



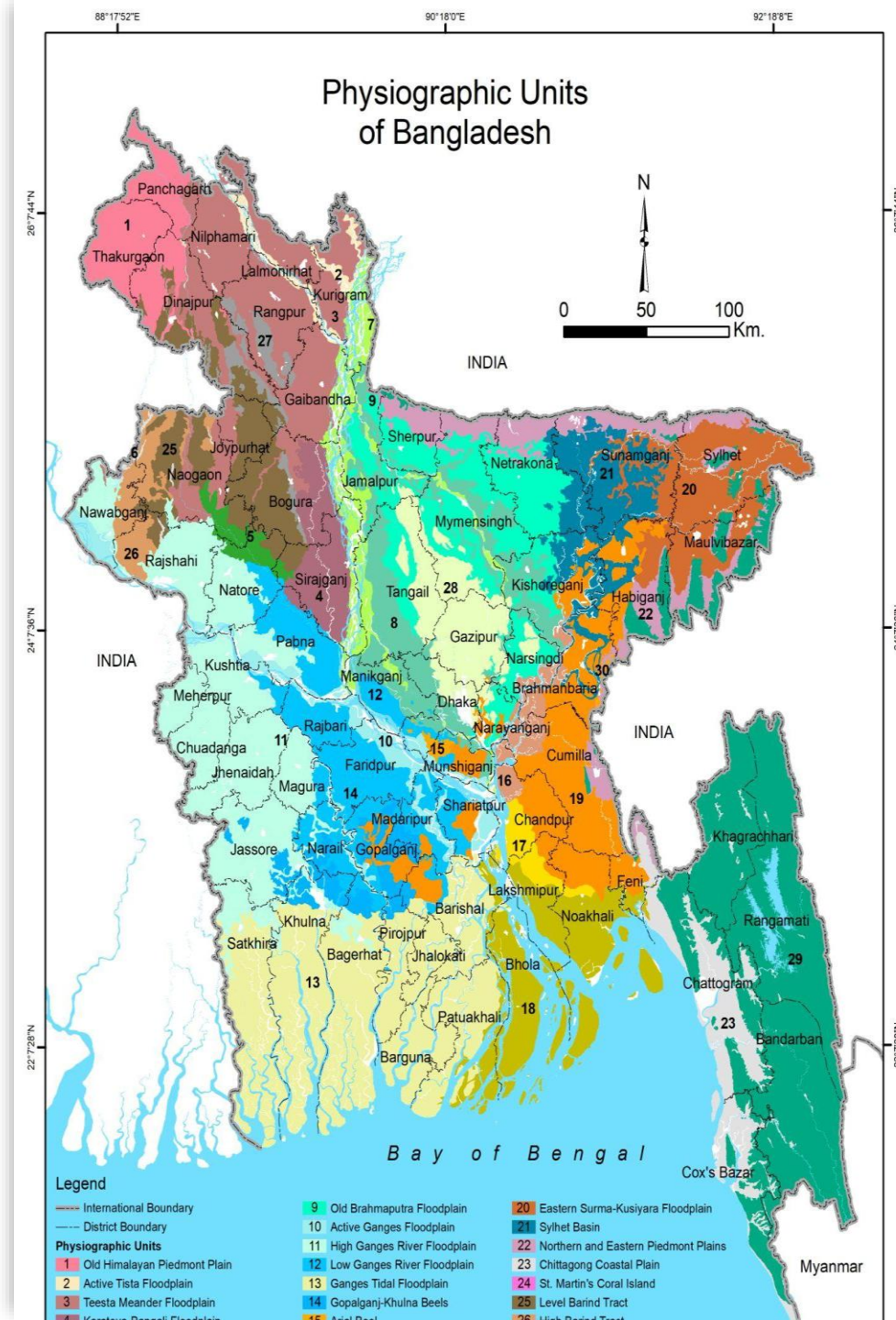
Country Presentation: Bangladesh

- Mr. Ashrafur Alam
- Mr. Surangit Kumar Ghosh

Bangladesh Context

Globally Recognized as Disaster Prone Country (Ranked 9),
at the same time Resilience Country

- **Geographical Area: 147 thousand sq. km**
- **Multiplicity of rivers: Over 310 rivers** (Including **57** trans-boundary river)
- **Deltaic landscape: 80% floodplain**
- **Population: 171.00 Million** (1st July 2023, SVRS)
- **Population density: 1171/km²** (2023, SVRS)
- **Disaster Affected Household: 7515977** (2021, BDRS)
- **Disaster Affected Population: 34112910** (2021, BDRS)
- **Slum Population: 1.73 Million** (2022, PHC)
- **Average Life Expectancy: 72.3 Year** (2023, SVRS)
- **Per Capita Income: 2820 in US\$** (2024-25P)
- **GDP Growth Rate: 3.97 %** (2024-25P)
- **Annual Inflation Rate: 10.03 %** (2024-25)
- **Poverty rate: (Upper 18.7 % and Lower 5.6 %** (2022, HIES)
- **Resilient Country: Regular and Devastating disastrous events**



National Policy Frameworks: Disaster

- Disaster Management Act, 2012 (Under this Act there is a National Disaster Management Council Headed by Prime Minister/Chief Advisor));
- Disaster Management (Committee Formation and Functions) Rules, 2015 (National Disaster Response Coordination Group-NDRCG; Inter-Ministerial Disaster Management Coordination Committee-IMDMCC; National Disaster Management Advisory Committee-NDMAC; National Platform for Disaster Risk Reduction-NPDRR; District Disaster Management Committee DDMC; Upazilla Disaster Management Committee-UDMC; etc.)
- National Plan for Disaster Management (2021-2025)
- National strategy for Disaster Risk Financing;
- Standing Orders on Disaster, etc.

Responsible Departments

Bangladesh Meteorological Department (BMD)

- Early Warning System and Preserve data on various meteorological disasters

Flood Warning Center

- Early Warning for Flood

Department of Disaster Management (DDM)

- Management, Relief & Rehabilitation Activities of the Disasters and collect data with D form & Keep collected information

Bangladesh Bureau of Statistics (BBS)

- Prepare, Compile and Publish Disaster related Statistics

Commitment on Environment Statistics in BBS (National)

The Constitution of The People's Republic of Bangladesh

FUNDAMENTAL PRINCIPLES OF STATE POLICY

Protection and Improvement of Environment and Biodiversity.

18 A. The State shall endeavor to protect and improve the environment and to preserve and safeguard the natural resources, bio-diversity, wetlands, forests and wild life for the present and future citizens.

19. Equity and Opportunity

Statistics Act, 2013

An Act to provide for making statistical activities expedited, integrated, target oriented, and for the preservation thereof

(m) to compile and disseminate economic, environmental, social and demographic indicators;

National Strategy for the Development of Statistics (NSDS) 2013

Strategic Actions:

- Compilation of Environmental-Economic Accounts (SEEA).
- Institutionalization of environmental statistics to ensure their regular updating and release.
- Developing statistics to monitor the impacts of climate change.
- Developing Bangladesh Framework for Development Environment Statistics (BFDES) complying with UNFDES.
- Setting up a new Environment and Resource Statistics Wing in BBS to take the lead in this area.
- Developing linkage with relevant Ministries and Agencies.

Commitment on Environment Statistics in BBS (International)



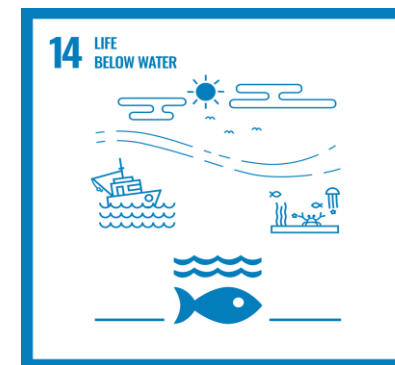
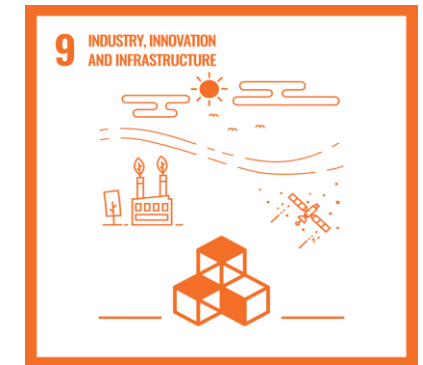
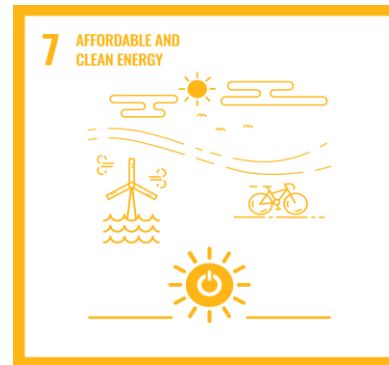
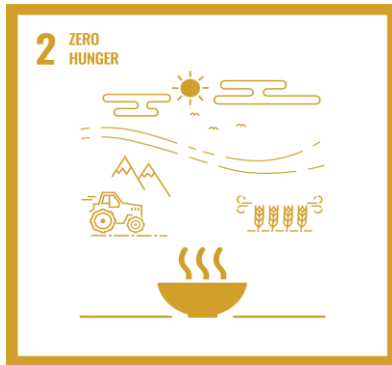
Sendai Framework
for Disaster Risk Reduction
2015 - 2030



UNITED NATIONS



Commitment on Environment Statistics in BBS (International)



Environmental Statistics and Institutionalization in BBS

- ❖ Established **“Environment, Climate Change & Disaster Statistics (ECDS) Cell”** in BBS to produce & publish Environment, Climate Change & Disaster Statistics as a regular basis;
- ❖ Prepare & Published **“Bangladesh Environmental Statistics Framework (BESF) 2016-2030”** complying with UNFDES;
- ❖ Prepare & Published **“Methodological Guidelines and Protocol for Data Producers and Users on Integrating Gender and Social Inclusion in Environment, Climate Change and Disaster-related Statistics”** under ECDS Cell, BBS;
- ❖ Implemented a Project Titled **“Strengthening Environment, Climate Change and Disaster Statistics (ECDS) Project”** from 2019-2025.
 - to produce comprehensive statistics related to the environment, natural resources, climate change, and disaster risk, aimed at establishing a systematic framework for environmental statistics within Bangladesh.

