

# Strategies for Effective Spatial Planning in Bangladesh

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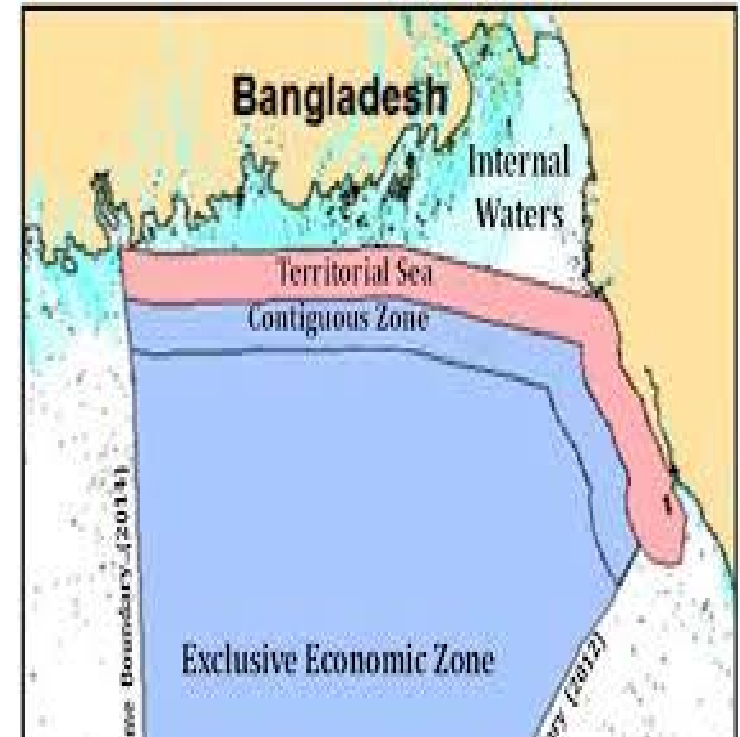
# Outline

- ❖ Introduction
- ❖ Urbanization of Bangladesh
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- ❖ Brief on spatial plan
- ❖ Examples of best practices like Dhaka, Coxbazar, Chottogram, Khulna following SP Planning, DAP
- ❖ Alignment of Spatial Planning with SDG-11
- ❖ Challenges to implement spatial plan to achieve SDG goal-11 in Bangladesh.
- ❖ Conclusion.



# Introduction

- Spatial Planning is a **legal and institutional planning system** that guides **planned land use, urban growth, infrastructure development, environmental protection, and climate resilience** across Bangladesh.





# Urbanization of Bangladesh

## Urbanization Snapshot

- 38% urban population;
- projected >50% by 2040
- Dhaka among fastest-growing megacities
- Pressure on land, housing, transport
- High climate vulnerability

## Urbanization Challenges

- Rapid urbanization exceeds infrastructure capacity
- Housing shortages
- Weak land-use regulation
- Limited basic services



# Spatial Planning Framework in Bangladesh

- National: Perspective Plan 2041, Delta Plan 2100, Five-Year Plans
- Regional: Structure Plans
- Local: Detailed Area Plans (DAPs)/Action Plan
- Project Level: Housing, transport, industrial zones

# Weakness and Core Priorities of the System



## **Weakness:**

- Implementation gaps
- Institutional fragmentation
- Weak zoning enforcement
- Limited local resources
- Climate impacts

## **• Core Priorities**

- Strengthen regional bodies
- Integrate climate & risk data
- Enhance local capacity
- Enforce land-use rules
  - adequate housing
  - land optimization
  - Enhances resilience and basic services

## Special Notions in Spatial Planning Project:

- Used 4-bands 3-Dimensional satellite Image
- Digital Elevation Model for generating real time surface
- Generating the real-time drainage system in the project area
- Using Participatory Rapid Appraisal (PRA) approach for collecting primary data
- Ensuring participation from woman and children in the project area
- Delineating the social spaces within the Municipality area
- Generating Geo-Physical information through bore-hole survey up to 30m depth
- Conducting socio-economic questions survey in urban & rural area
- Conducting transportation survey for 9 locations



# Peoples Participation

Participatory  
Rapid Appraisal  
(PRA)

