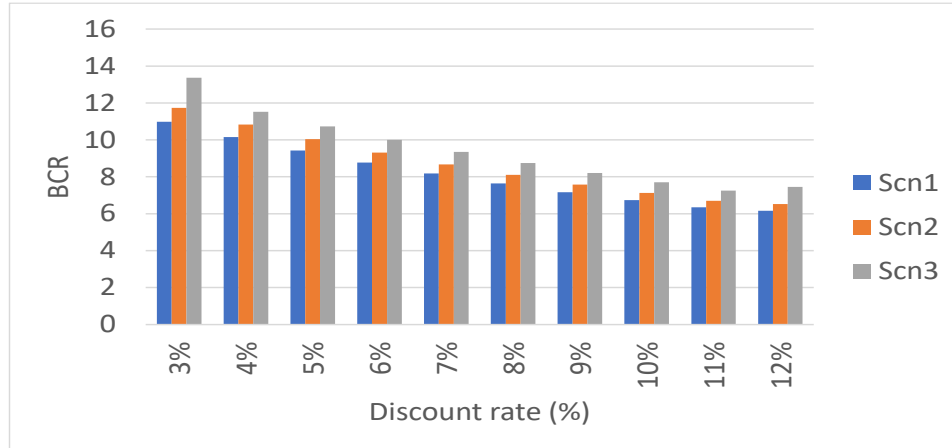
# Study Framework and Methodology



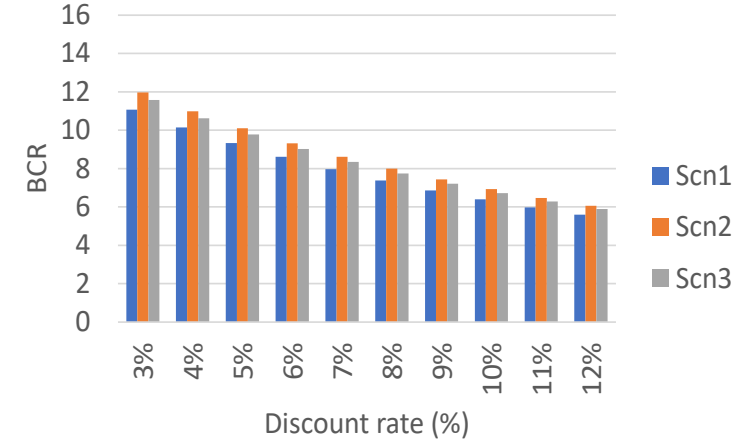
# Findings for Bangladesh and Sri Lanka: Hydromet Investments pay off!

High NPV and BCR: \$1 invested in improved services yields \$6.1 to \$13.1 in Bangladesh and \$5.6 to \$11.6 in Sri Lanka

Bangladesh



Sri Lanka



	Scen 1		Scen 2		Scen 3	
Discount rate (%)	3.0	12.0	3.0	12.0	3.0	12.0
Present Value of Costs						
Investment	78.3	58.0	81.5	60.6	78.9	59.4
Depreciation&Replacement	152.1	104.3	158.4	108.9	153.3	106.7
Management	23.0	11.0	12.0	5.7	11.5	5.5
O&M	34.5	16.6	35.9	17.3	34.5	16.6
Total costs PV	287.9	189.2	287.8	192.5	278.3	188.3
Present Value of Benefits						
Households' welfare	60.1	21.7	68.0	24.5	71.6	25.79
Unblocked productivity	195.1	70.3	216.2	77.9	232.8	83.9
Drought management	1483.8	534.7	1582.8	570.4	1681.7	606.0
Flood avoided damages	1421.2	512.2	1510.9	544.5	1734.5	625.0
Total benefits PV	3160.4	1138.9	3377.9	1217.3	3720.6	1340.8
Net Present Value	2872.5	949.0	3090.1	1024.8	3442.3	1152.5