Bangladesh Disaster related Statistics (BDRS) 2021

OBJECTIVES:

To measure -

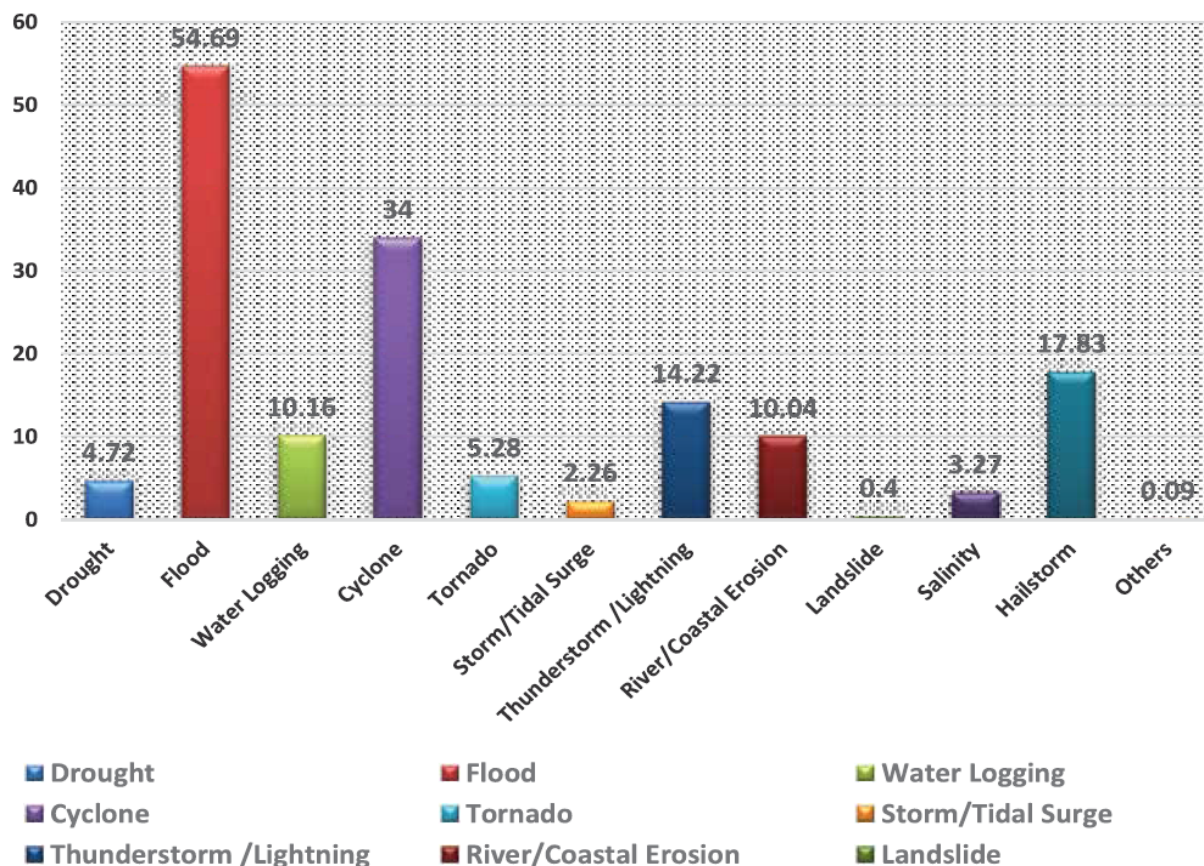
- Socio-economic characteristics of Household in disaster prone area;
- Disaster-induced agricultural production losses (Crops, Livestock, Poultryes) (In BDT.);
- Damage and loss of cultivable land and useable land;
- Damage and loss of residence (dwelling), cowshed, kitchen (In BDT.);
- Health and sanitation condition from the natural disaster-prone area;
- Vulnerability of the women, children, aged persons and person with disability; and
- Perception and knowledge about climate, environment, and disasters.

SAMPLING FRAME:

- 1) Geographically to cover the entire area except territorial enclaves;
 - 2) **Survey Frame:** A mauza/mahalla list of containing the dominant mauzas in terms of natural disaster prone mauzas under 64 district;
 - 3) Two-Stage Sampling Frame with Kish Allocation formula:
 1. A simple random sampling (SRS) selection of the mauzas/mohallas (PSUs) within the stratum under the districts.
 2. A systematic sampling of 30 Households from each of the selected PSUs.
- 1) Allocation of sample:**
- 4,240 PSUs (mauzas/mahallas) from 29199 disaster affected PSUs (mauzas/ mahallas) against 12 main disasters
 - Total 127,200 households for district estimation.

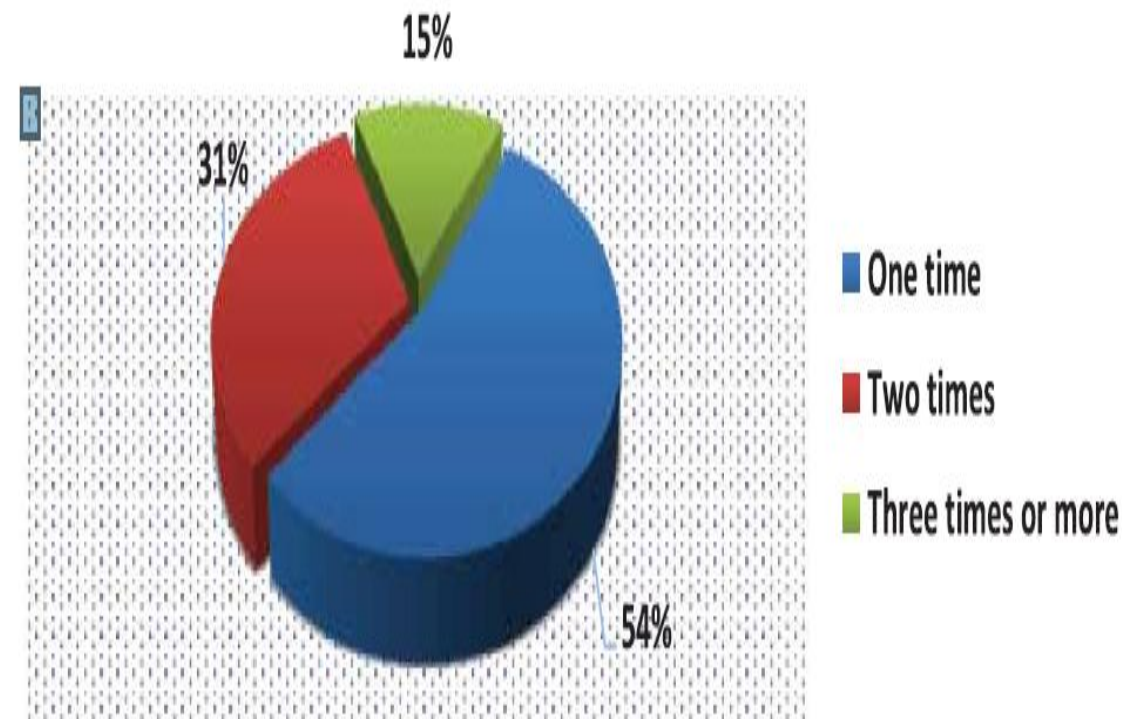
Few Findings of the Bangladesh Disaster Related Statistics 2021

Percentage distribution of affected household by type of disasters



Total -7515977 HH

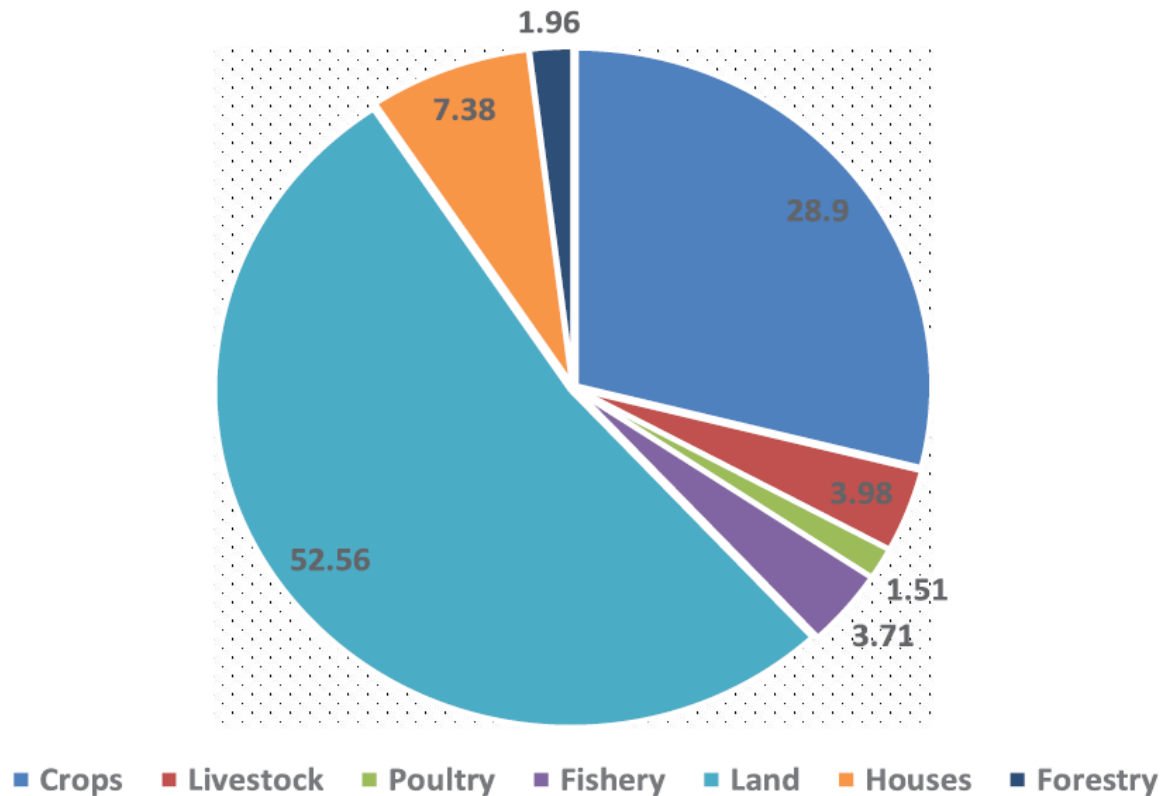
Percentage distribution of households by number of times disaster struck the households during 2015-20



