



10th UNCTAD DEBT MANAGEMENT
CONFERENCE

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Ensuring Sustainability in the Face of Climate Change

by

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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD

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Bangladesh: Climate Change and Debt Sustainability

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Joint Secretary, Ministry of Finance, Bangladesh



Nepal

Bhutan

Brahmaputra

India

Ganges

India

Bangladesh

Dhaka

Chittagong

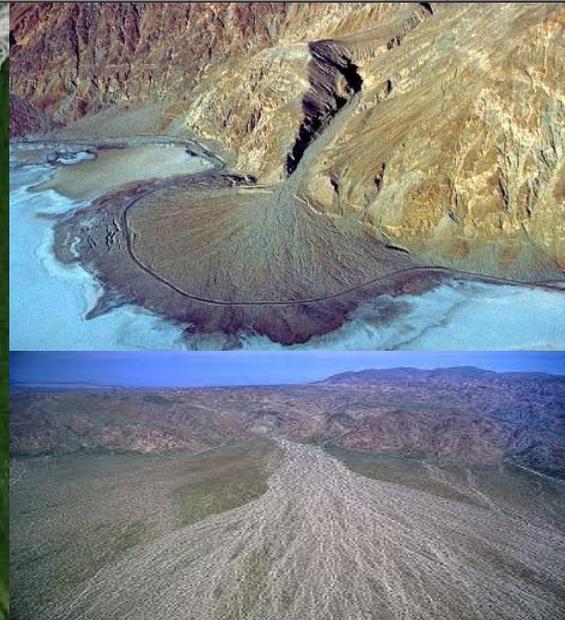
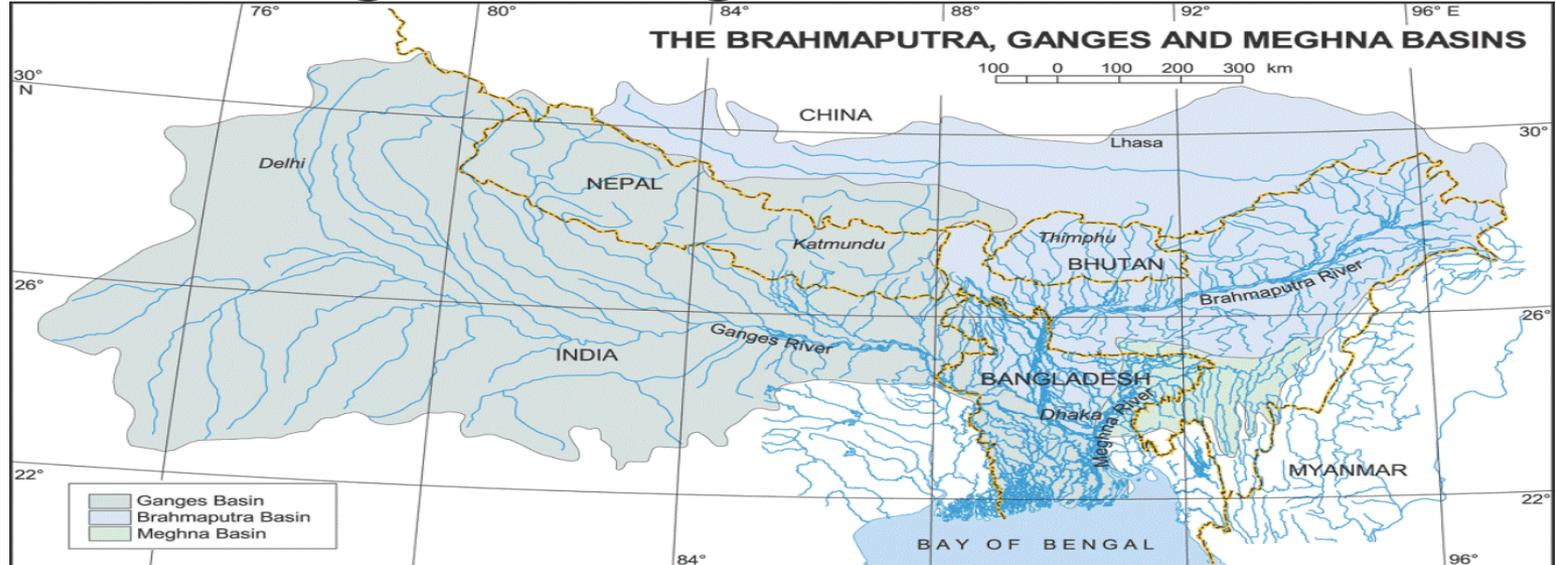
Bay of Bengal

