Governing the Urban Wetlands: A Comparative Case Study of Ecology, Ecosystem Services and Government Policy

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WETLANDS POLICY : MAIN TREND SETTERS

Ramsar Convention (1971)

- Main global trend-setter for national level policies

Bonn Convention on Migratory Species (1972)

- Major practical implication on wetland governance, through shore-bird networks

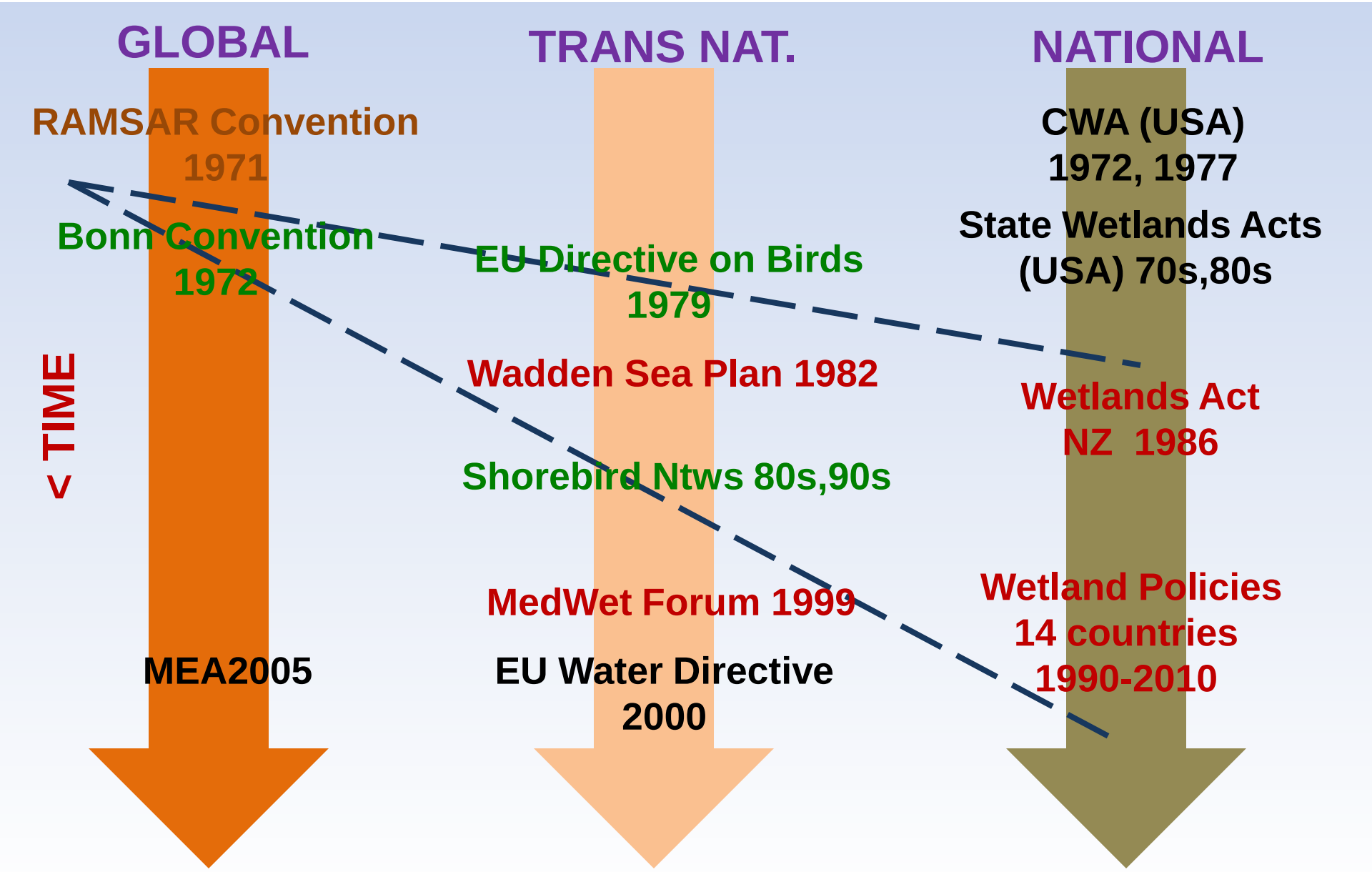
World Heritage Convention and UNHESCO Biosphere Program

- Lesser impact than Ramsar or Bonn. Effective in Protected Area wetlands

Major transnational initiatives

- Wadden Sea Plan (1982), Med-Wet forum (1991), Great Lakes Wetlands Initiative (1994)

WETLANDS POLICY : BEYOND RAMSAR



Wetlands Policy : Where are urban wetlands?