Total -7515977 HH

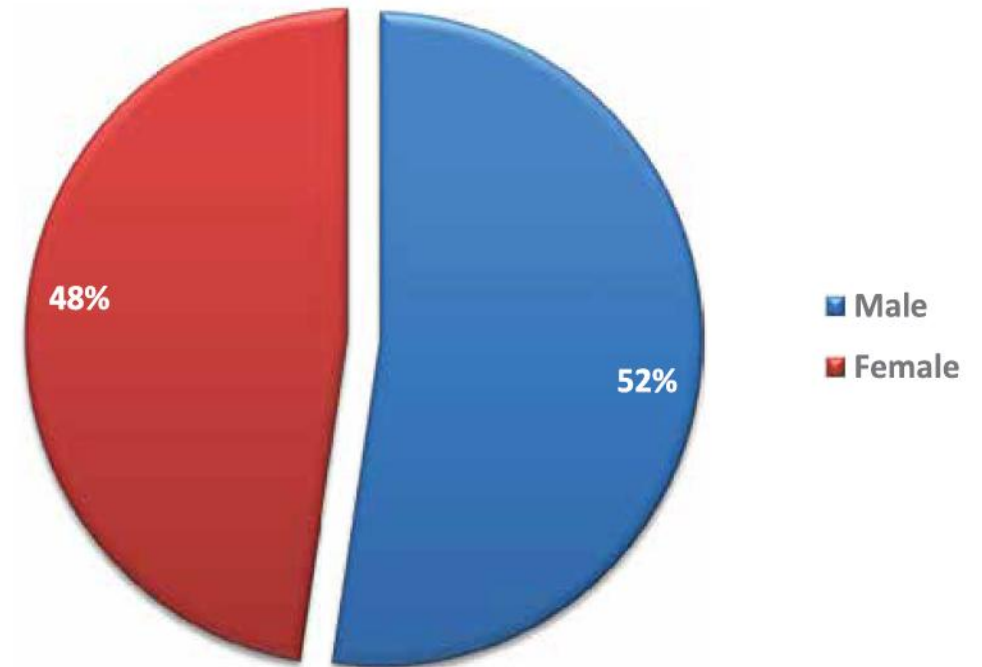
Few Findings of the Bangladesh Disaster related Statistics 2021

Percentage distribution of loss and damage by sector



Total - 1791988 Mill. Tk.

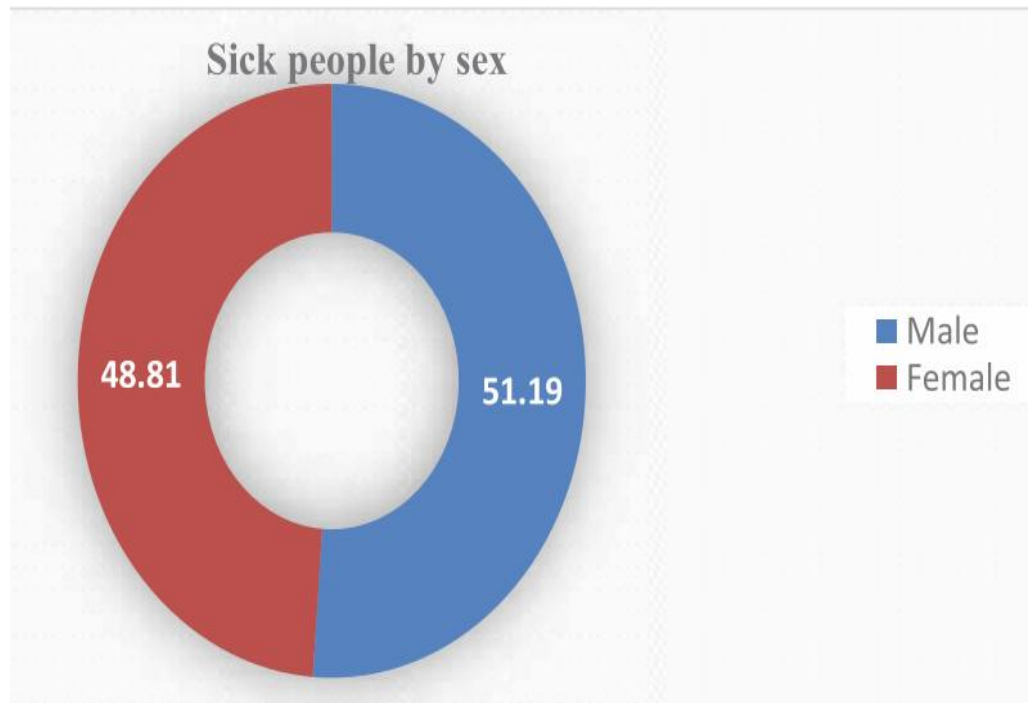
Percentage distribution of injured people by sex



Total - 172426

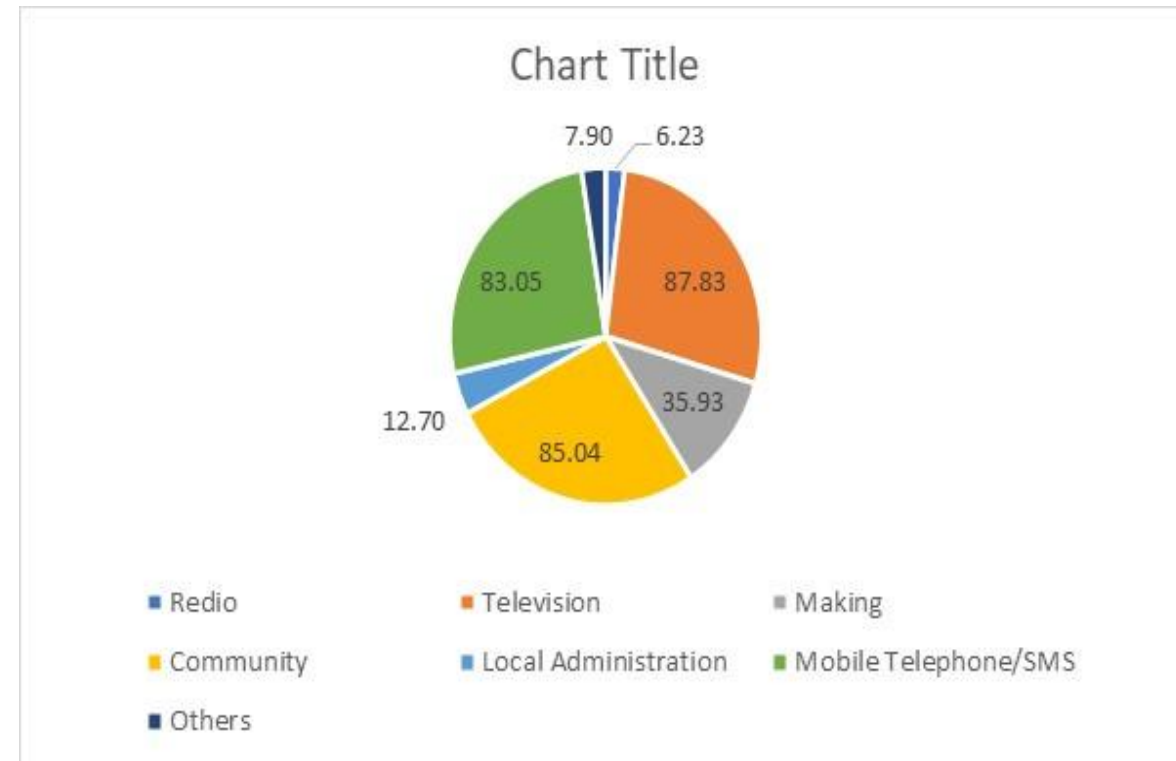
Few Findings of the Bangladesh Disaster related Statistics 2021

Percentage of Sick People by Sex, 2015-20



Total - 2588925

Percentage of households that received early warning by type of media, 2015-20



Total HH - 4031295

BD WebGIS Platform

Environmental Web GIS for Bangladesh

Environmental WebGIS is an Open Source to publish GIS data to web

Anyone can access GIS data and Map through internet without GIS skill

Environmental WebGIS is an application that maintain the centralized GIS database system and where we can view spatial data, tabular data, pdf with exploring all dataset, superimpose Google map, export data and prepare customized map without installing any GIS software

Main Features of the Web Application

- ✓ Metadata Viewer
- ✓ Tabular Data Viewer
- ✓ Map Viewer
- ✓ Document Viewer
- ✓ Admin Panel
- ✓ Sub-Admin Panel for Designated Focal Points
- ✓ Analytics Tool
- ✓ Linkage to Desktop Version
- ✓ Integration with Socio-economic and Demographic Data

ECDS Project, BBS in collaboration with CEGIS has been developed the BD Web GIS using all open sources platform for mobile responsive web application

a) ASP.NET Core (For Application), b) MYSQL (For Database), c) Leaflet JS (For Map Representation), d) Flutter (For Mobile Application) etc.