Myanmar

Physiography mainly consists of River Flood Plan and Tidal Flood Plain



A big drainage of the world

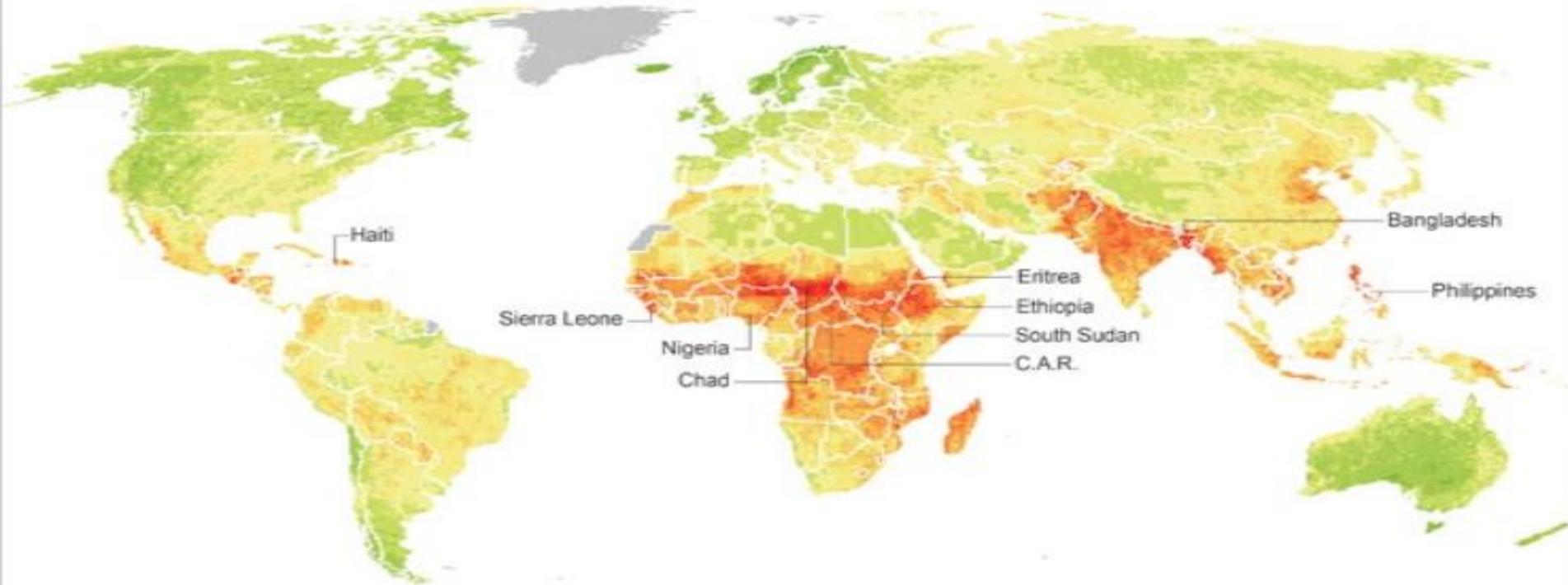


CC Impacts: A net recipient

- Beneath the Himalayan range and in the most rainy area in the world
- Located at the bottom of the mighty GBM river system
- Southern part is mostly flood plain region
- 57 trans-boundary rivers coming down to it: (India-54 Myanmar-3)
- Over 200 rivers and their tributaries/distributaries

Lost 1.2% of GDP during 1994-2013 period

Climate Change Vulnerability Index 2015



Rank	Country	Category
1	Bangladesh	Extreme
2	Sierra Leone	Extreme
3	South Sudan	Extreme
3	Nigeria	Extreme
5	Chad	Extreme

Rank	Country	Category
6	Haiti	Extreme
7	Ethiopia	Extreme
8	Phillippines	Extreme
9	C.A.R.	Extreme
9	Entrea	Extreme