Paurashava  
&  
10 Union

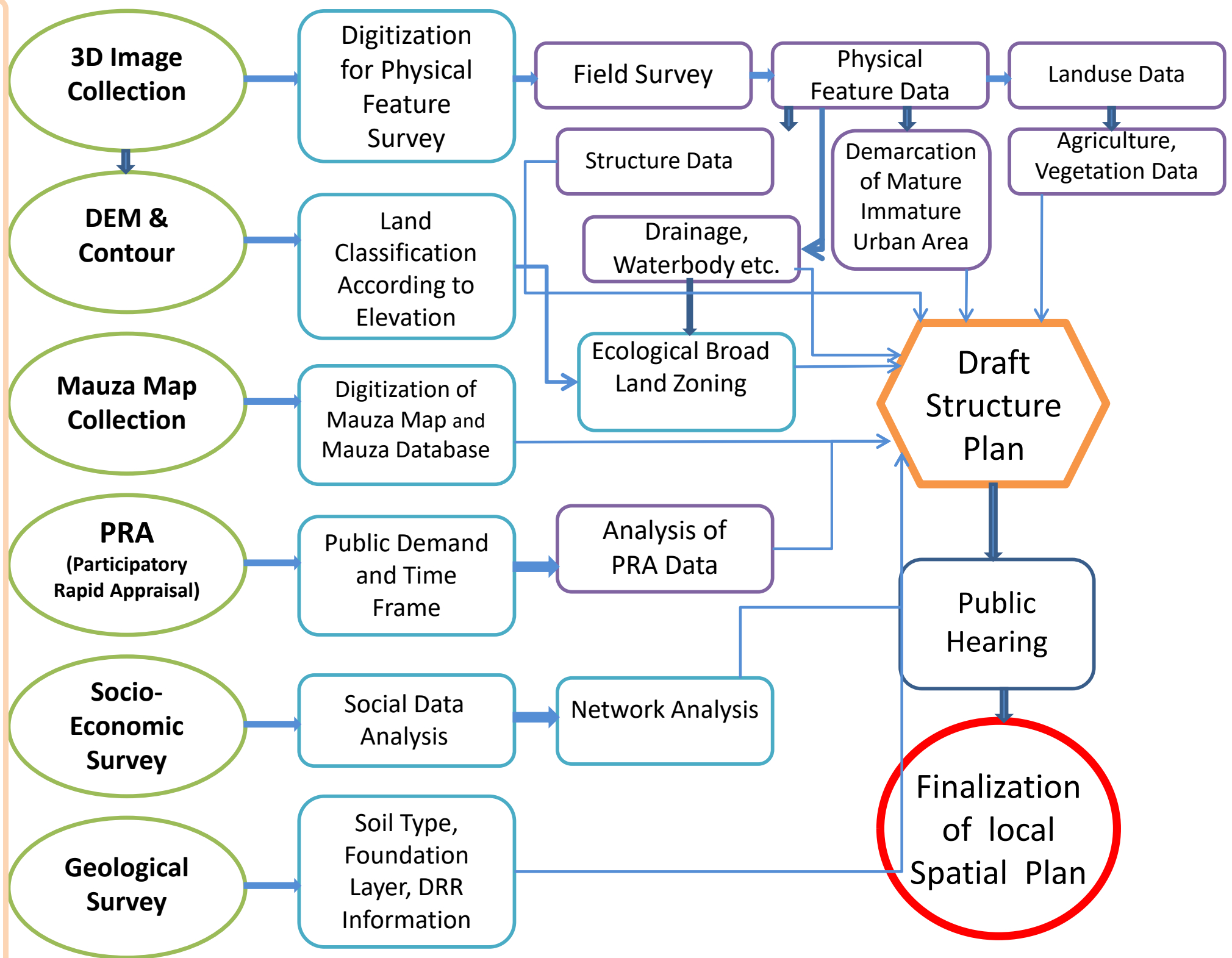
PRA Sessions with  
Different  
Personnel

Mayor, Councillor,  
Chamber of  
Commerce, Civil  
Society, Journalists,  
Bus Driver, Slum  
People, Minority  
Community.

Participant from  
all stakeholder



# Total Structure Plan Procedure for local level Spatial Planplan



# Steps of Local Spatial Plan Preparation

1	<b>Image Collection</b>
2	<b>Digitize &amp; Field Check</b>
3	<b>DEM</b>
4	<b>Other Survey (Physical feature, Transport, Social, Drainage etc.)</b>
5	<b>Mauza Map collection and Digitization</b>
6	<b>PRA</b>
7	<b>Agricultural Map</b>
8	<b>Geological Map</b>
9	<b>Soil Map</b>
10	<b>Tree</b>
11	<b>Urban Road</b>
12	<b>Eco Sensitive Land</b>
13	<b>Strategic Environmental Assessment</b>
14	<b>Network Analysis</b>
15	<b>Drainage Map</b>
16	<b>Fire Map</b>
17	<b>Crime Map</b>
18	<b>Ecological Sensitive Map</b>
19	<b>Regional Road Network</b>
20	<b>Regional Growth Center</b>
21	<b>Draft Structure Plan</b>



# Spatial Planning Efforts of Bangladesh

- 1. Housing and Slum Upgrading (SDG 11.1):** New town projects (e.g., Purbachal), land-use regulations, and DAP measures aim to reduce informal settlement pressure and improve access to serviced land.
- 2. Sustainable Transport (SDG 11.2):** Mass transit systems (MRT/BRT), identified road hierarchies, and transit-oriented development (TOD) principles in structure plans support accessible and low-emission mobility.
- 3. Urban Resilience and Disaster Risk Reduction (SDG 11.b):** Integration of flood risk, sea-level rise, and drainage considerations, particularly through the Delta Plan and climate-responsive spatial Plans.
- 4. Inclusive Public Spaces (SDG 11.7):** Structure Plans designate open spaces, community facilities, and pedestrian environments to enhance urban livability.