Purpose of Geospatial (GIS) Data Integration

BD WEBGIS is an internet-based system that allows users to manage, analyze, and share geospatial data and interactive maps through web browsers and mobile devices.

Purpose of the Activity:

- Integrate, compile and publish geospatial data along with socio-economic, demographic and environmental data.
- An environmentally sustainable web GIS application designed to assist policymakers in project planning and decision-making.
- To assist relevant ministries, departments, agencies, academia, researchers in acquiring the skills to securely host, manage, share, visualize, and analyze geospatial data
- Creating and developing mobile responsive web applications using open-source software



Administrative Information



Environment and Natural Resources



Climate and Climate Change



Hazard and Natural Disaster

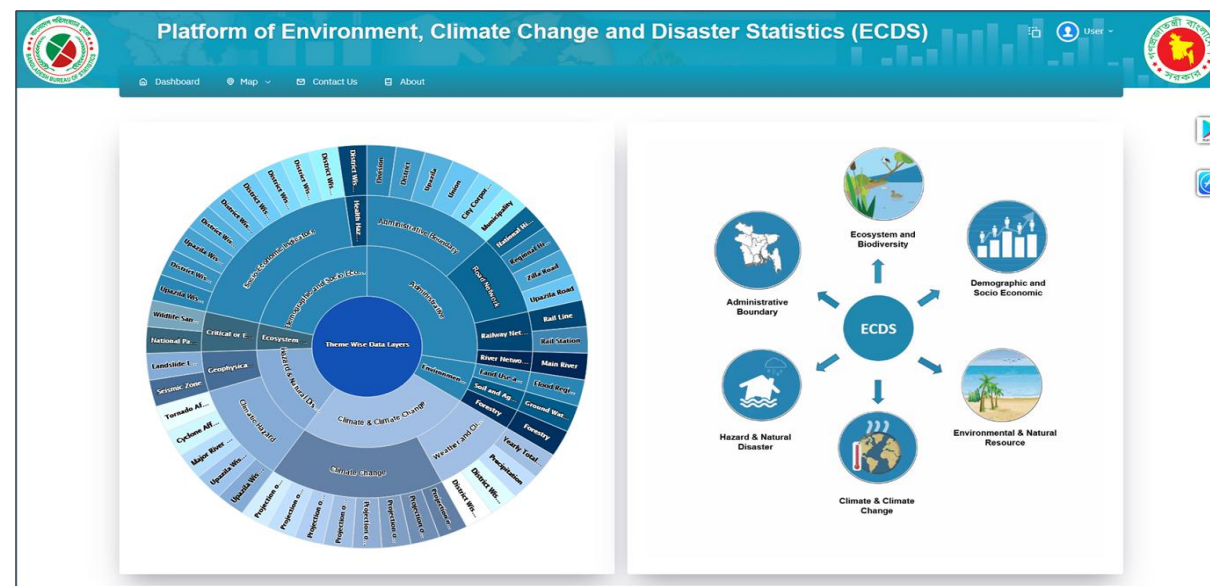


Ecosystem and Biodiversity

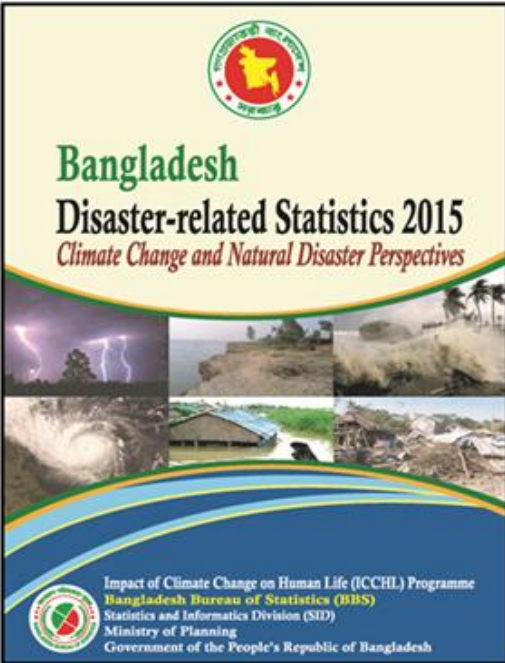


Demographic and Socio-Economic

Thematic Areas

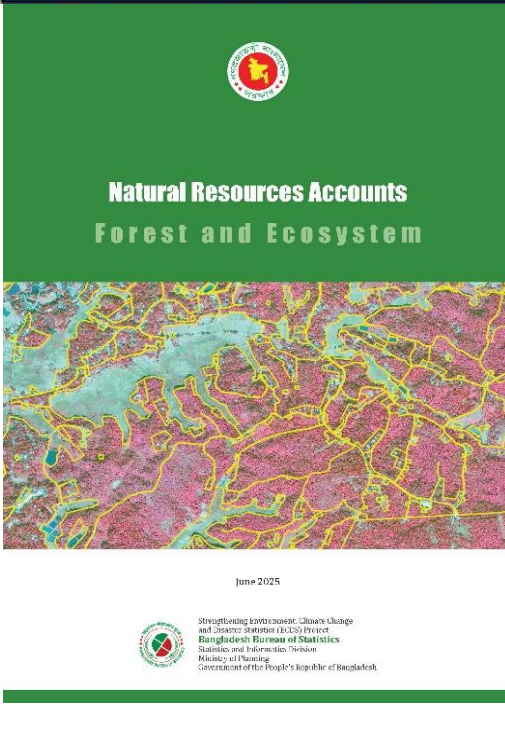


Home Page : <https://www.ecds.bbs.gov.bd/>



Bangladesh
Disaster-related Statistics 2015
Climate Change and Natural Disaster Perspectives

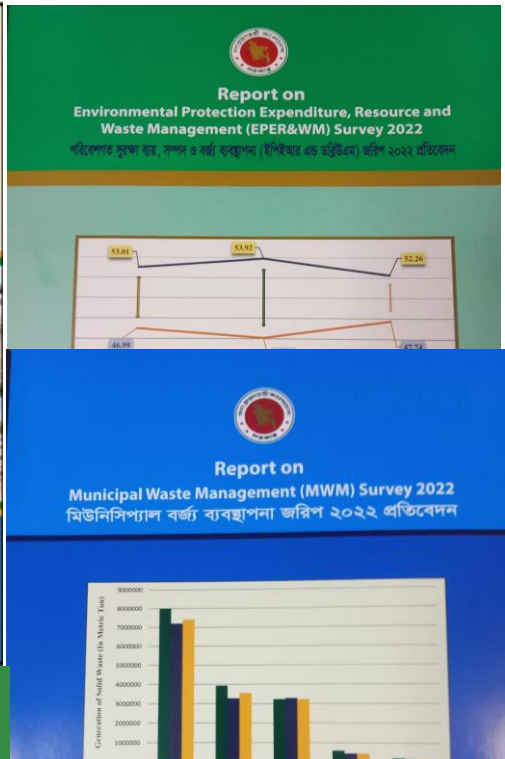
Impact of Climate Change on Human Life (ICCHL) Programme
 Bangladesh Bureau of Statistics (BBS)
 Statistics and Informatics Division (SID)
 Ministry of Planning
 Government of the People's Republic of Bangladesh



Natural Resources Accounts
Forest and Ecosystem

June 2025

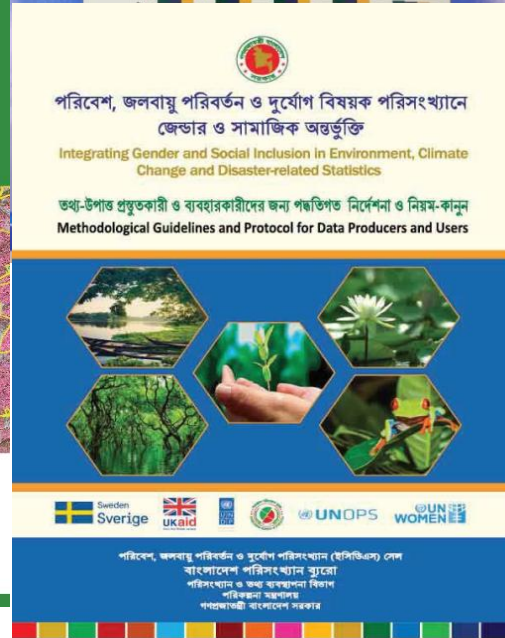
Strengthening Environment, Climate Change and Disaster Statistics (ECDS) Project
 Bangladesh Bureau of Statistics
 Statistics and Informatics Division
 Ministry of Planning
 Government of the People's Republic of Bangladesh



Report on
Environmental Protection Expenditure, Resource and Waste Management (EPER&WM) Survey 2022
 পরিবেশের সুরক্ষা ব্যয়, সম্পদ ও বর্জ্য ব্যবস্থাপনা (ইপিইআর এন্ড ওটিইএম) সার্ভে ২০২২ প্রতিবেদন



Report on
Municipal Waste Management (MWM) Survey 2022
 মিউনিসিপ্যাল বর্জ্য ব্যবস্থাপনা জরিপ ২০২২ প্রতিবেদন

পরিবেশ, জলবায়ু পরিবর্তন ও দুর্যোগ বিষয়ক পরিসংখ্যানে
জেন্ডার ও সামাজিক অন্তর্ভুক্তি
 Integrating Gender and Social Inclusion in Environment, Climate Change and Disaster-related Statistics