Legend	
■	Extreme Risk
■	High Risk
■	Medium Risk
■	Low Risk
■	No data

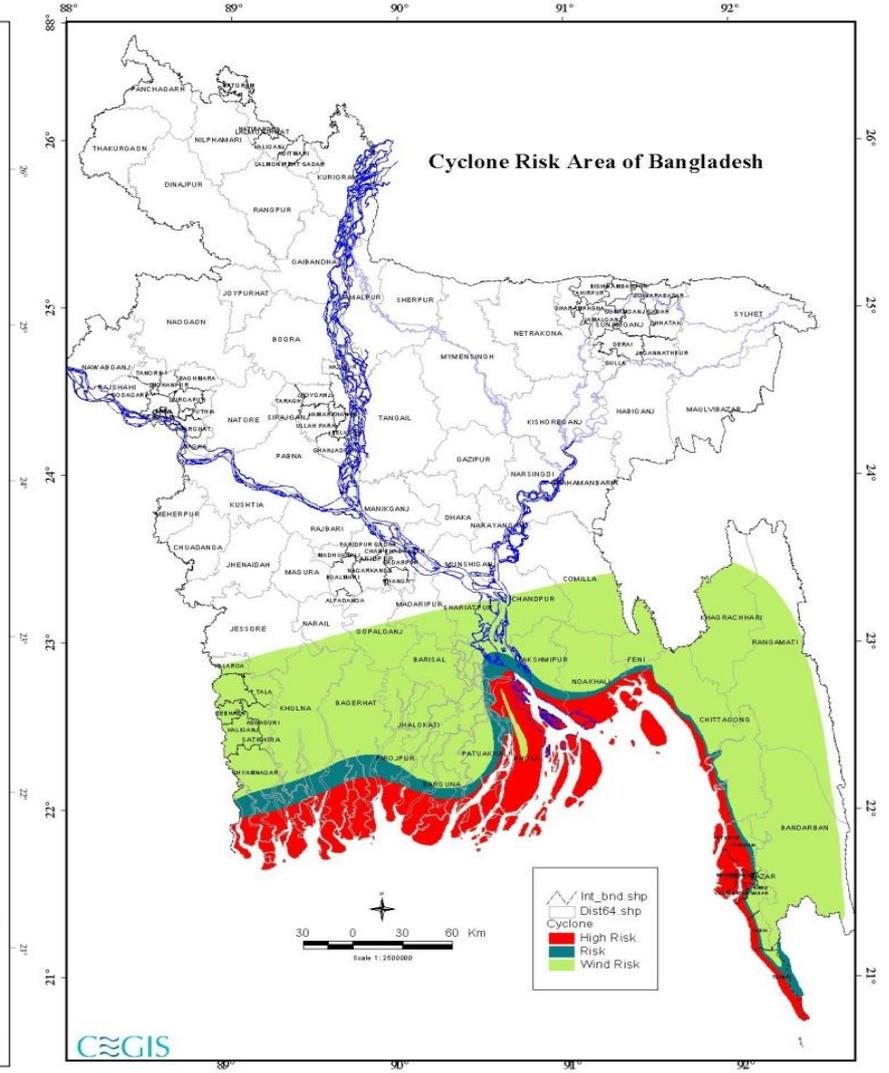
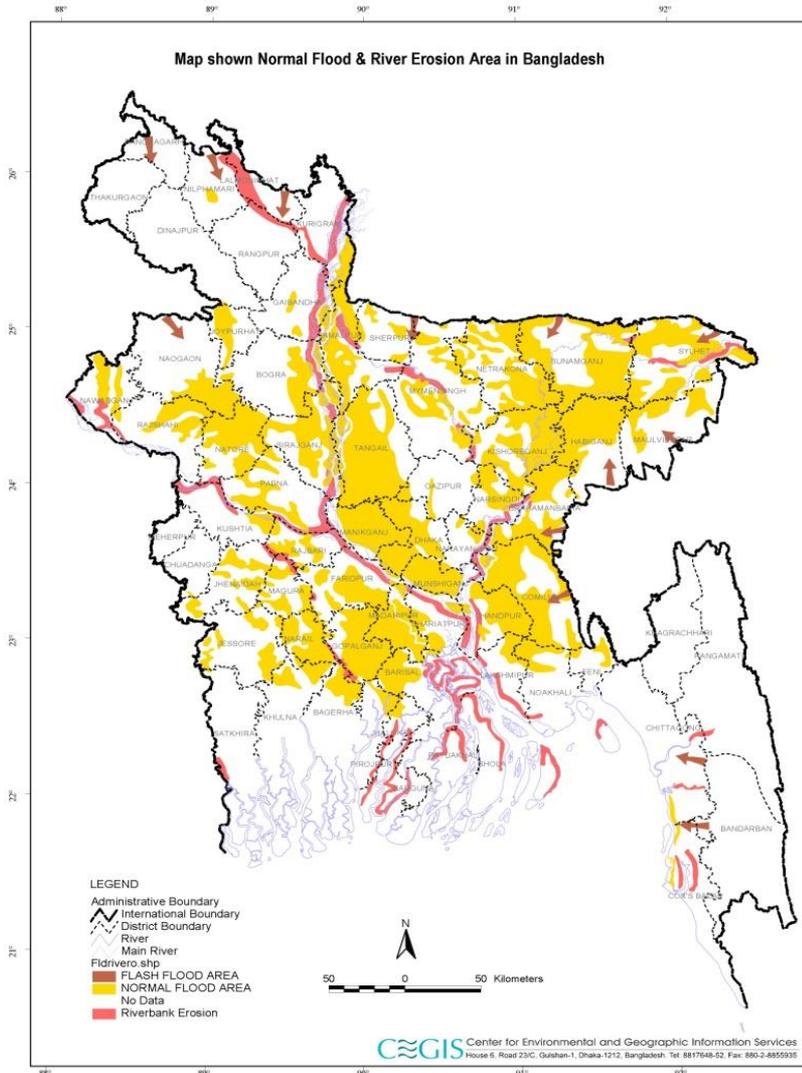
Frequency of major climate events Increasing...

- ◆ Flood
- ◆ Tropical Cyclone
- ◆ Storm Surge
- ◆ Tornado
- ◆ River/ Coastal Bank Erosion
- ◆ Water Logging
- ◆ Drought
- ◆ Erratic Rainfall
- ◆ Arsenic
- ◆ Landslide

Major Cyclones	Deaths
1970	300,000
1988	5704
1991	138,868
1997	550
2007	3406
2009	190
2012	14
Major Floods	
1988	2373
1998	918
2004	747
2007	1071
Others	
1996-Tornado	545
2007 & 2012-Landslide	248

- Frequency of Events increased over time
- Increasing adaptability reduced number of deaths but economic loss increasing

Flood, Erosion & Cyclone Map





160 m Population, Density 1100/ S.km, Growing 2 mill/ year

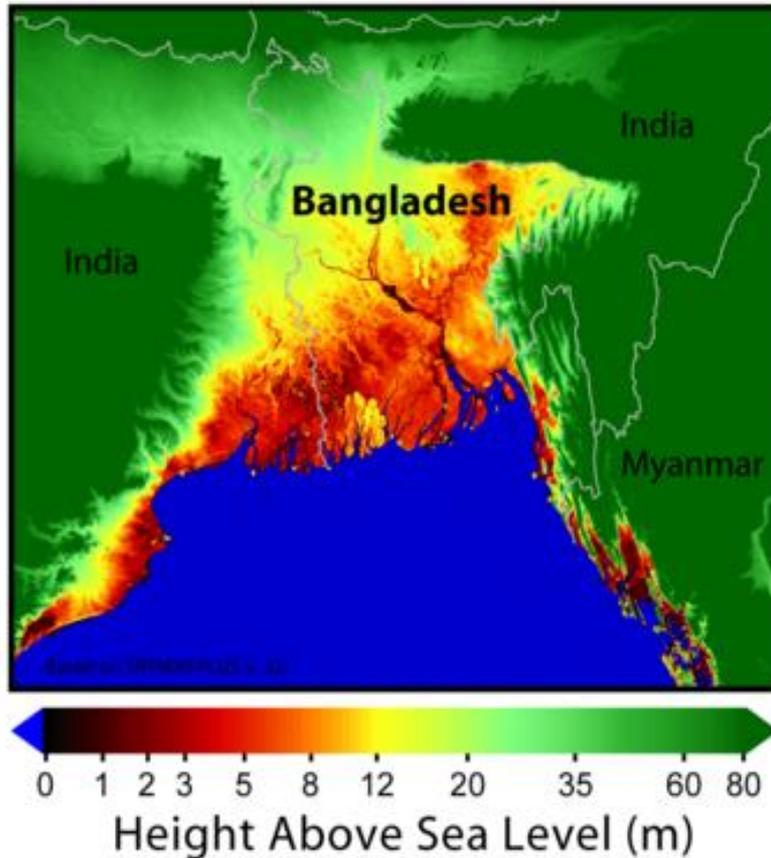


CC Impacts on people



Rising sea level is the major threat to sustainability.....