- Less than 2% of wetlands literature covers urban wetlands
- Comprehensive studies on urban wetlands policy and governance is rare or nonexistent
- No global policy directive on urban wetlands to date
- Ramsar adopted a resolution on urban wetlands in the 10th CoP (R X.27)
- Urban wetlands are not specifically mentioned in most of the existing 15 national wetlands policies

Urban Wetlands Policy : Analysis Criteria

Policy Subsystem

- 1. Main actors 2. Institutions 3. Organization of govt. agencies *(Sabatier & Jenkins-smith, 1999)*

Nature of Formal Institutions (Laws & Regulations)

- 4. Coordination 5. Delegation 6. Property rights *(Alston et al, 1996; Adger and Luttrel, 2000)*

Policy Process

- 7. Valuing of ecosystem services 8. Stakeholder access 9. Information flow *(Turner et al, 2000; Adger and Luttrel, 2000)*

THE CASE STUDIES

Case	Location	Area	Down-stream	Wetland type	RAMSAR status
New York Tidal Wetlands	Long Island, Jamaica bay USA	~2000 ha	Hudson Bay	Tidal (Estuarine)	No
Eastern Kolkata Wetlands	Lower Gangetic Delta: INDIA	12,500 ha	Bay of Bengal	Tropical Marsh (Palustirne)	YES (2002)
Colombo Flood Detention Area	Colombo SRI LANKA	500 ha	Kelani River	Tropical Marsh (Palustirne)	NO
Yatsuhigata Mud Flat	Tokyo JAPAN	40 ha	Tokyo Bay	Tidal Flat (Estuarine)	YES (1998)