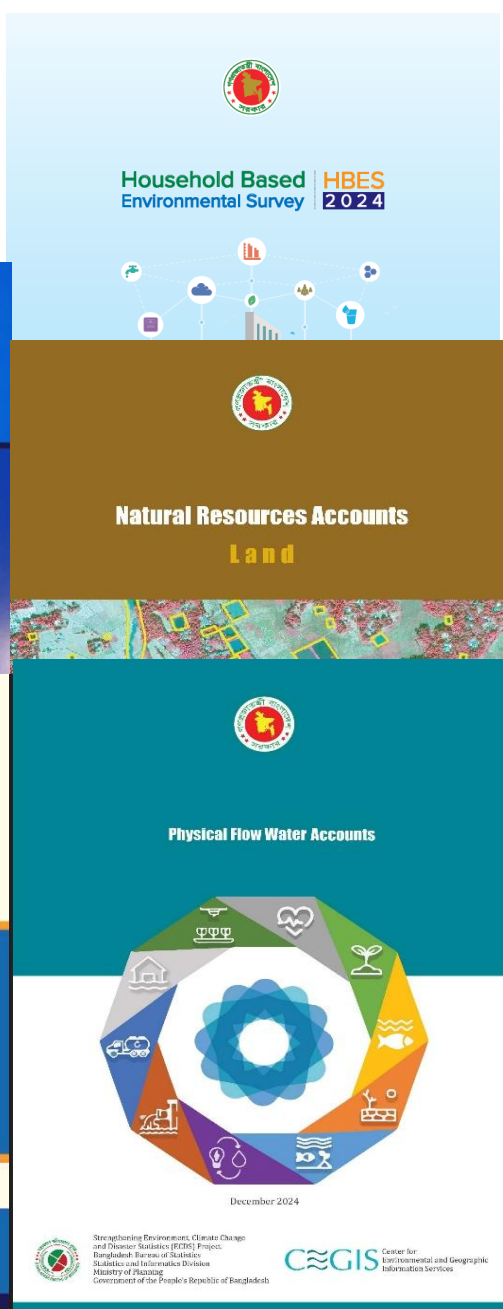
তথ্য-উপাত্ত প্রস্তুতকারী ও ব্যবহারকারীদের জন্য পদ্ধতিগত নির্দেশনা ও নিয়ম-কানুন
 Methodological Guidelines and Protocol for Data Producers and Users



Sweden Sverige UK BIC UNOPS WOMEN

পরিবেশ, জলবায়ু পরিবর্তন ও দুর্যোগ পরিসংখ্যান (ইপিইএস) সেল
 বাংলাদেশ পরিসংখ্যান দ্বারা
 পরিবেশ ও জল ব্যবস্থাপনা বিভাগ
 পরিসংখ্যান বিভাগ
 বাংলাদেশ সরকার

BBS Initiatives



Household Based Environmental Survey HBES 2024



Natural Resources Accounts
Land



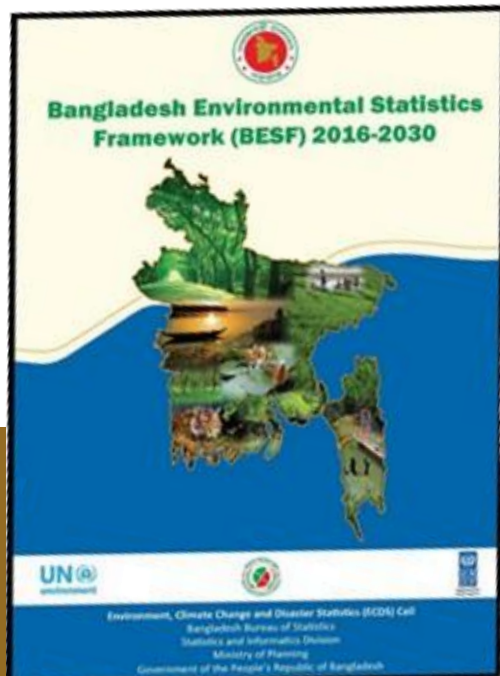
Physical Flow Water Accounts



December 2024

Strengthening Environment, Climate Change and Disaster Statistics (ECDS) Project
 Bangladesh Bureau of Statistics
 Statistics and Informatics Division
 Ministry of Planning
 Government of the People's Republic of Bangladesh

Center for Environmental and Geographic Information Services

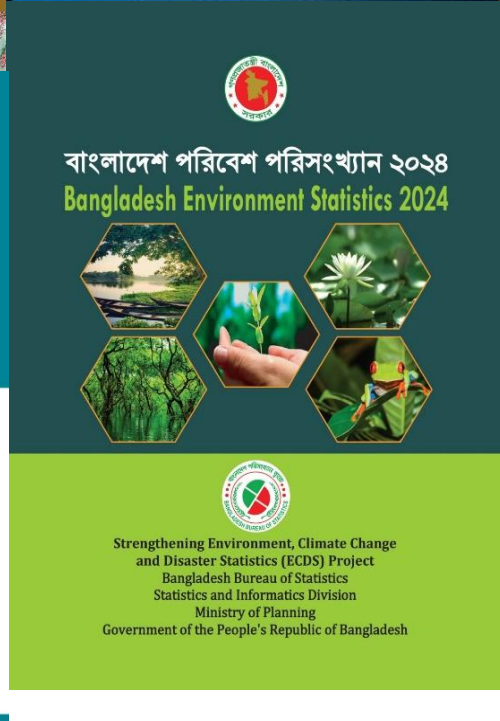


Bangladesh Environmental Statistics Framework (BESF) 2016-2030



UNEP

Environment, Climate Change and Disaster Statistics (ECDS) Cell
 Bangladesh Bureau of Statistics
 Statistics and Informatics Division
 Ministry of Planning
 Government of the People's Republic of Bangladesh



বাংলাদেশ পরিবেশ পরিসংখ্যান ২০২৪
Bangladesh Environment Statistics 2024



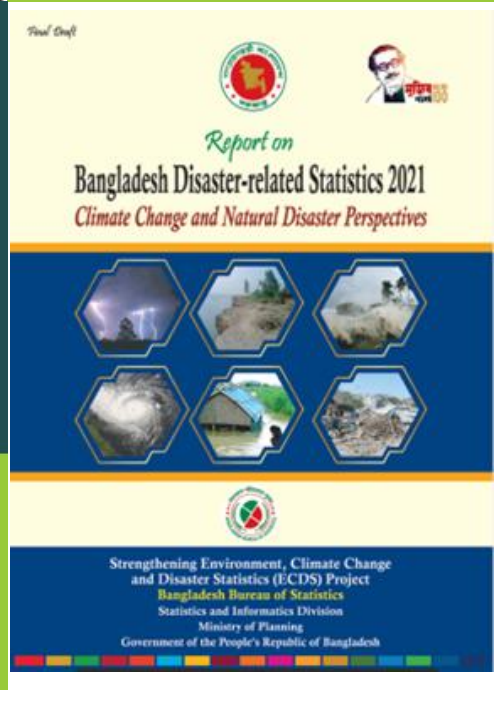
Strengthening Environment, Climate Change and Disaster Statistics (ECDS) Project
 Bangladesh Bureau of Statistics
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বাংলাদেশ পরিবেশ পরিসংখ্যান ২০২০
Bangladesh Environment Statistics 2020



Strengthening Environment, Climate Change and Disaster Statistics (ECDS) Project
 Bangladesh Bureau of Statistics
 Statistics and Informatics Division
 Ministry of Planning
 Government of the People's Republic of Bangladesh



Report on
Bangladesh Disaster-related Statistics 2021
Climate Change and Natural Disaster Perspectives



Strengthening Environment, Climate Change and Disaster Statistics (ECDS) Project
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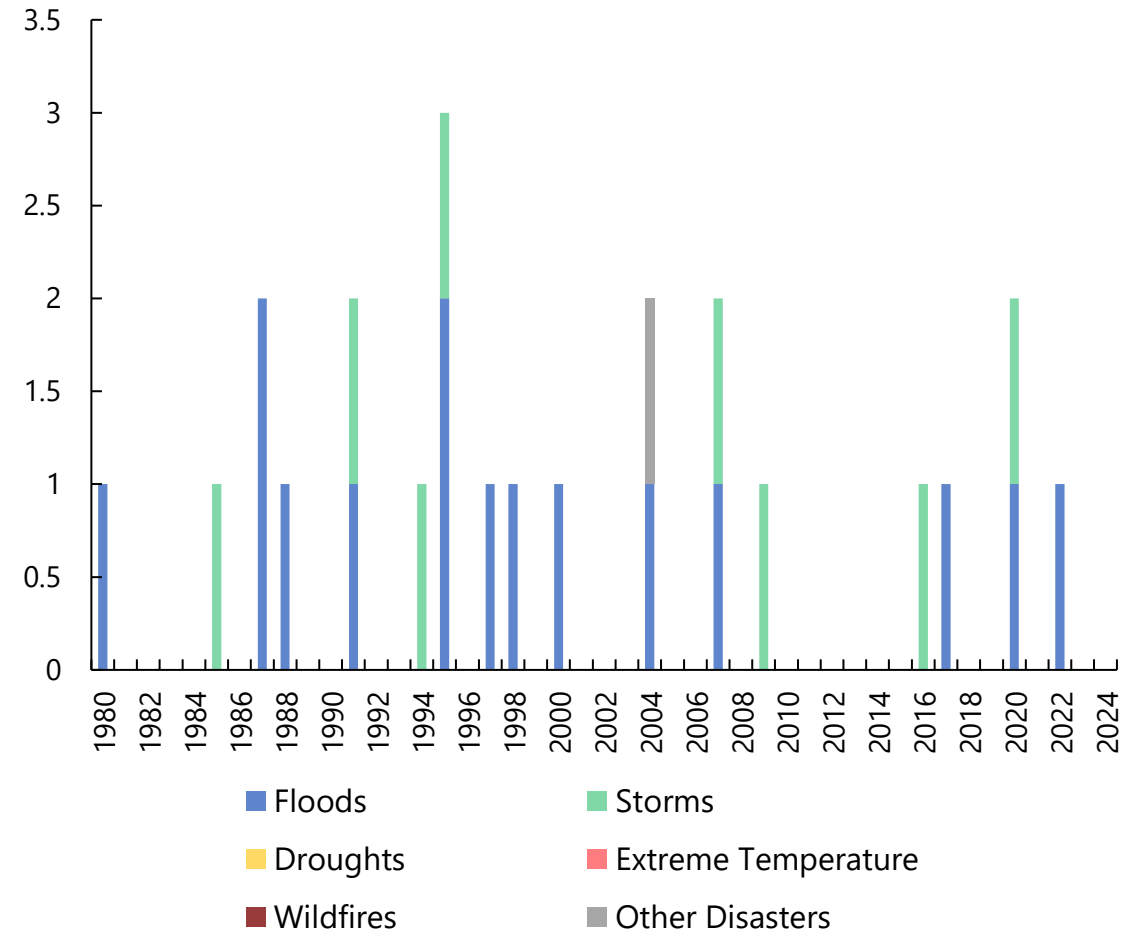
Climate change and natural disaster risks