Sea Level Risks - Bangladesh

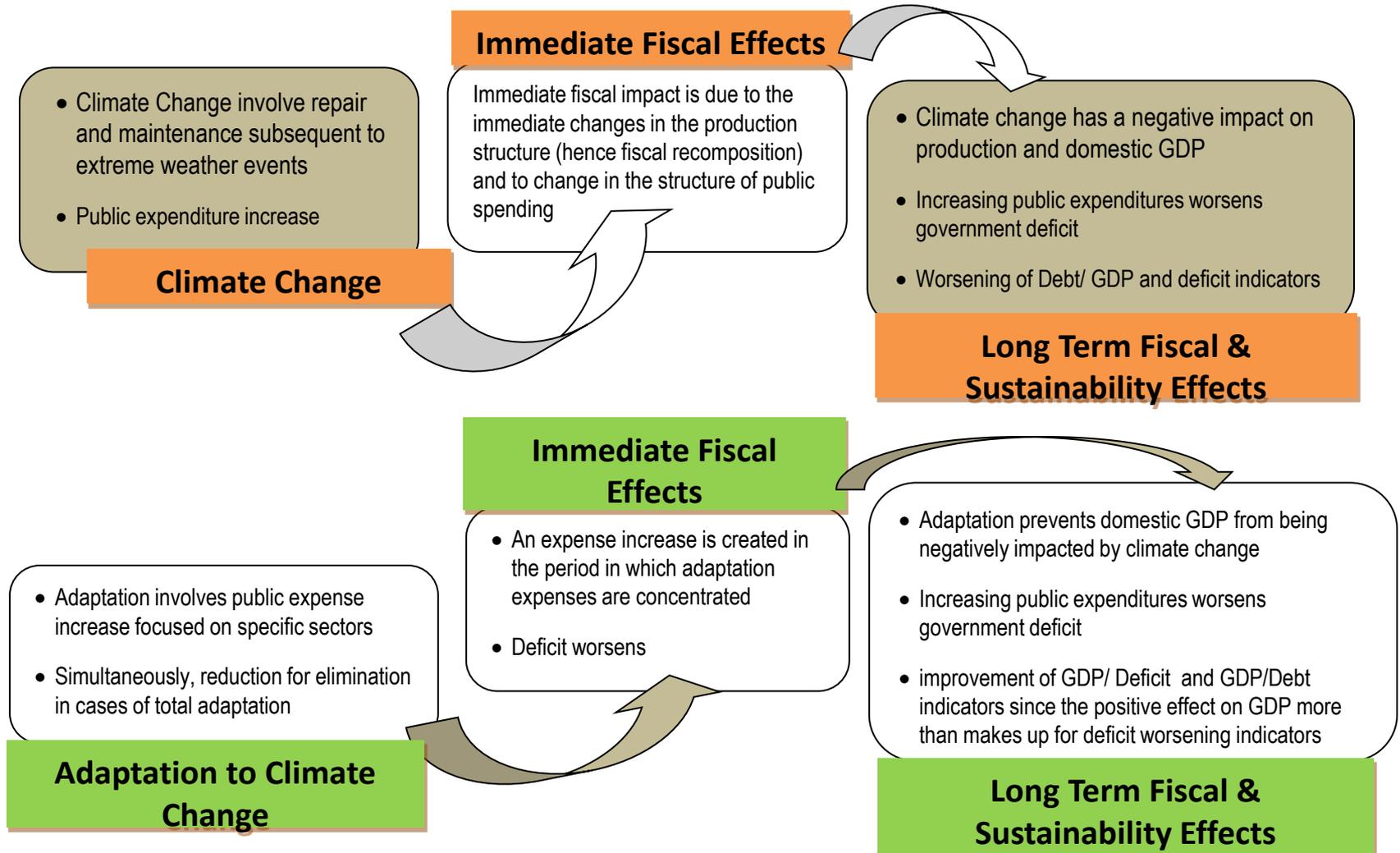


Rising 6-20mm/ year in 3 different coastal regions:

- **11-20 mm/year** in the Chittagong coastal plain
- **6-9 mm/year** in Meghna Estuarine floodplain
- **7-8 mm/year** in Ganges Floodplain
- **39million people & 19 districts will be effected**

2015 report based on 30 years data

Fiscal Implications of CC

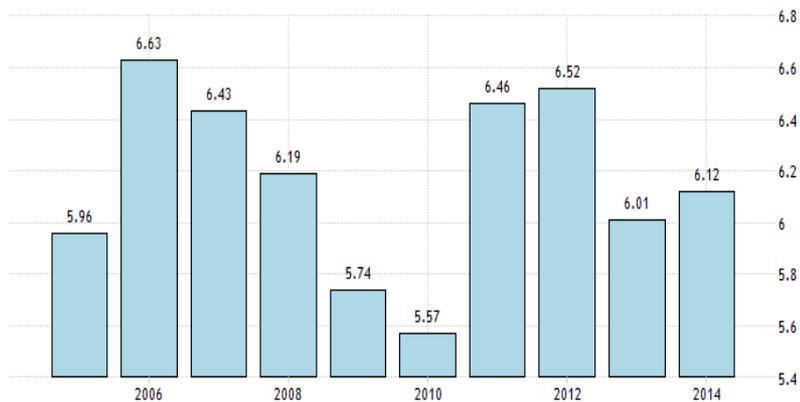


Steady Growth for 10+ years..

