

Towards Resilient Future of Dhaka Metropolitan Area: Building Urban- Rural Partnership for Management of Wetland

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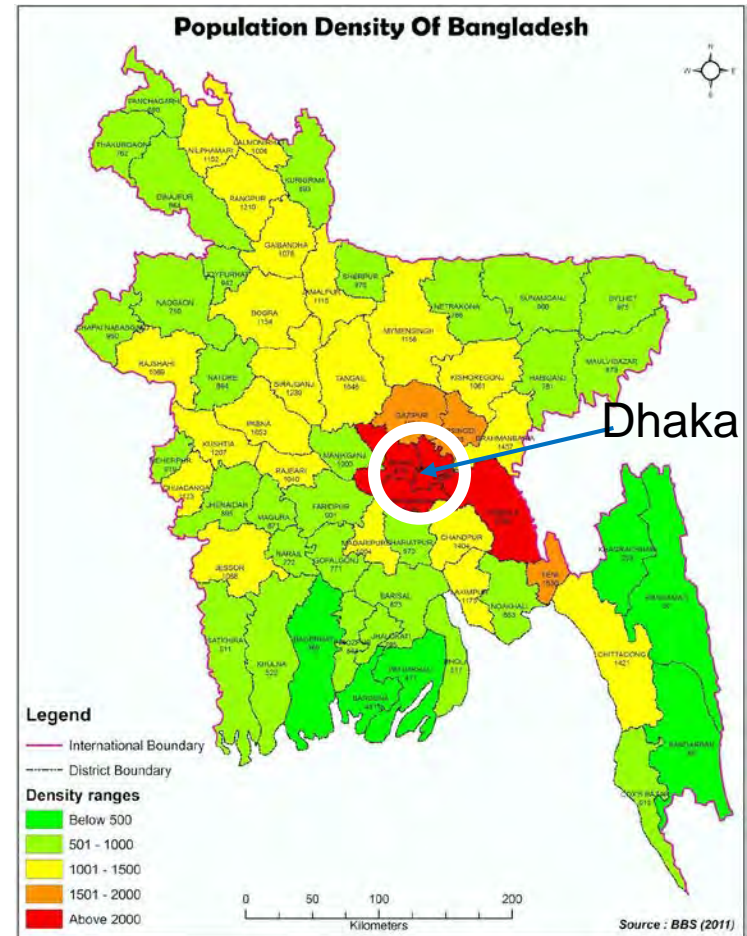