- Apply Climate Macroeconomic Framework (CMF) Tool
- Global database on different climate scenarios
- Shock scenario assumptions
- Impact analysis

Natural Disasters in Past Years

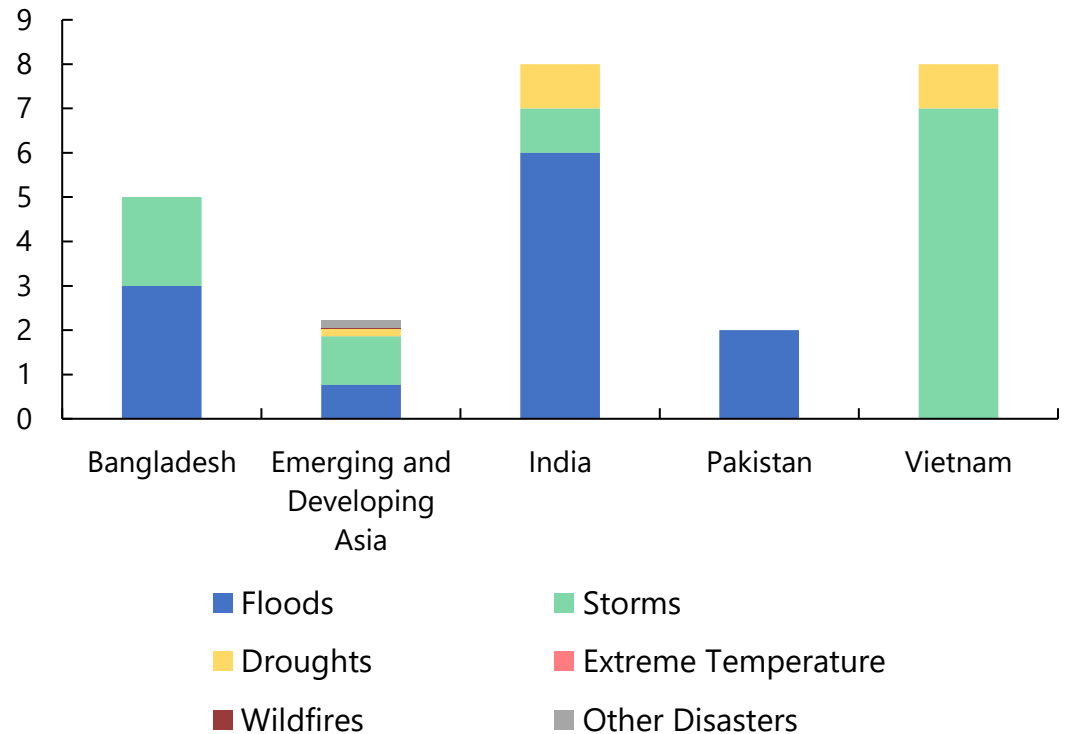
- Floods and Storms are the most frequent natural disasters happen in Bangladesh
- During past 40 years, 13 Floods and 8 storms happened in Bangladesh



Comparison with Neighbouring Countries

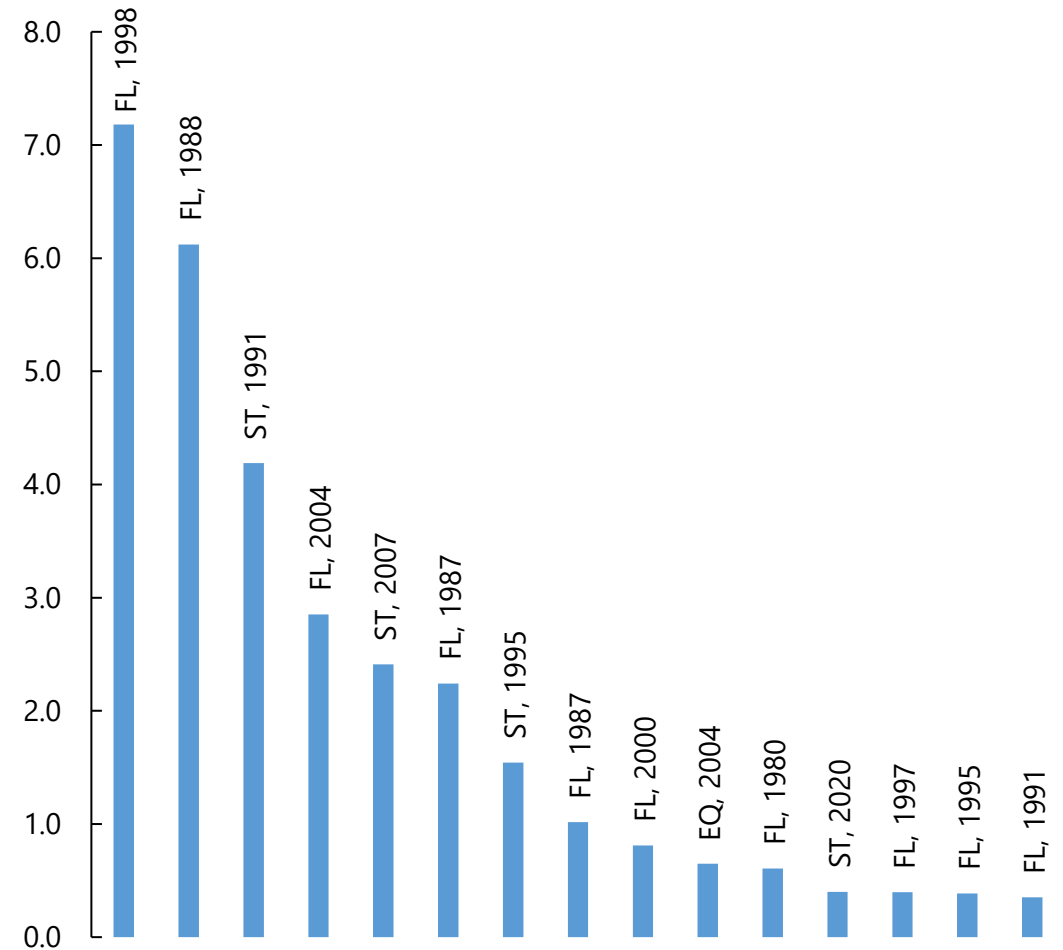
- India and Vietnam are mostly affected by Natural Disasters
- Bangladesh, like India and Pakistan, affected mostly by floods during last 10 years.

Natural Disaster Events by Disaster Type in Selected Countries, 2015-2024



Bangladesh's GDP Loss due to ND

- Most severe damage happened in 1998 flood and followed by 1988 flood.
- On an average, Bangladesh Suffered a loss of 3.88 percent of GDP due to floods



Shock Criteria

Country Characteristics	Input
Pre-disaster fiscal space (pre-ND overall fiscal balance as % GDP)	-2.98
Income group (AE, EMMIEs, LIDC)	Low Income and Developing Country
Small Island	No
NDGAIN Adaptation Capacity (0 = highest, 1 = lowest)	0.78
Disaster Characteristics	Input
Physical damage (% of GDP)	3.88
Type of Disaster (Flood, Storm, Drought, Others)	Flood

- Average Overall fiscal balance has been taken as input
- Average Adaptation Capacity score has been taken
- Average physical damage (%of GDP) due to floods has been considered

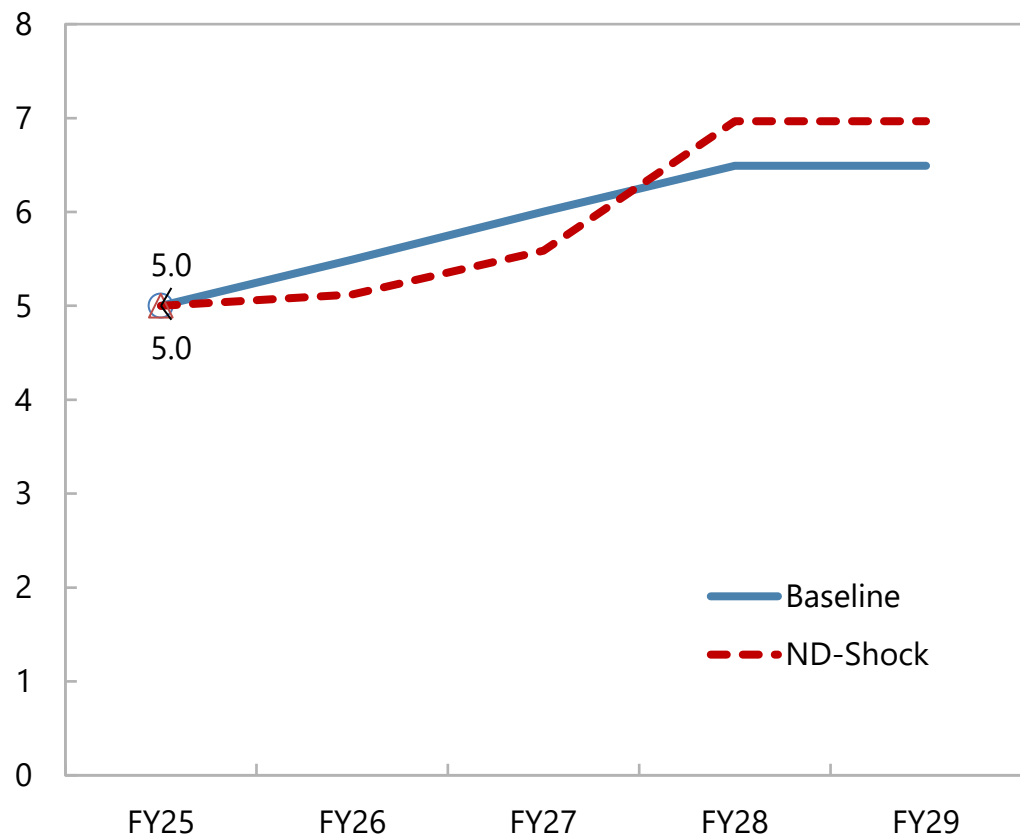
Impact Scenario of ND in next 3 Years

Variables	Mean Estimates (Deviation from trend)		
	t=0	t=1	t=2
Output Growth (%)	-0.48	-0.63	0.34
Gov Expenditure Growth (%)	2.93	-1.05	-2.97
Current Account Balance (% of GDP)	1.34	1.00	0.77
Interest Rate (%)	0.43	-2.04	2.55
Log of Nominal Exchange Rate	0.04	0.01	-0.02