FY15 Real GDP Growth 6.51%

FY15 GDP 195 billion USD

BANGLADESH GDP GROWTH RATE



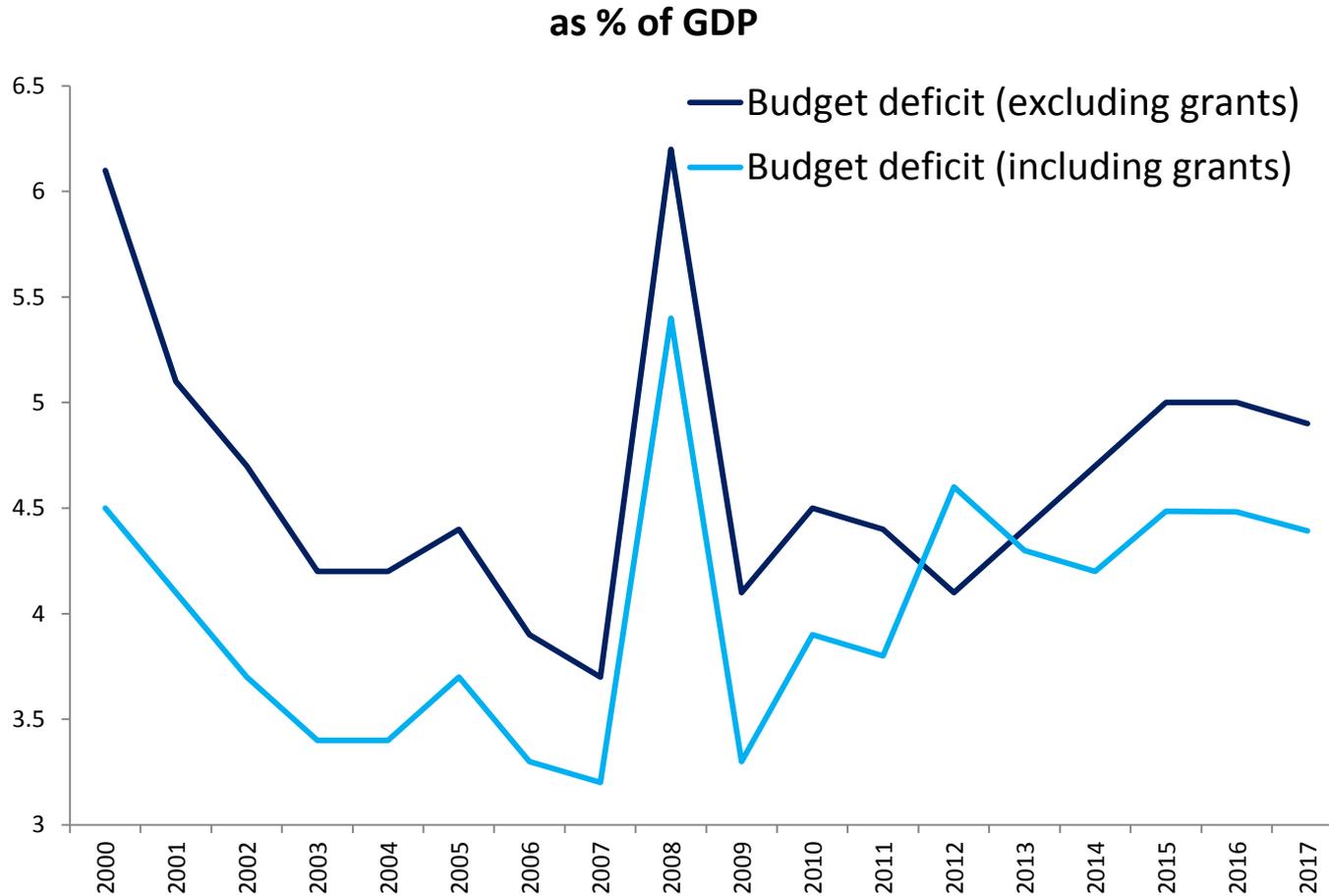
SOURCE: WWW.TRADINGECONOMICS.COM | BANGLADESH BANK