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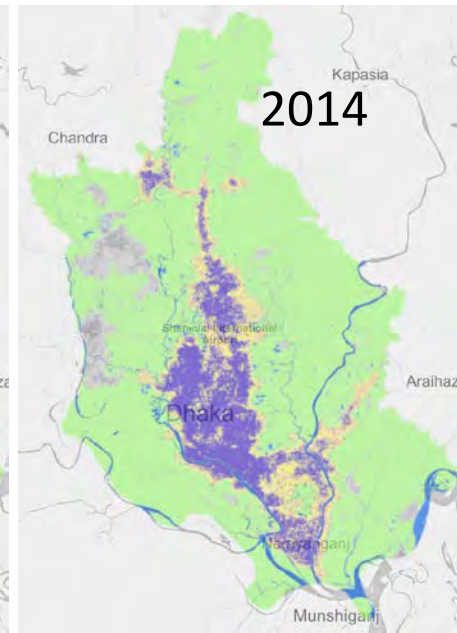
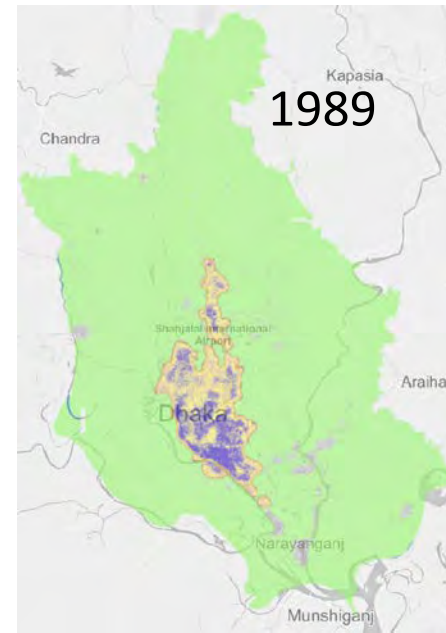
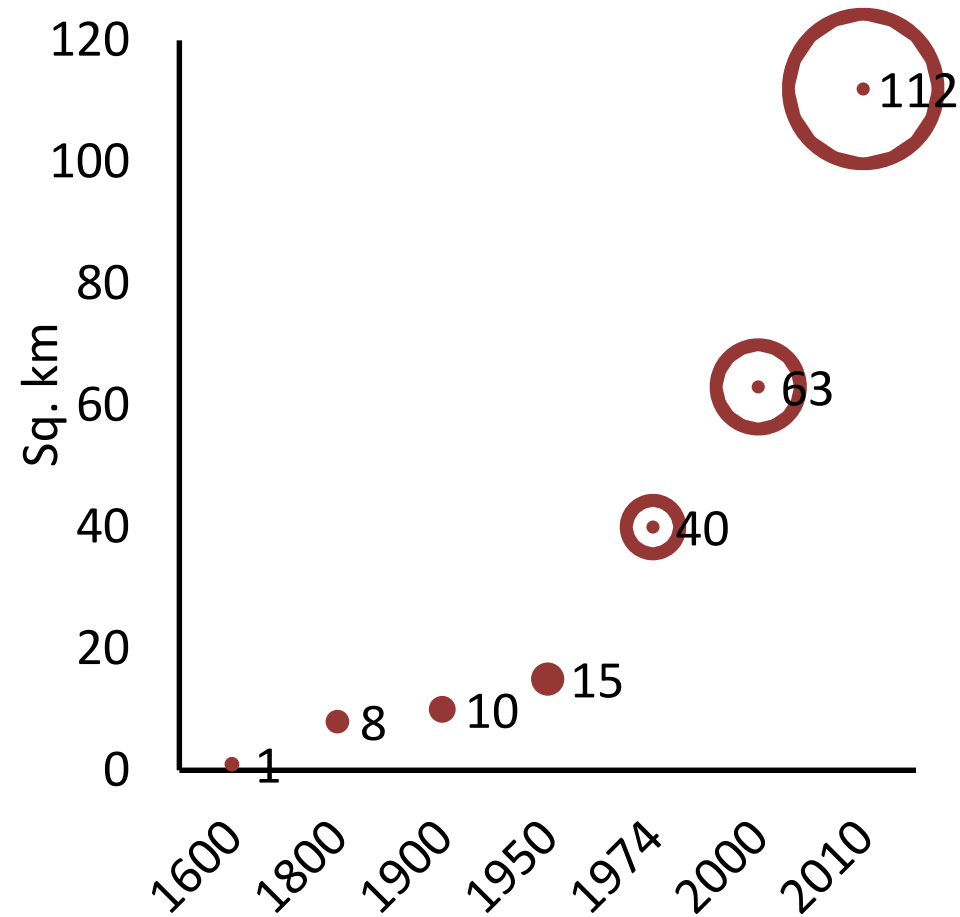
持続可能なアジア太平洋に関する国際フォーラム
International Forum for Sustainable Asia and The Pacific

Dhaka at a glance

- The **11th** largest mega city in the world (世界11番目の大都市)
- Population - **19** million
> 1300万人 (東京都) 370万人 (横浜市)
- Annual growth - **+5%** (人口増加率)
- Density of Population apprx. **49,407** person/km² (人口密度)
> 22,800人/km² (豊島区)
8,500人/km² (横浜市)
- GDP - **37** billion US dollars (4兆円) < 12.6兆円 (横浜市)