Shock Impact: GDP & Private Consumption

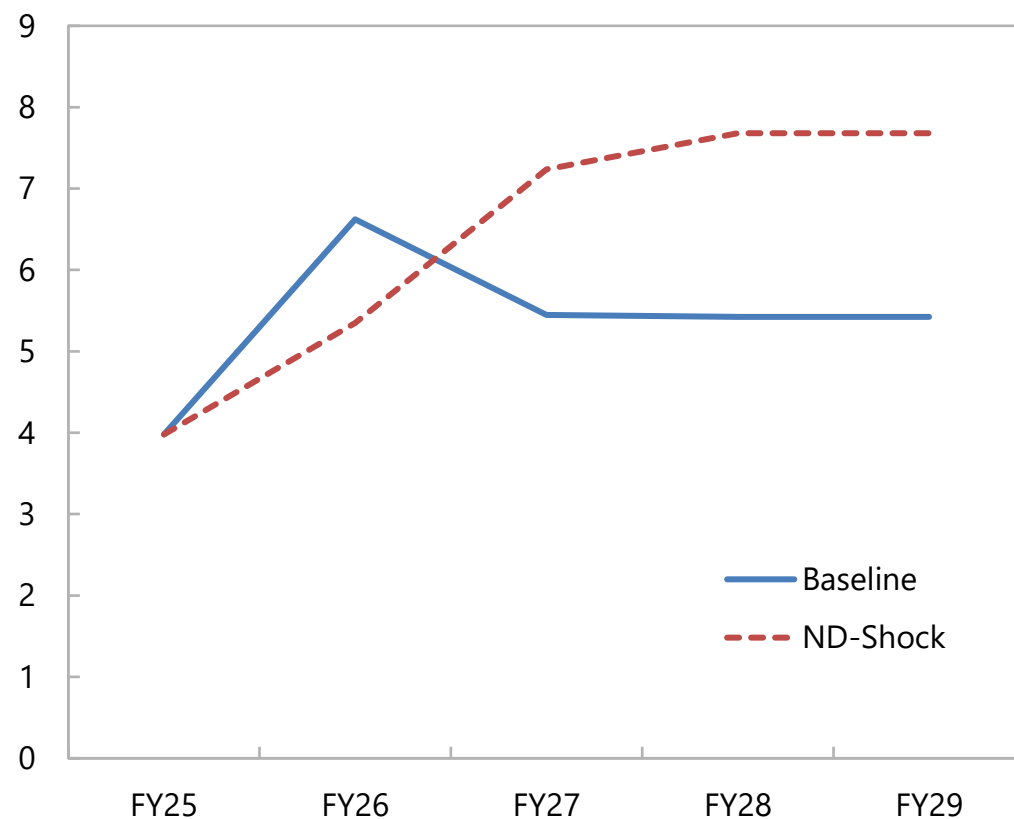
Real GDP

(Percentage growth)



Real Private Consumption

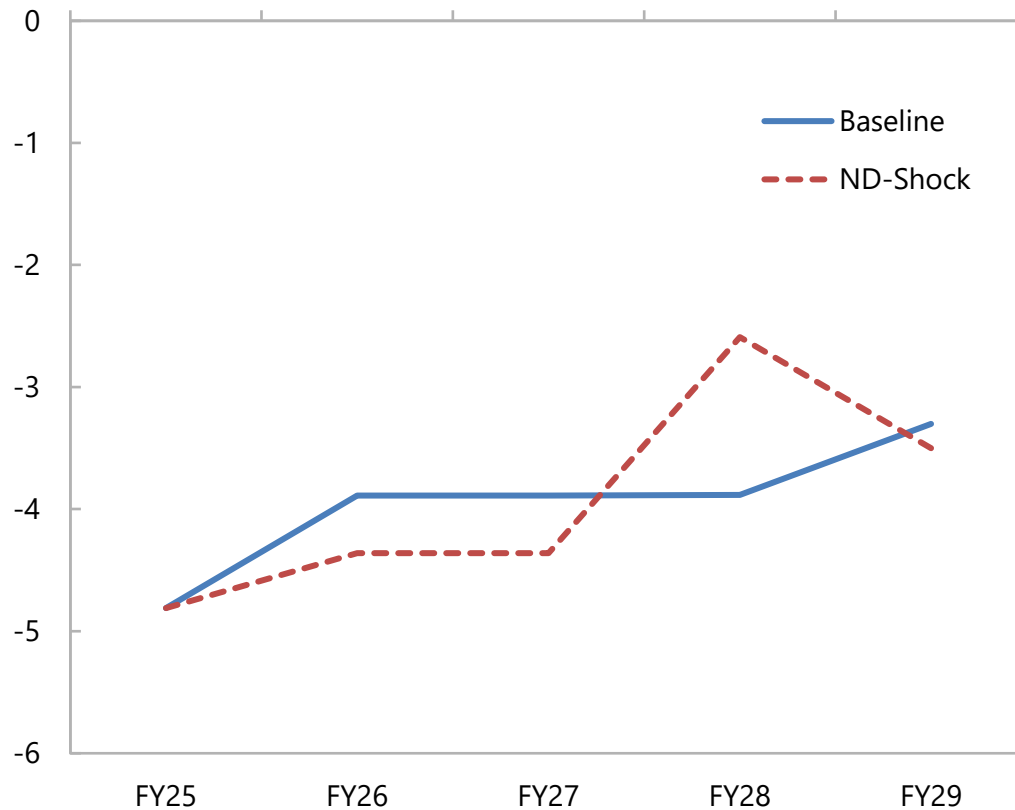
(Percentage growth)



Shock Impact: Overall balance and Public Debt

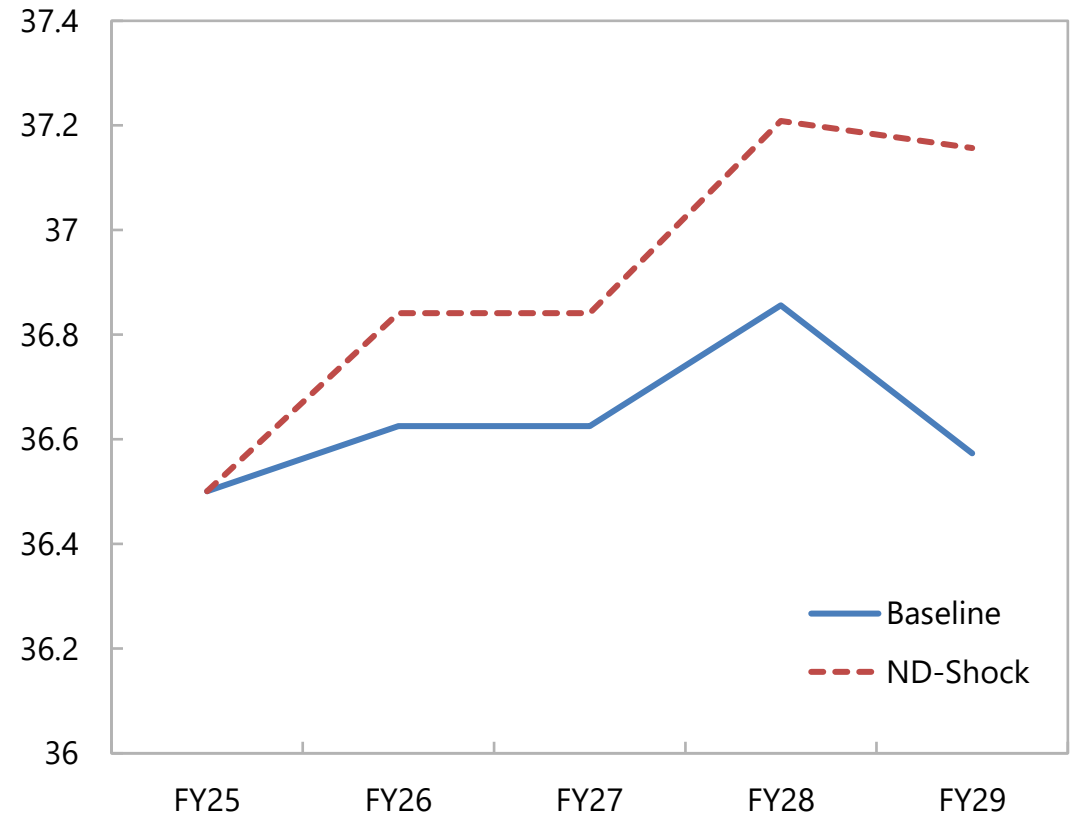
Overall Balance

(GDP Percentage)