# Baseline for Spatial Plan

- It is implemented under:
- **Town Improvement Act, 1953**
- **DAP Guidelines (2022)**
- **Structure Plan, Urban Area Plan (UAP), Detailed Area Plan (DAP)**
- **Linked with National Development Plans & SDGs**

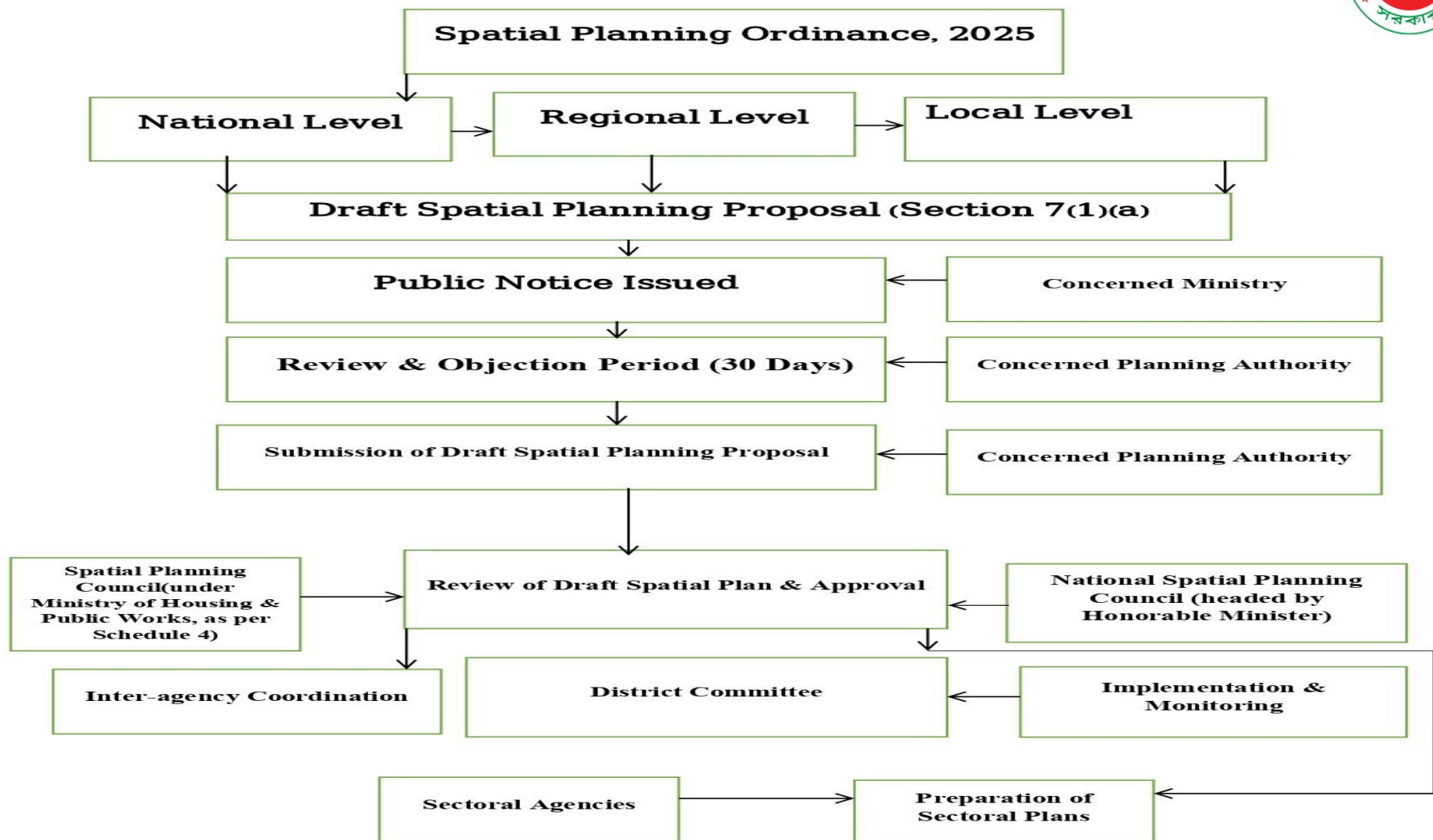




- **Objectives of Spatial Planning Ordinance:**
  - **Ensure planned urban and regional development**
  - **Control unplanned construction and land-use change**
  - **Protect water bodies, wetlands, flood flow zones**
  - **Support climate-resilient and sustainable cities**
  - **Align local plans with SDGs and national priorities**
- 
- **Key Planning Levels in Bangladesh**
  - **National Level**
  - **Regional Level**
  - **City / Metropolitan Level**
  - **Local / Ward Level (DAP)**