Historical growth of urban area in Dhaka City



Urban
built-up

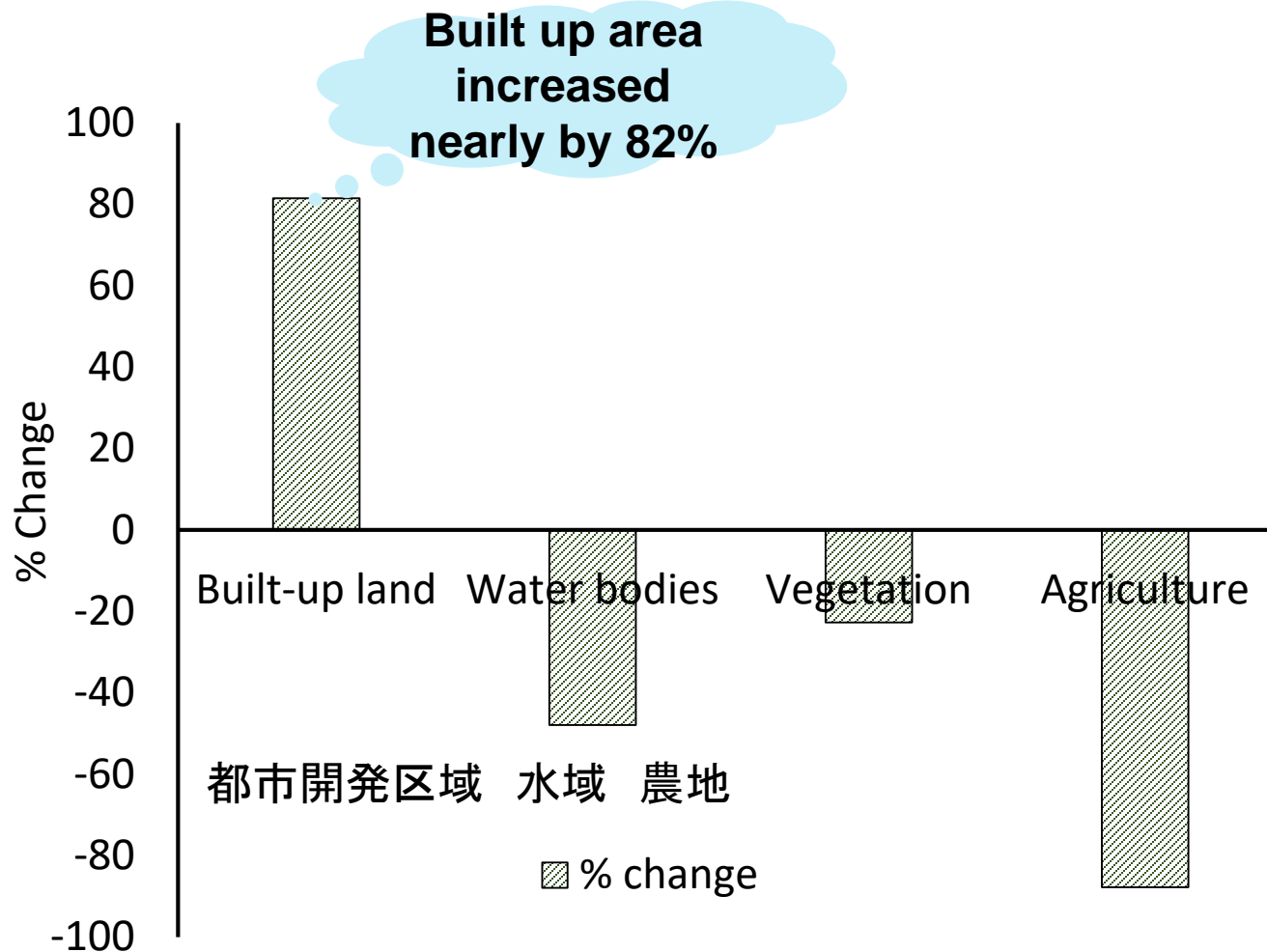
Sub-urban
built-up

Urban open
space

Rural

Land use change between 1989 and 2014

1989年から2014年の土地利用の変化



Urban-rural partnership for conservation of Belai beel (wetland)

Belai Beel is one of the largest wetlands, located in three upazilas (Kaliganj, Gazipur Sadar, Sreepur) of Gazipur District covering 5 UPs (Bokterpur, Jangalia, Prahladpur, Razabari, Baria) under Belai beel.

Socio-economic role: source of livelihoods of more that 300000 people. It supplies foods for both urban and rural people.

Environmental role: it protects Gazipur city from flood disaster, groundwater recharge zone, home of more than 27 species of fish.



IGES research activities in Belai Beel



Household survey



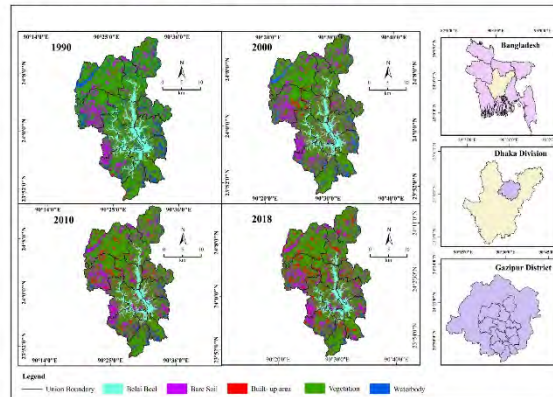
Women's participation in Household survey