	Scen 1		Scen 2		Scen 3	
Discount rate (%)	3.0	12.0	3.0	12.0	3.0	12.0
Present Value of Costs						
Investment	45.8	36.5	47.1	37.5	50.2	39.7
Depreciation&Replacement	89.0	65.61	91.6	67.5	97.5	71.4
Management	6.58	3.1	6.8	3.2	7.2	3.5
O&M	19.73	9.47	20.3	9.6	21.7	10.4
Total costs PV	161.2	114.8	165.8	118.0	176.5	125
Present Value of Benefits						
Households welfare	227.7	82.1	255.2	91.9	257.5	92.8
Increased productivity	312.5	112.6	342.7	123.5	369.1	133.0
Drought management	609.4	219.6	676.5	243.8	682.6	246.0
Flood avoided damages	633.7	228.4	710.7	256.1	732.8	264.0
Total benefits PV	1783.3	642.6	1985.0	715.3	2042.0	735.9
Net Present Value	1622.1	527.9	1819.2	597.3	1865.5	610.9

Thank you!

Arati  
Belle

Sonia  
Quiroga

Lelia  
Croitoru

David  
Rogers

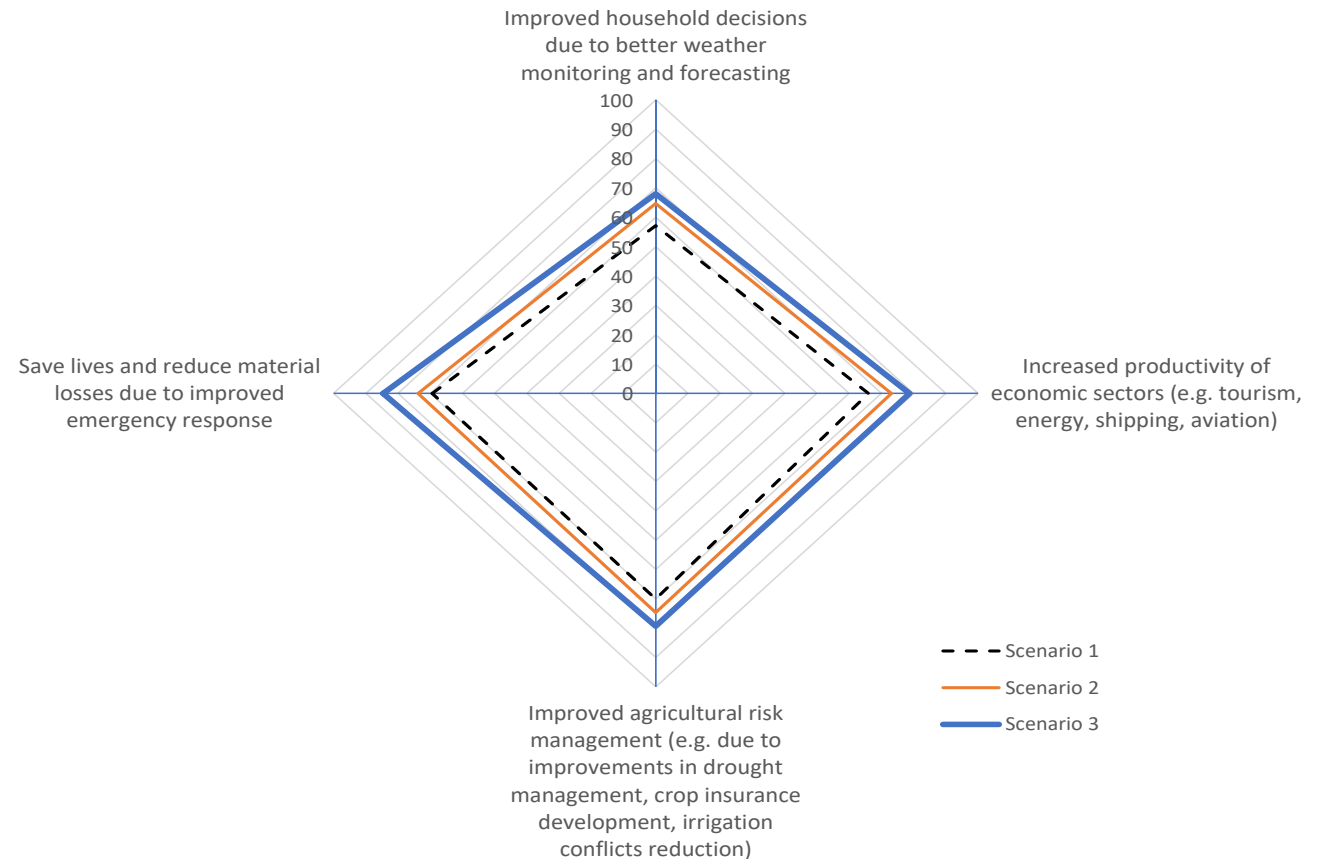
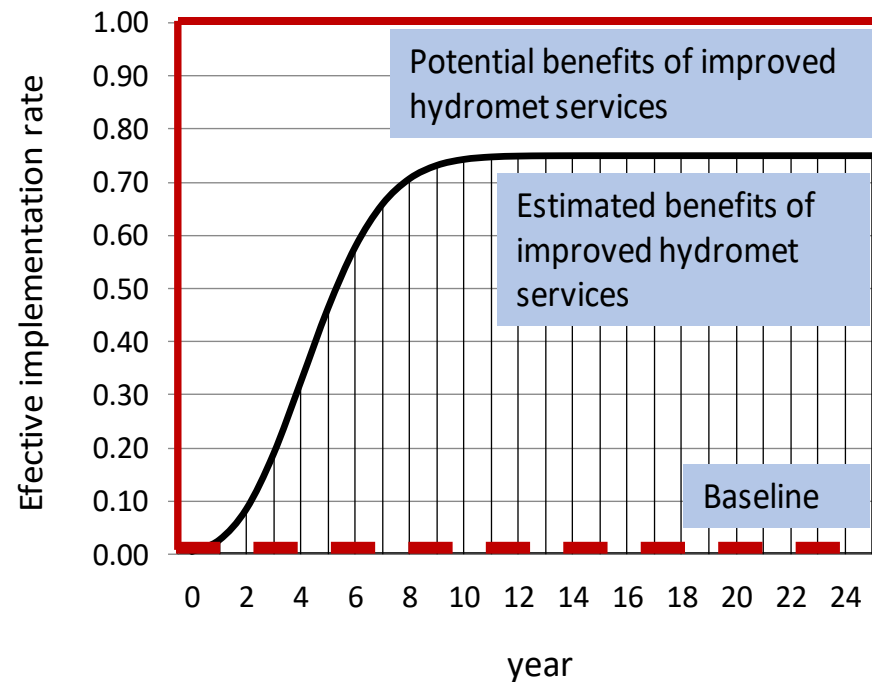
Alice  
Soares