# Flow chart on SP Planning of Bangladesh





# Alignment of Spatial Plan with SDG-11

- **SDG-11: Make cities inclusive, safe, resilient, and sustainable** is directly linked to spatial planning through the following targets:
- **Sustainable urbanization & planning:** The Cox's Bazar master plan emphasizes planned land use, infrastructure, and services that aim to reduce unplanned development.
- **Resilience to disasters:** Incorporating disaster risk management in coastal urban planning supports SDG-11's resilience focus.





- **Environmental protection & waste management:** Coastal conservation and waste/drainage systems support healthy urban environments.
- **Access to public services:** Planned transport and utilities contribute toward safe, accessible, and sustainable cities.
- Thus, spatial planning serves as an institutional mechanism to mainstream SDG-11 within local and regional development frameworks.





## Role of Spatial Planning in Achieving SDGs

SDG	Contribution through Spatial Planning
SDG 11	Planned cities, housing, transport, public space
SDG 13	Climate resilience, flood & coastal zoning
SDG 6	Protection of rivers, canals, wetlands
SDG 9	Integrated infrastructure & economic zones
SDG 15	Conservation of green areas & ecosystems
SDG 8	Planned industrial, tourism & economic growth



# Plan-wise SDG Alignment

- **Perspective Plan & Five Year Plan**  
→ National SDG framework
- **Structure Plan**  
→ Long-term sustainable land use & growth
- **Urban Area Plan (UAP)**  
→ Infrastructure, transport, environment
- **DAP**  
→ Plot-level control, zoning, livability



# Implementing Agencies

- RAJUK
- CDA (Chattogram Development Authority)
- KDA (Khulna Development Authority)
- Cox's Bazar Development Authority (CBD A)



# Dhaka (RAJUK Area)

- **DAP 2022–2035**
- Flood Flow Zone protection
- TOD-based land use planning
- Mixed-use zoning & density control
- Strong alignment with **SDG 11 & SDG 13**

# Cox's Bazar

- Tourism-based spatial zoning
- Coastal and disaster risk-sensitive planning
- Environmental conservation of beach & hills
- Integration of refugee-affected areas



# Chattogram

- Port-oriented spatial planning
- Industrial and logistics zoning
- Hill cutting regulation
- Transport corridor-based development



# Khulna

- Climate-resilient spatial planning
- Waterlogging and drainage-based zoning
- Wetland and river protection
- Alignment with **Bangladesh Delta Plan 2100**





# Key Challenges in Implementing Spatial Plans for Achieving SDG-11

- **Rapid Urbanization and Informal Growth:** Urban expansion outpaces the supply of planned, serviced land—fueling informal settlements and unregulated land conversion.
- **Institutional Fragmentation:** Overlapping mandates among agencies (RAJUK, City Corporations, LGD, Planning Commission, MoWR, MoHPW) weaken coordinated implementation.
- **Land Governance Issues:** Disputed tenure, unclear land records, and slow land acquisition complicate planned development.
- **Financing Constraints:** Municipalities lack adequate revenue and financing tools (e.g., land value capture, municipal bonds) to deliver large-scale infrastructure.



# Key Challenges in Implementing Spatial Plans for Achieving SDG-11

- **Climate and Hazard Exposure:** Floodplains, low-lying coasts, and cyclone-prone regions face high vulnerability, making poorly sited development risky and expensive to retrofit.
- **Data and Monitoring Limitations:** Insufficient geospatial integration, outdated cadastral data, and weak SDG-11 indicator tracking hinder adaptive planning.
- **Local Government Capacity Gaps:** Many local authorities lack trained personnel and resources to translate structure plans into implementable local regulations and projects.

# Conclusion

- **Spatial Planning Ordinance ensures planned, sustainable, and climate-resilient development**
- **DAP is the key implementation tool at local level**
- **Strong linkage with SDGs, Delta Plan 2100, and national policies**
- **Cities like Dhaka, Cox's Bazar, Chattogram, and Khulna demonstrate good practices**
- **Scaling up SP Planning is essential for Smart & Sustainable Bangladesh**



# Thanks All