Consultation with union parishad Chairmen



Collecting water samples

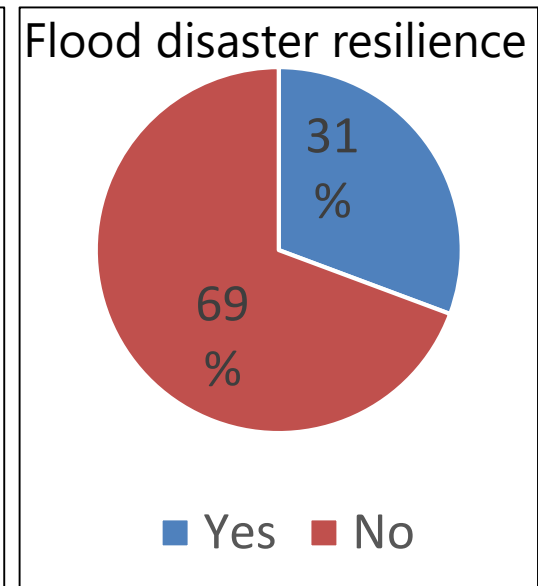
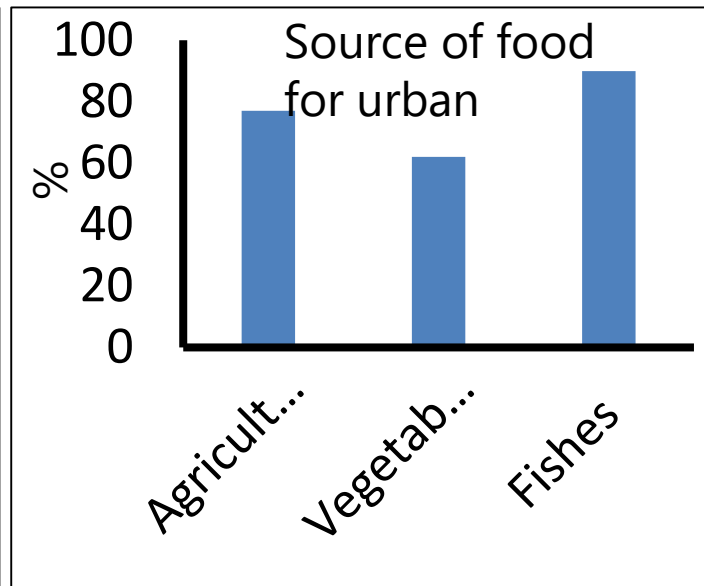
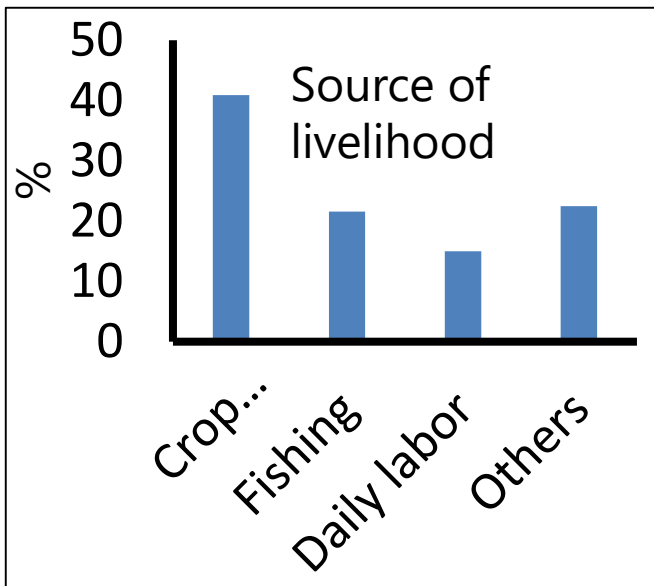