INMAGINE
Yatsuhigata


East Kolkata


New York


Colombo

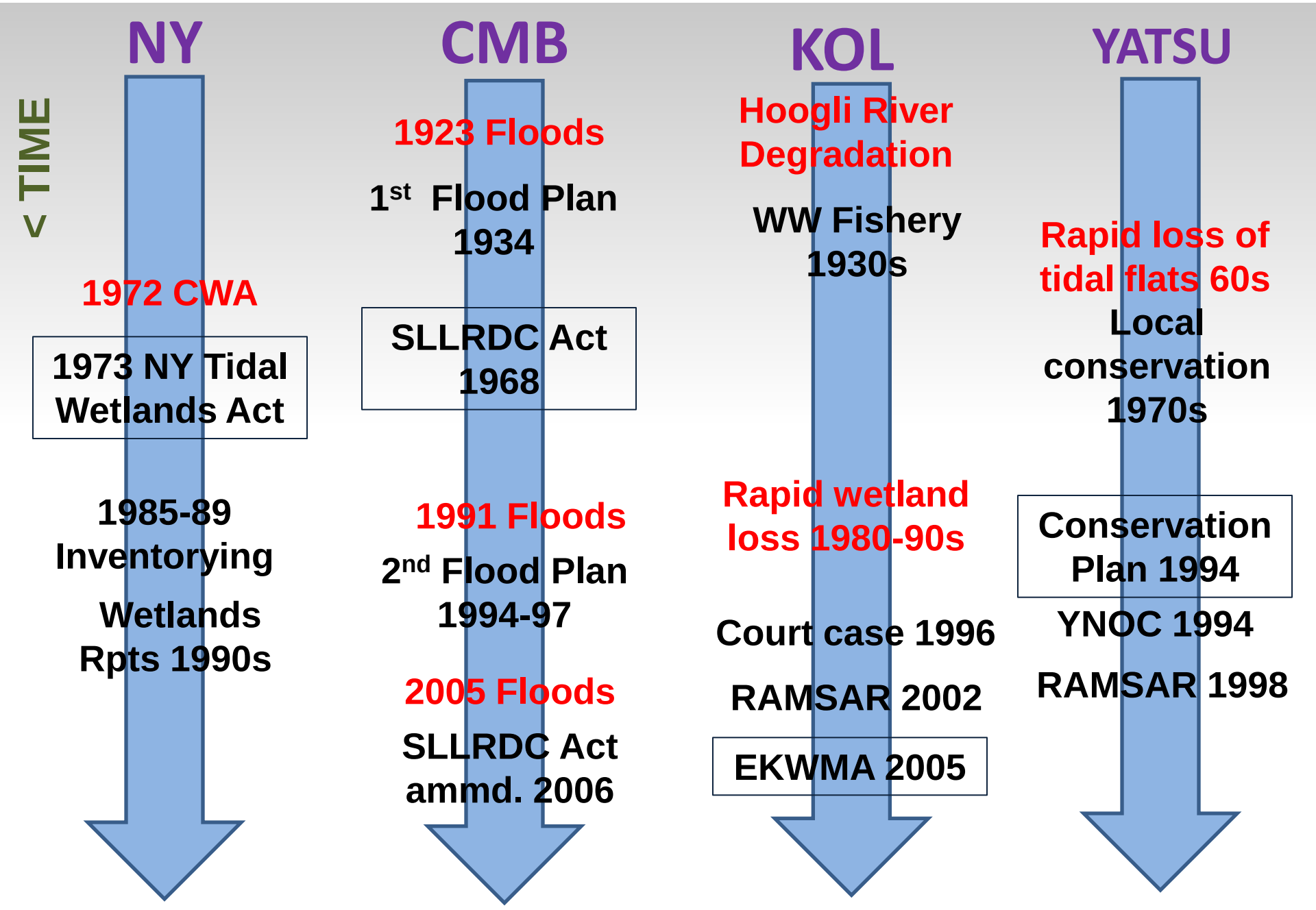
Some Characteristics

	Main State Actor (s)	Foci of programs
NY	Department of Nature Conservation NY	*Primary :* Waterways conservation *Secondary :* Recreational services.
KOL	East Kolkata Wetland Mgt. Authority	*Primary :* Drainage improvement Fish and crop productivity *Secondary :* Ecological restoration
CMB	Land Reclamation Board	*Primary :* Flood control *Secondary :* Waterways conservation
Yatsu	Env. Agency Narshino City	*Primary :* Nature Conservation *Secondary :* Environmental Education

Some Characteristics

	Key State Actors	Land Tenure	Formality of Institutions	Integrated decision-making	Community particip'n
NY	**1**	Mainly private	**Strictly formal**	Moderate	Poor
KOL	**3**	Mainly private	Mixed	**Strong**	**Moderate**
CMB	**1**	Mixed	**Strictly formal**	**Poor**	**Poor**
Yatsu	2	Totally state	Mainly Formal	**Poor**	Moderate