BANGLADESH GDP



SOURCE: WWW.TRADINGECONOMICS.COM | WORLD BANK

Budget deficit contained below 5%



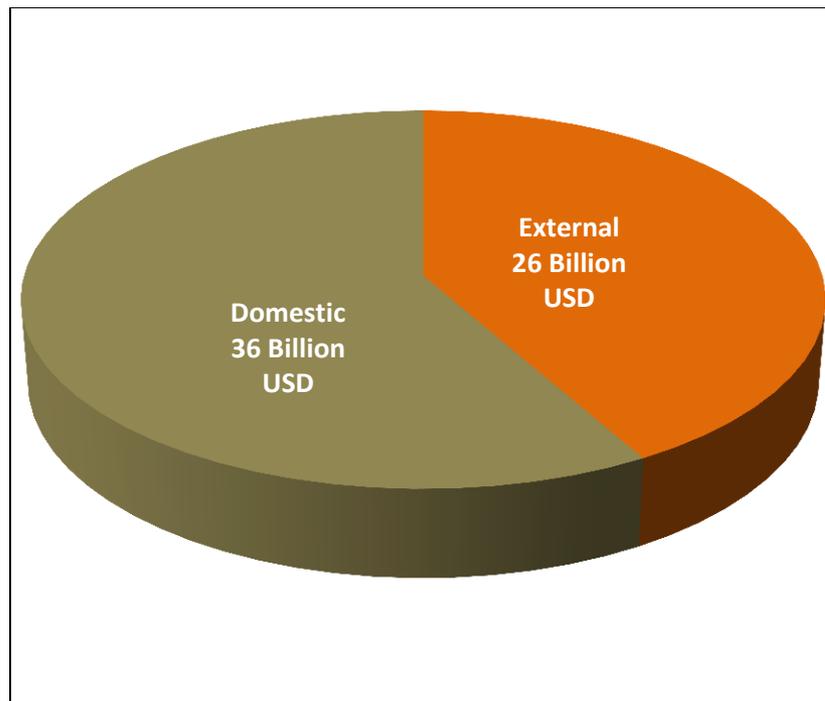
Debt Ratios are below thresholds

(as on 30 June, 2014)

DEBT RATIOS

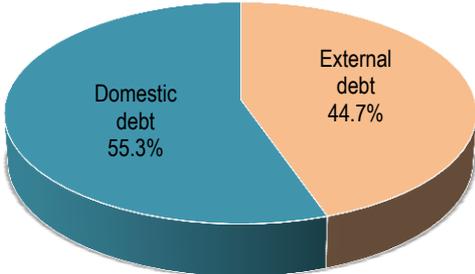
DEBT RATIO	
PPG External Debt as % of GDP	15
Domestic Debt as % of GDP	21
Domestic Debt as % of REVENUE	190
PV of External Debt as % of EXPORT	52.9
PV of External Debt as % of REVENUE	96.4
DEBT SERVICE RATIO	
Debt service as % of EXPORT	5.3
Debt Service as % of REVENUE	6.8

DEBT STOCK

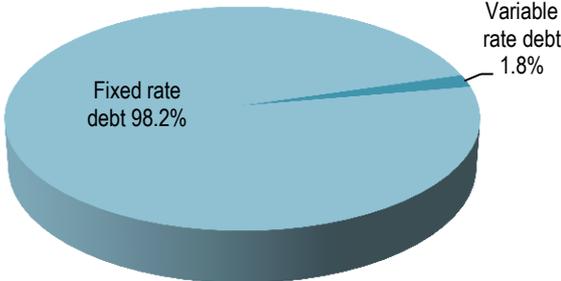


Analysis of Debt Stock

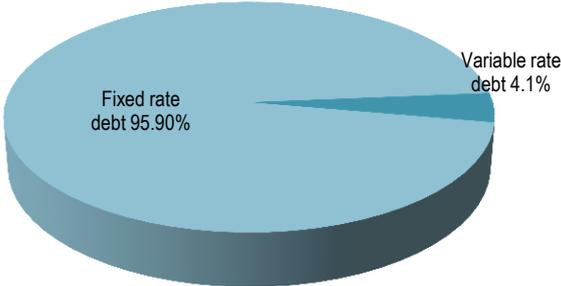
Debt stock by source



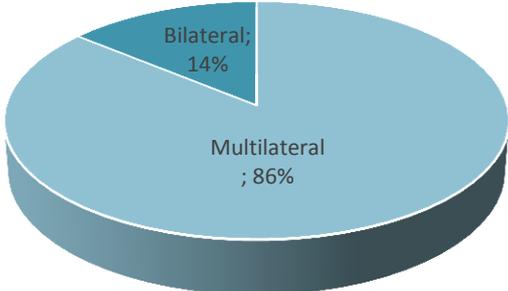
Share of fixed rate debt in total public debt



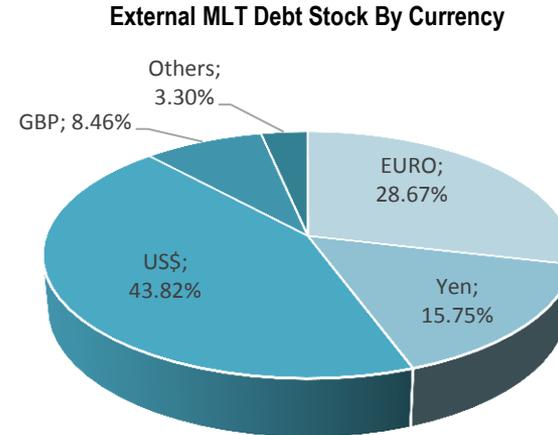
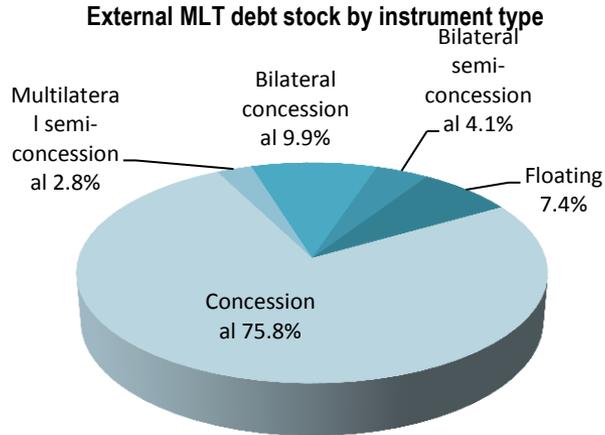
Share of fixed rate debt in total external public debt