Spatial analysis of land use change



Multi-stakeholder workshop

Importance of Belai Beel: findings from household survey

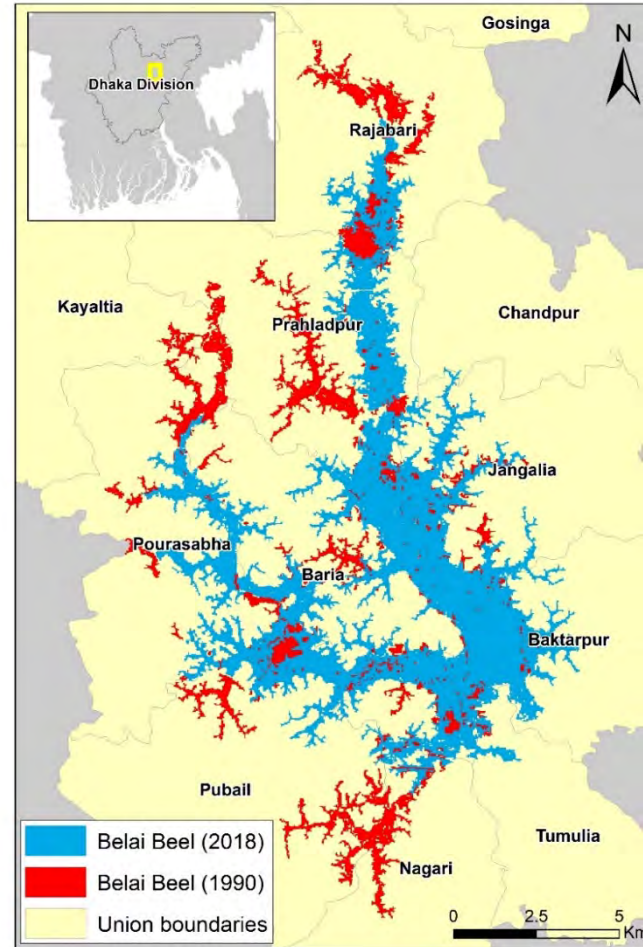


At least 80% of local people's livelihood directly or indirectly depend on the Belai Beel

Significantly contributes to food security in neighbouring urban areas

Belai beel protect local people from flood hazard

Challenges of sustainability of of Belai beel (wetland



Land filling site















	Observed Value (average) mg/L	DOE Standard mg/L
DO	1.9	5
COD	20.6	4

Pollution from industries
and Gazipur Municipality

Wetland area decreased by 30%
in the last 3 decades

Potential risk of change of environment of the Belai beel on rural and urban

Impact	Rural	Urban
Economic risk		
Flood risk		
Food security		
Health risk		
Job risk		
Unplanned migration		

 High  Low

Mapping of stakeholders for management of Belai Beel

Local Govt.

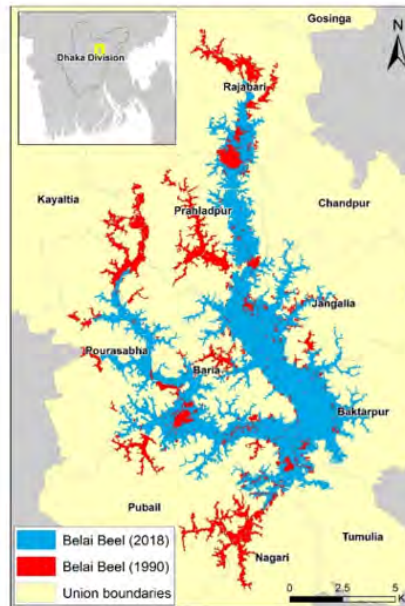
1. District Commission Office
2. Gazipur City Corporation
3. Jila Parishod
4. Union parishds (3)

Production system

1. CBO
2. Agri. Extension Dept.
3. Fisheries Extension Dept.

National Govt.