Timeline of Institutional Development



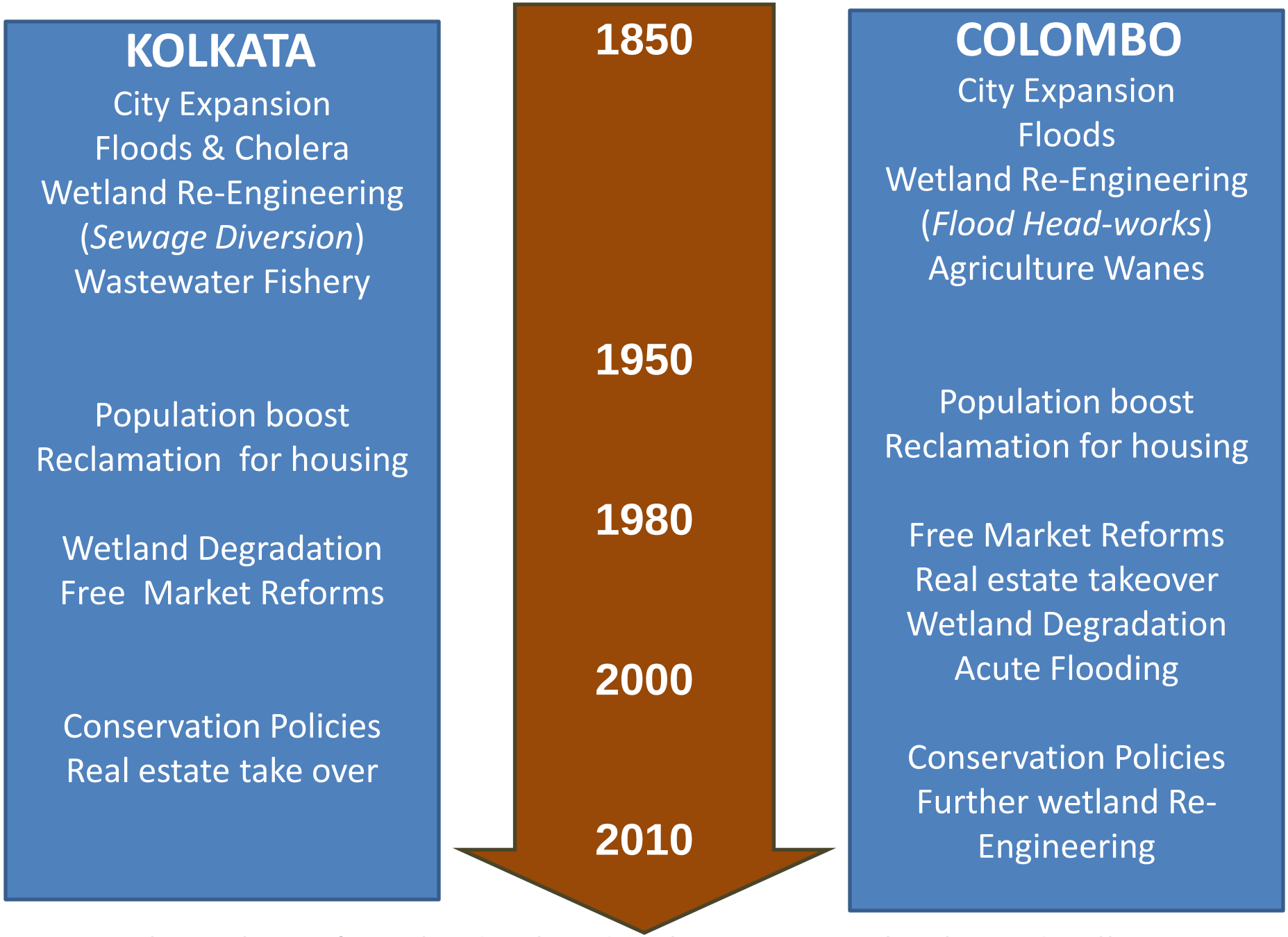
Main Observations

Common characteristics of the cases

- Very diverse policy instruments and regulations
- Policy development influenced both by local problems and global/national trends
- Influence of Ramsar is mixed: Not the main trend setter
- Institutional arrangements are mainly formal
- Single agency emerged prominent as regimes matured
- Partnerships are common, power delegation is rare
- Strong use of scientific information in policy formulation and implementation
- Community participation in decision-making is limited

Kolkata and Colombo : Why the difference?

- Urban wetlands in Kolkata and Colombo have same wetland type
- Similar socio-economic environment and political history
- Yet the institutional arrangements are very different in the outlook
- Why the difference?



Chronology of wetland policy development in Colombo and Kolkata

The Policy Outcomes

Colombo

High rate of wetland conversion / modification

No marketable wetland products or community use

High rate of ***marsh to shrub*** transformation (44% - 1980 to 2008)

1981

1994

2008

The Policy Outcomes

Kolkata

Moderate rate of wetland conversion

Good market for wetland products (Fish & Vegetables)