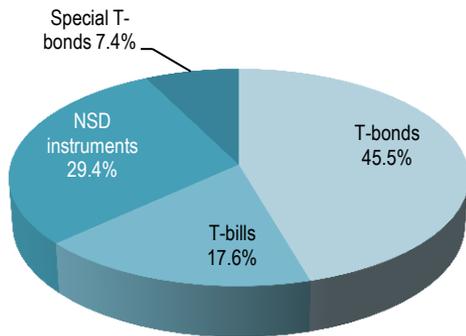
. External debt stock by type of creditors



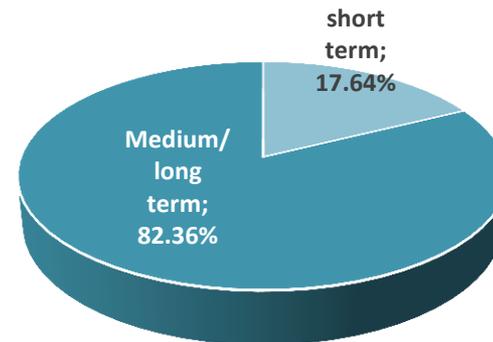
Analysis of Debt Stock



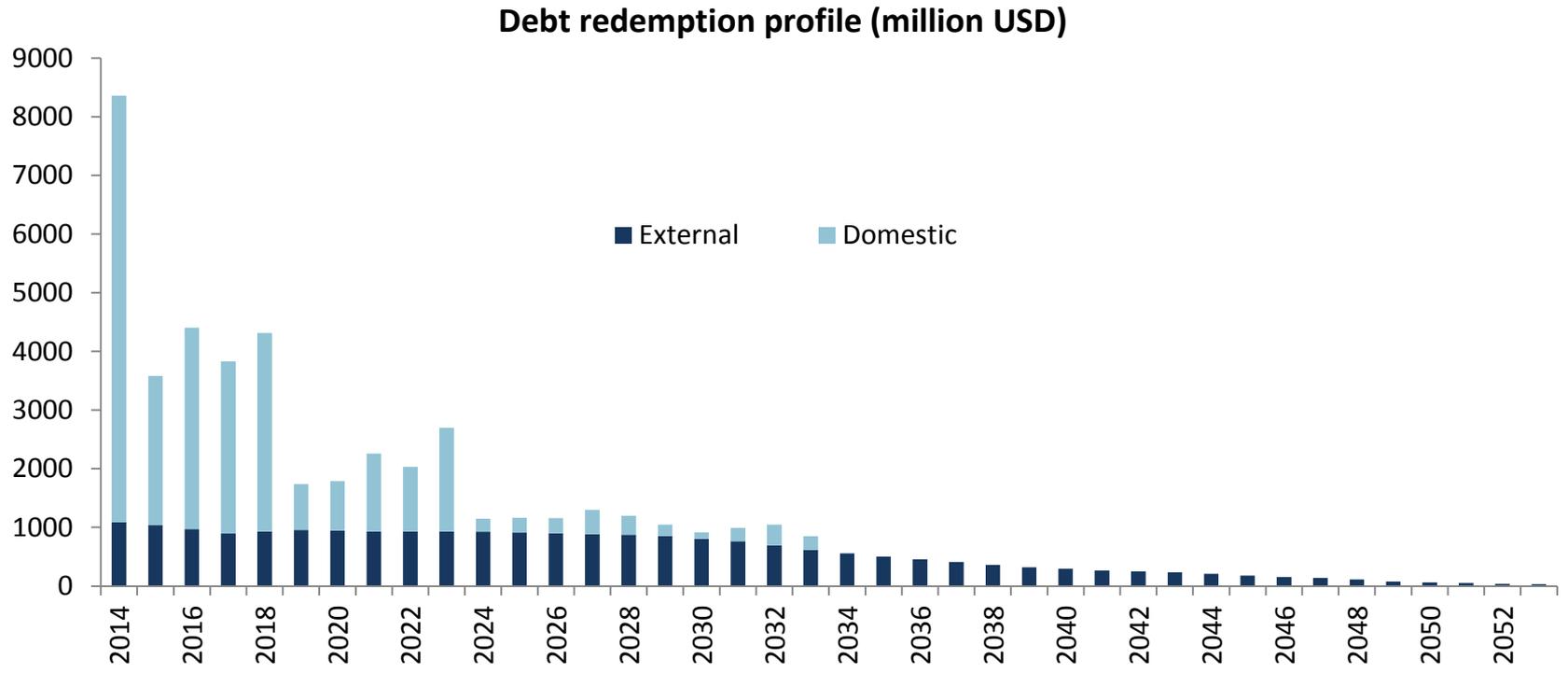
Domestic debt stock by instruments



Domestic debt stock by tenure



Analysis of Debt Stock



Cost and Risk of Debt Portfolio is low

Risk Indicators		External debt	Domestic debt	Total debt
Amount (in millions of USD)		22,586.4	27,959.0	50,545.4
Nominal debt as % GDP		16.9	20.9	37.9
PV as % of GDP		12.0	20.9	32.9
Cost of debt	Weighted Av. IR (%)	1.0	9.7	5.8
Refinancing Risk	ATM (years)	12.9	4.5	8.3
	Debt maturing in 1 year (% of total)	4.8	26.0	16.5
Interest Rate Risk	ATR (years)	12.7	4.5	8.1
	Debt refixing in 1 year (% of total)	8.6	26.0	18.2
	Fixed rate debt (% of total)	95.9	100.0	98.2
FX Risk	FX debt (% of total debt)			44.7
	ST FX debt (% of reserves)			7.0