1. MOEFCC (Dept. of Env.)
2. MOWR
3. MOHPW



Source of pollution

1. Association of Industries
2. Gazipur Municipal wastewater and solid waste

Urban planning and development

1. RAJUK
2. Private real state business Association

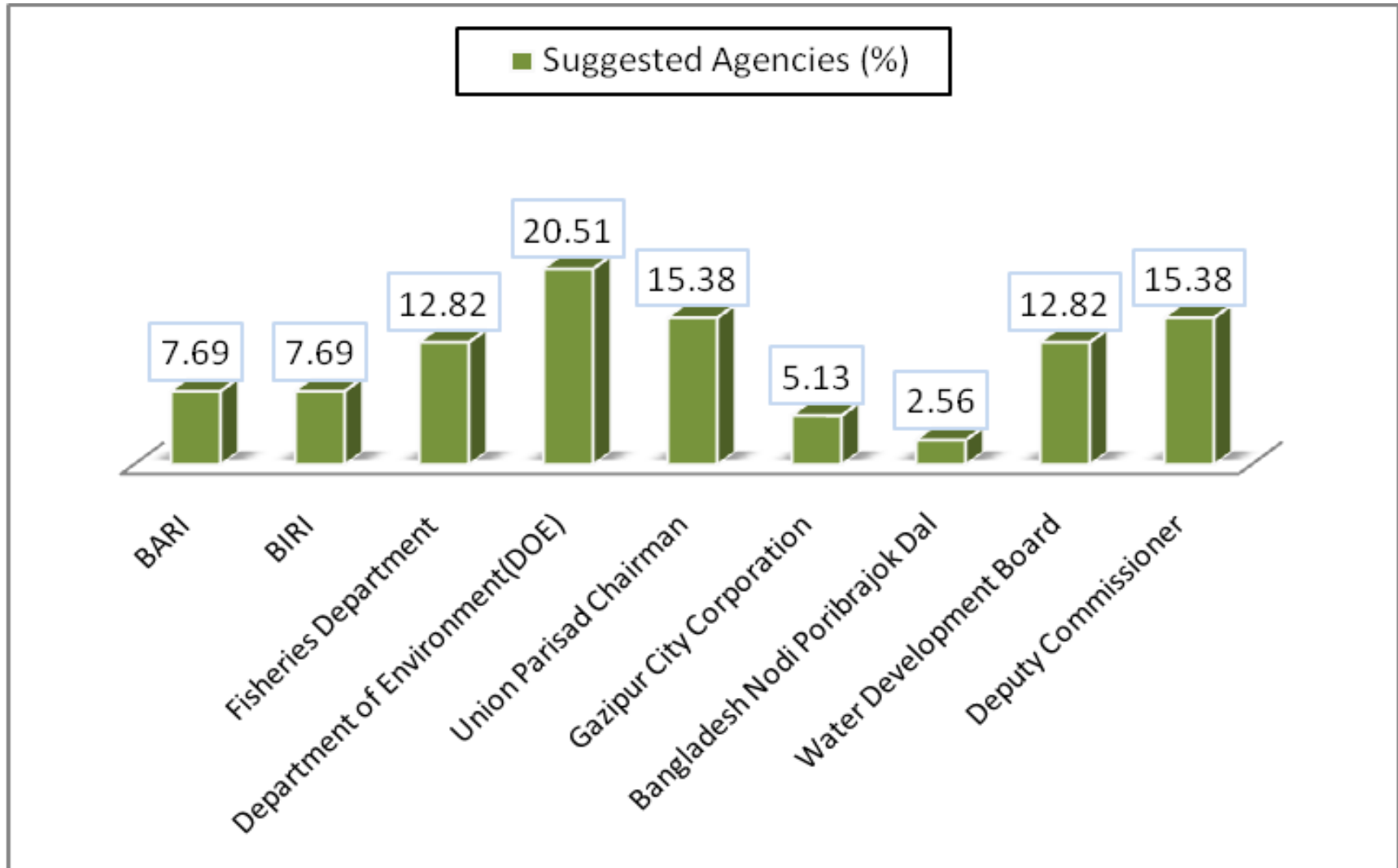
Knowledge generation

1. BSMRAU
2. University of Dhaka
3. BARI
4. BRRI
5. BFRI

Environmental activists

1. BAPA
2. Environmental Journalists

Key stakeholders for urban-rural partnership on Belai beel conservation



Proposed Belai Beel Conservation Committee to realize urban-rural partnership



Coordinating body

- ✓ District Commissioner
- ✓ Gazipur City Corporation
- ✓ Jilla Parishod

Technical expert Team

- BRRI
- BARI
- DUET
- BSMRAU
- DU

Governance Team

- Union Parishod
- DOE
- Government agencies
- Business Associations
- RAJUK

Social Outreach Team

- NGOs
- Environmental activists
- Citizens
- Journalists
- CBO
- Education institutes

Conclusions and way forward

- ✓ Belai beel (wetland) provides multiple ecosystem services. However, water pollution and unplanned urbanization challenge sustainability of this important wetland
- ✓ Disposal of untreated industrial wastewater and Gazipur municipal wastewater and wastes from in are main causes of pollution. In addition, area of Beali beel decreased due to unplanned urbanization
- ✓ Environmental degradation of Belai beel increase economic risk, food insecurity, health risk and disaster risk.
- ✓ Strengthening urban-rural partnership is crucial for conservation of Belai beel. Establishment of multistakeholder committee on Belai conservation is a great milestone to build-up effective partnership for Belai beel conservation
- ✓ Need to provide supports to the newly established committee to prepare action program on Belai beel conservation and implement the action program





ご清聴ありがとうございました。

Thank you for your attention.

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