Yunziyi  
Lang

# Stakeholders' perception is key for achieving value

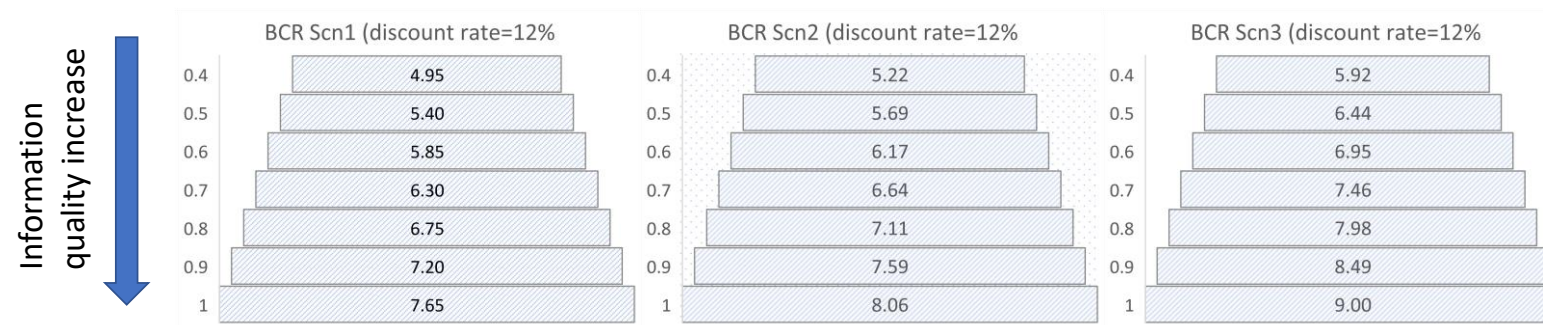
• Bangladesh end-users perceptions on the effective implementation rate for the 3 scenarios:

- Agency
- Country
- Regional



# Enhancing the Quality of Services is critical for Generating Value

## Bangladesh



## Sri Lanka