Sustainable Macro-fiscal Indicators

- Graduated to lower middle income country
- Debt indicators are improving and well below thresholds
- GDP per capita doubled in only 7 years
- Sustained GDP growth 2-3% (1970), 6% (FY04-14), 6.3% (FY11-16) and 6.5% in FY15
- Fiscal deficit constantly below 5% of GDP and total debt to GDP ratio has been falling
- Total 9.2 million jobs created in 5 years

Sustainability: the Social Indicators

- Attained most of the MDGs
- Poverty rare to 24.8% from 70% in 1970s
- Popn. growth decreased to 1.37% from 2.6%
- life expectancy now 70.7 yrs against 42 yrs 1970
- Under-5 mortality rate now 41 from the base-year high of 239 per 1000 live births.
- Literacy rate to 57.2% (from 24.3%); female literacy went up to 55.1% (from 14.8%).

Sustaining CC Adaptation: Strategies and action plans prepared.....

- Delta Plan 2100 + Perspective Plan 2040
- Sustainable Development Strategy 2010-2021 / Climate Change Strategy Action Plan / Strategy Program for Climate Resilience
- Climate Change Unit at MoEF/ National Adaptation Program of Action
- Climate Public Expenditure & Institutional Review / Climate Fiscal Framework 2014
- Climate Change Trust Fund 2010-\$385 mil/ Climate Change Resilience Fund-S189 mill

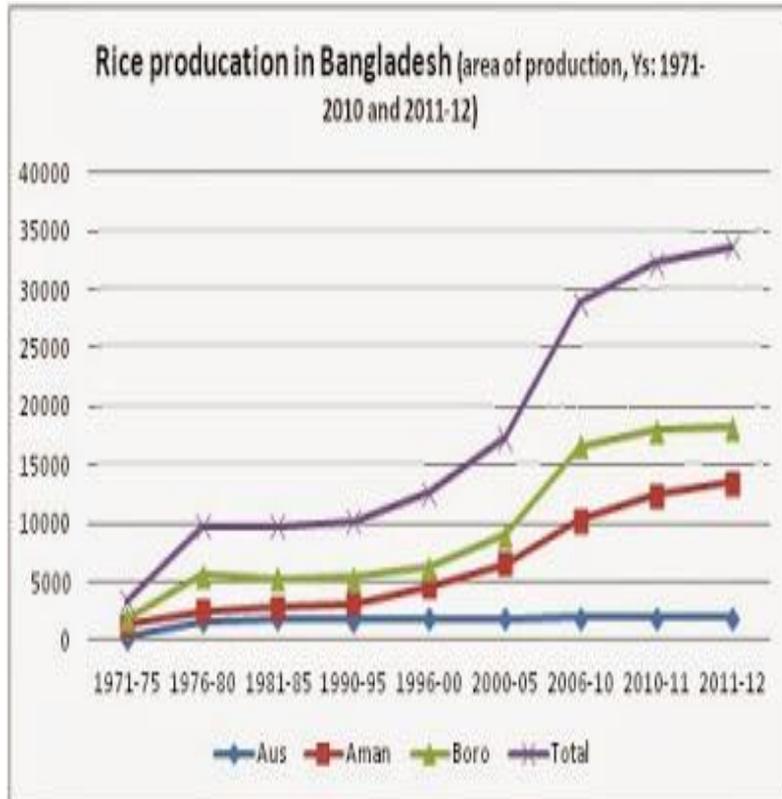
Sustaining CC Adaptation: Challenges to mainstreaming

- No option but to adapt and natural adaptation skills are already high but not enough at all
- With large population are poverty stricken (24.8% of which 12% extreme poor) embedding CC into systems and processes is an additional challenge to structured adaptation
- Struggle limited to protecting marginal poor through social safety net program
- CC adaptation remains separate from systems and process
- Lack of dedicated fund makes adaptation priorities unattended

Sustaining CC Adaptation & Financing

- 6% to 7% annual budget on climate sensitive activity just over 1% of GDP
- 77% of climate sensitive financing from domestic resources (FY10 -FY12)
- Loan funding increased from 58%-82% of foreign funds (FY10 -FY12)
- Climate Fiscal Framework yet to contribute towards tracking CC related expenditure.
- Global commitment is needed for sustainability of a net recipient of CC impacts country
- 2% of GDP in the 7th FYP for Delta Plan

Successful Adaptation & Sustainability



- Submergence, drought, hail storm, salinity tolerant rice varieties
- High yielding varieties
- Photosensitive varieties
- Short and Long duration rice varieties
- Non saline tidal zone variety
- Brown Plan hopper (BPH) resistant

Successful Adaptation & Sustainability

- Agriculture Input Assistance Card for Farmers
- Marginal, small and medium farmers get cash subsidies. 10.82 million farmers of the country will be brought under this program
- 9.8 million farmers bank account for cash transfer for seed, irrigation and other input
- Floating Garden in submerged area
- Government Procurement of food grains from farmers to protect from to ensure fair price
- Cash incentive for CC impact area farmers round the year
- Cropping pattern change and variety change for drought area
- Multipurpose disaster shelter
- NSS Strategy formulated to integrate operation

Successful Adaptation & Sustainability



Sustaining CC Adaptation: Some suggestions

- Synchronize all strategies/ plans and mainstream CC
- Better tracking and analyzing climate related expenditure (GIFMIS, CFF)
- DSA should address CC related impacts on fiscal and macro economy for vulnerable countries.
- Gradual introduction of crop insurance for adaptation to CC can reduce burden on fiscal
- Spending on research and innovation for adaptation methods, financing and resilience can be strengthened



Thank you