Strong community use

Moderate organic pollution but ecologically stable

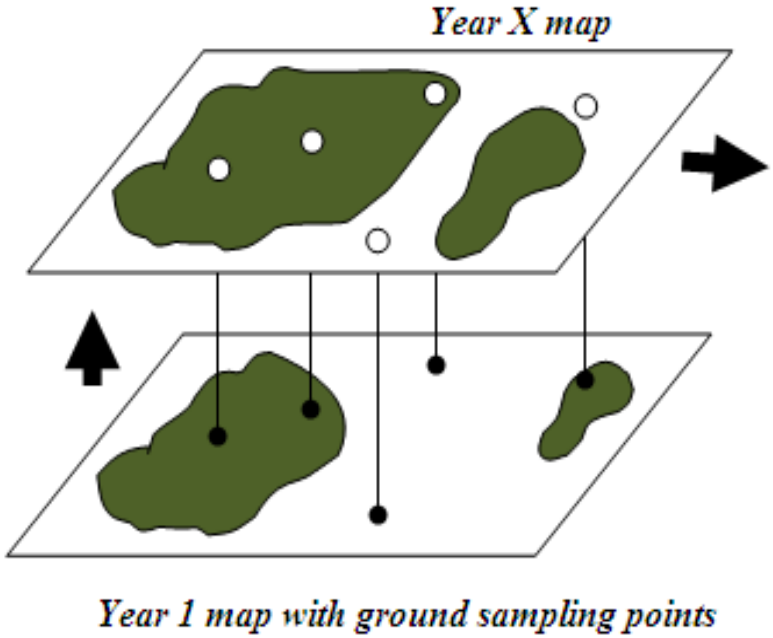
Colombo & Kolkata: Diverging Institutional Paradigms?

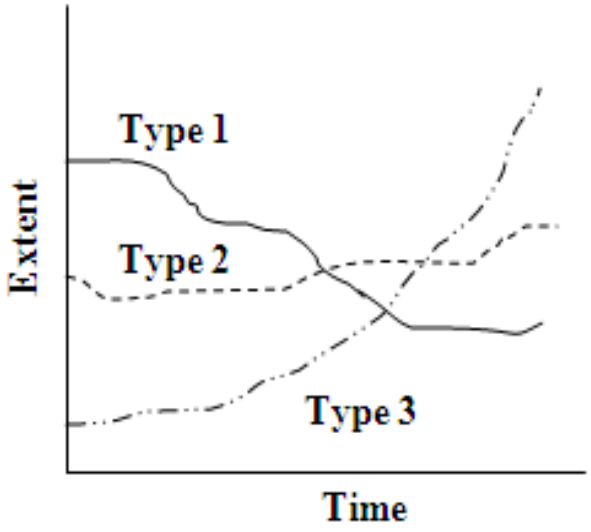
	Colombo	Kolkata
Policy Process	Both cases had similar political histories and trends (Colonial, Post-Independent and Free Market Reform)	
Institutional arrangements	Strong formal/statutory	Mix of statutory and informal /de facto institutions
Eco-system Services	Heavily focused on flood control	Healthy mix of multiple eco-system services
Grass-root user community	Small number, politically weak	Large number, politically strong
Markets	Mainly real-estate	Real estate, Wetland products
Environmental Issues	High rate of modification and ecological transformation	Moderate conversion rate but ecologically stable

Conclusions and Lessons

- Despite the apparent differences, the formal institutional arrangements (legislations/regulations) have many similarities in both cases
- The formal policy development shared common political histories and traditions in both cases
- The endurance of wastewater fishery and related *de facto* informal institutions mark the main difference in Kolkata
- Strong user community and market for wetland products were the main reasons for endurance of WW fishery
- Diversity of ecosystem services contributed to ecological stability

Ecological (Habitat Type) Change

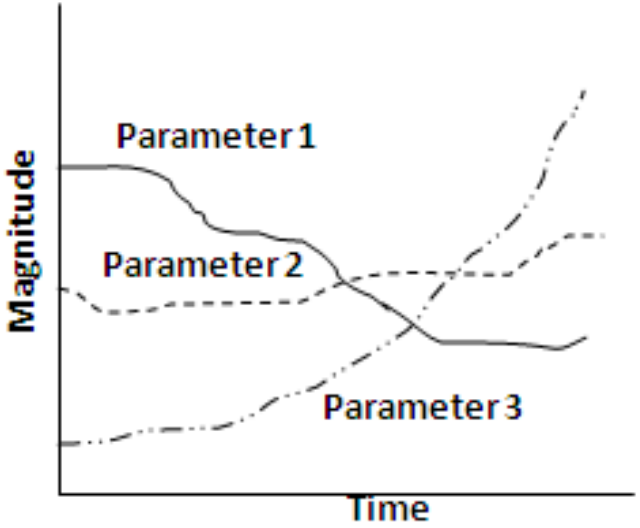




Institutional Change

Chronologies of Institutional Change

Time series of Watershed and Climatic Parameters



Analysis of Trends & Correlations

Quant./Qual. Analysis of Relationships

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