Public Debt

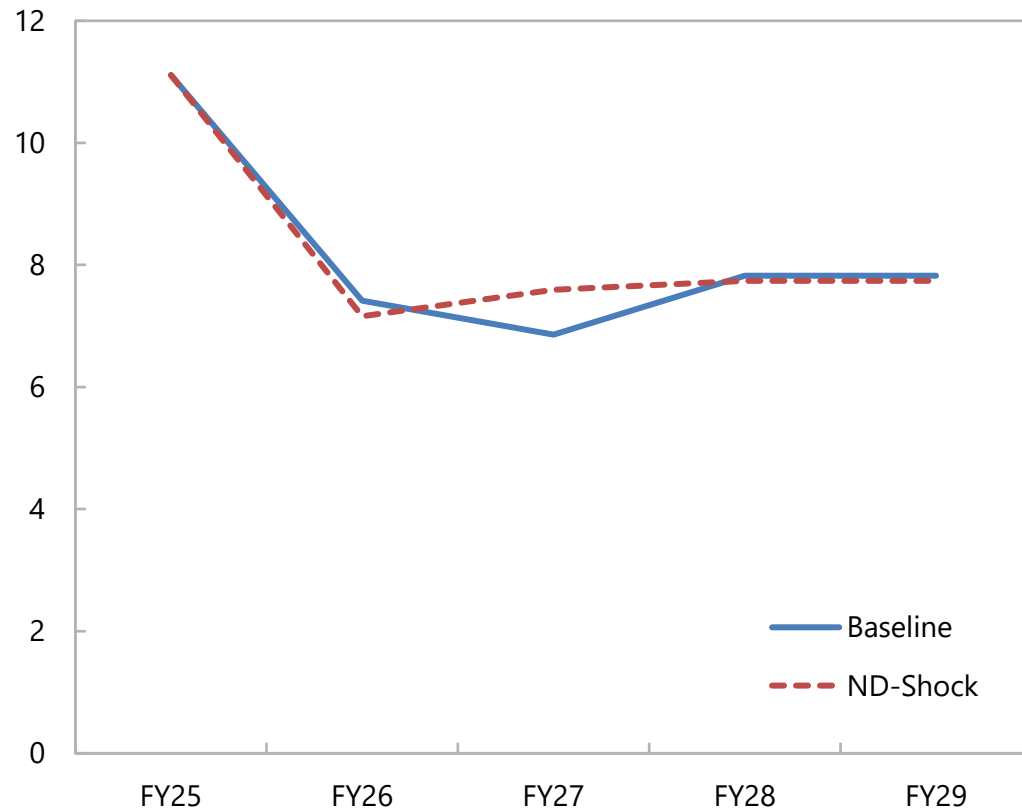
(Percent of GDP)



Shock Impact: Export & Import

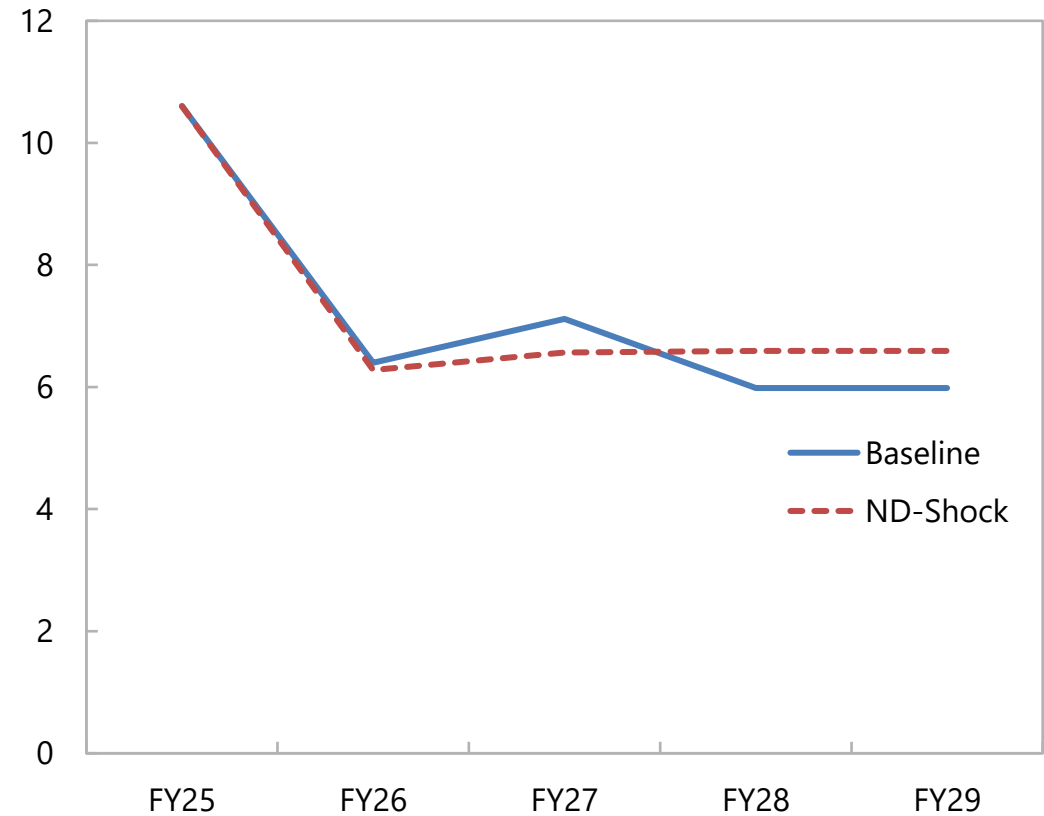
Real Exports

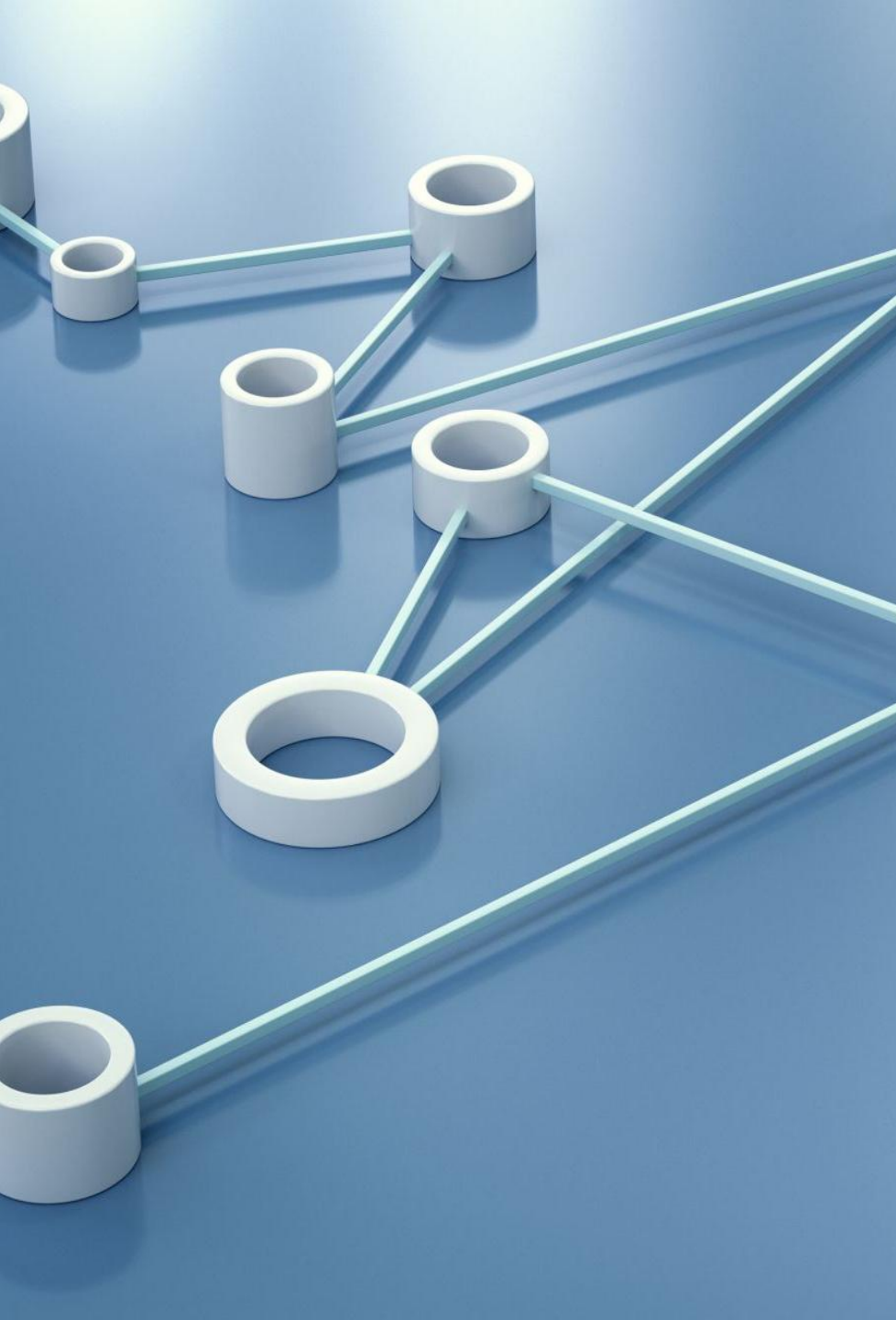
(Percentage growth)



Real Imports

(Percentage growth)





Challenges

- Lack of coordination among the departments;
- No centralized dynamic database;
- Complex accountability among the departments;
- Slow progress in integration in national planning and development process
- Lack of data availability;
- Lack of Skilled Manpower;
- Resource Constraints, etc.

Way Forward

- Central Database;
- Coordination and sharing of the data;
- Incorporation in national planning process;
- Clear responsibility and accountability;
- Quality data;
- Skilled Manpower; and
- Resource Mobilization.

The background features three overlapping circles in a light blue shade, arranged horizontally. A central white horizontal band spans the width of the image, passing through the middle of the circles. The text "Thank You" is centered within this white band.

Thank You