NARBO

Network of Asian River Basin Organizations

WELLCOME TO EVERYBODY

IN

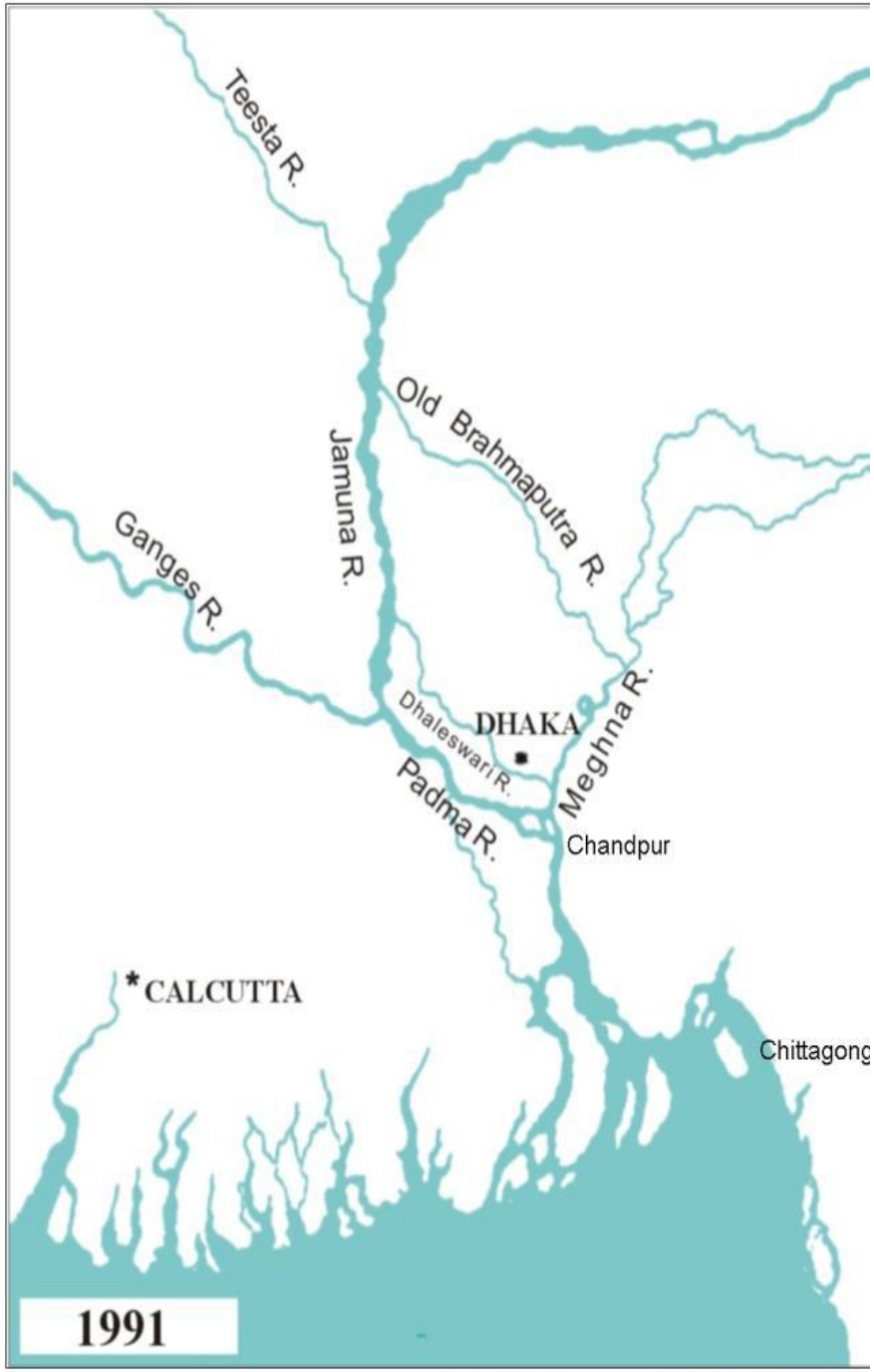
IWRM Spiral

For Teesta River Basin

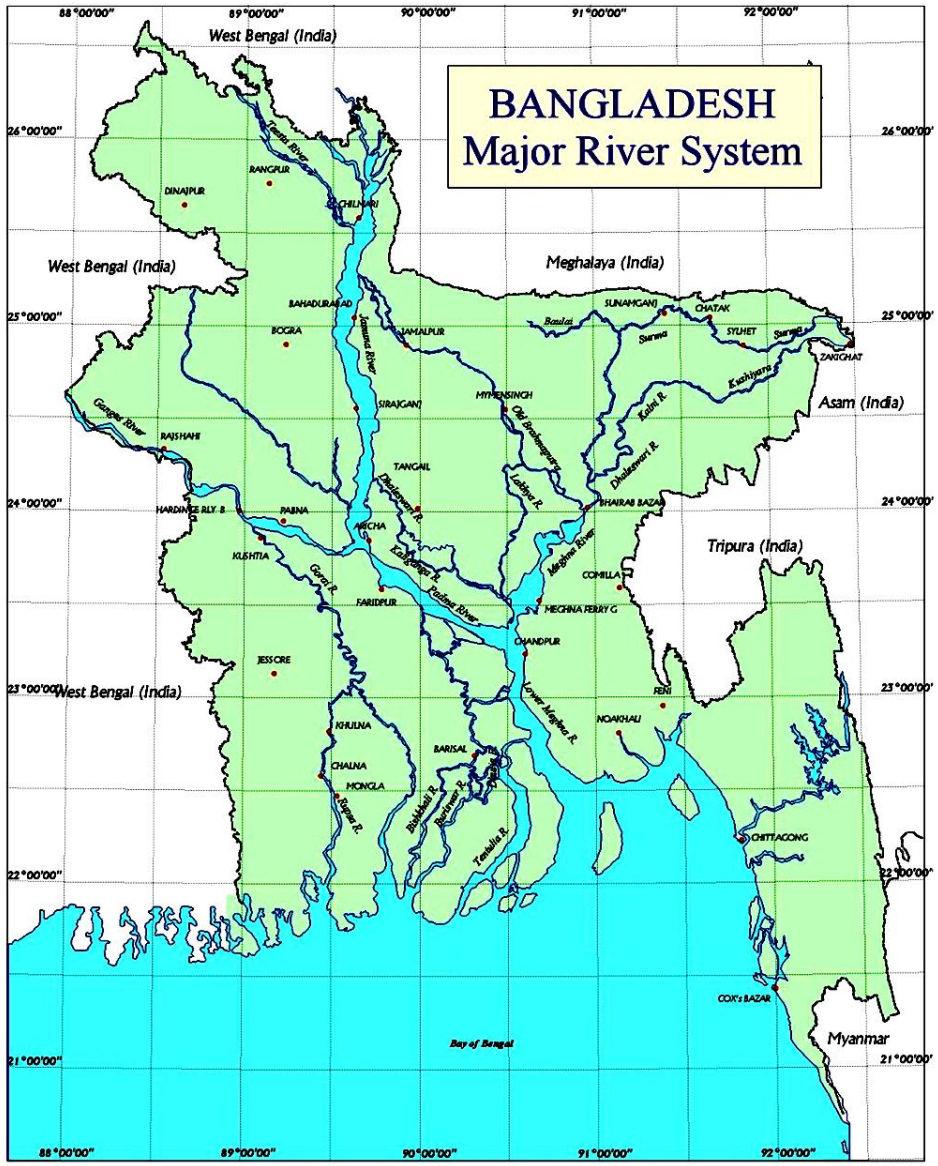
ORGANIZATIONS IN WATER RESOURCE MINISTRY					
WARPO	BWDB	RRI	CEGIS	IWM	JRC
MASTER PLANNING	EXECUTION MONITORING MAINTENANCE	PHYSICAL MODEL RESEARCH	ENVIRON-MENT GEOGRAPHY STUDY	MATH. MODEL STUDY	NEGOTIATION

- **EPWAPDA established in 1959**
- **BWDB in 1972.**
- **Managing 405 rivers**

  (57 Trans-boundary).



Satellite Image, NOAA/AVHRR



LEGEND:

International boundaries

Important Town / Location

River / Canal

0 50 Kilometers

SWMC Surface Water Modelling Centre

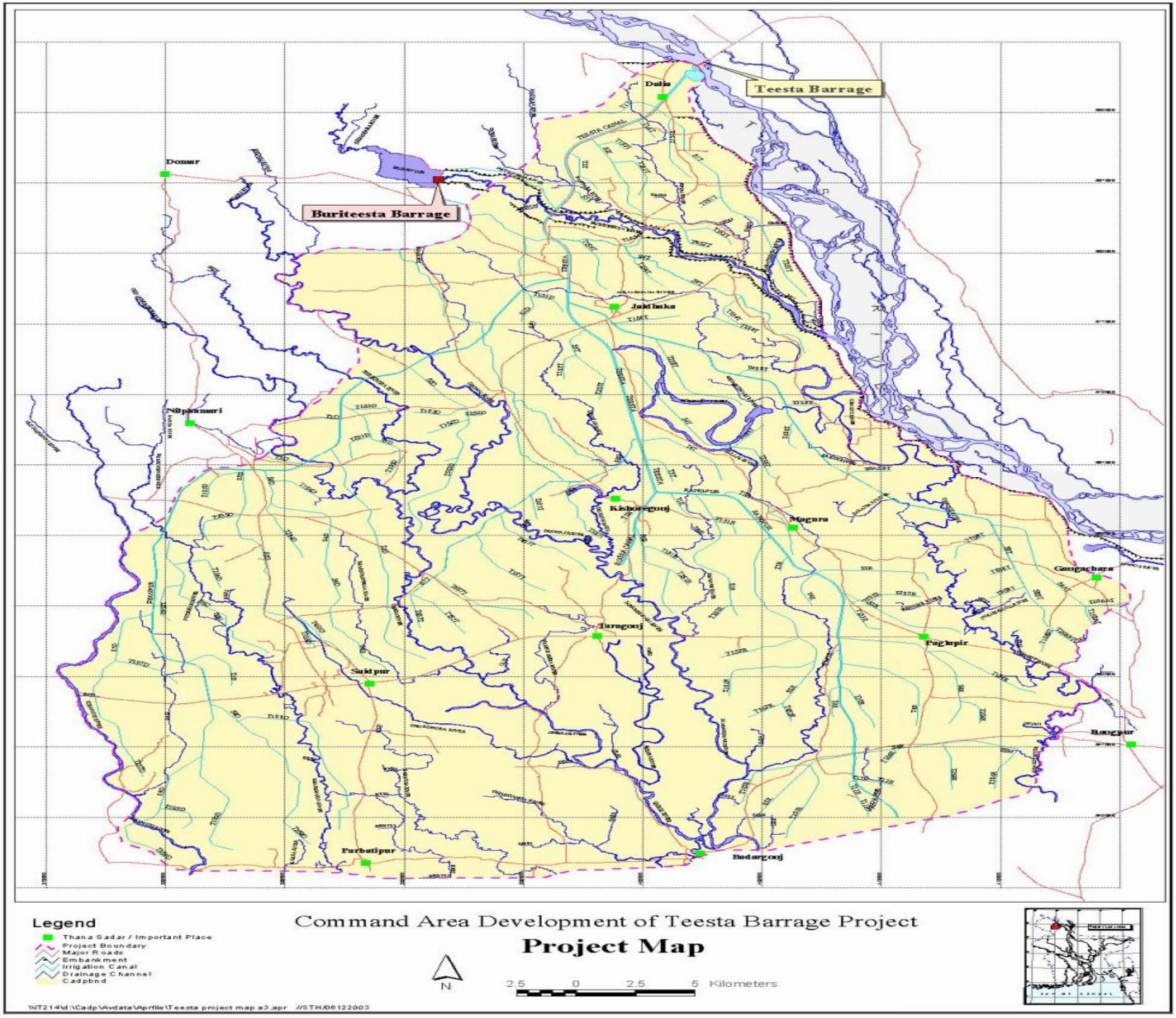
Features of TEESTA River

Length (KM)	WIDTH (KM)	Discharge (Cumec)
Total 315	Minimum 0.70	Minimum 8.00
Bangladesh 115	Maximum 5.50	Maximum 4494
	Average 3.00	Average 2430

- **Origin:** Chitama Lake of Sikkim
- **Source of Flow:** Lachang & Lachum Mountain
- After **Flood of 1787** Teesta At Present Position
- **Braided** in Nature.
- Sometimes acts as **Flushy** in Monsoon

Teesta Barrage

Teesta River Basin
Teesta Barrage Project Map



Brief of Teesta Project

Start 1979	Complete 1998	Cost 9695.29 M BDT
Gross Area	Target:154,250 Hac.	Executed:126,310 Hac.
Irrigable Area	Target:111,406 Hac.	Executed:91,226 Hac.
Yearly Addl. Crop	960,320 MT	
Cropping Intensity	Increases from 180% to 230%	
WUG 1756	Plantation 600,000	
WUA 60		
WUF 01		
Type of Irrigation	Supplementary ,Gravity System	

Project Benefits

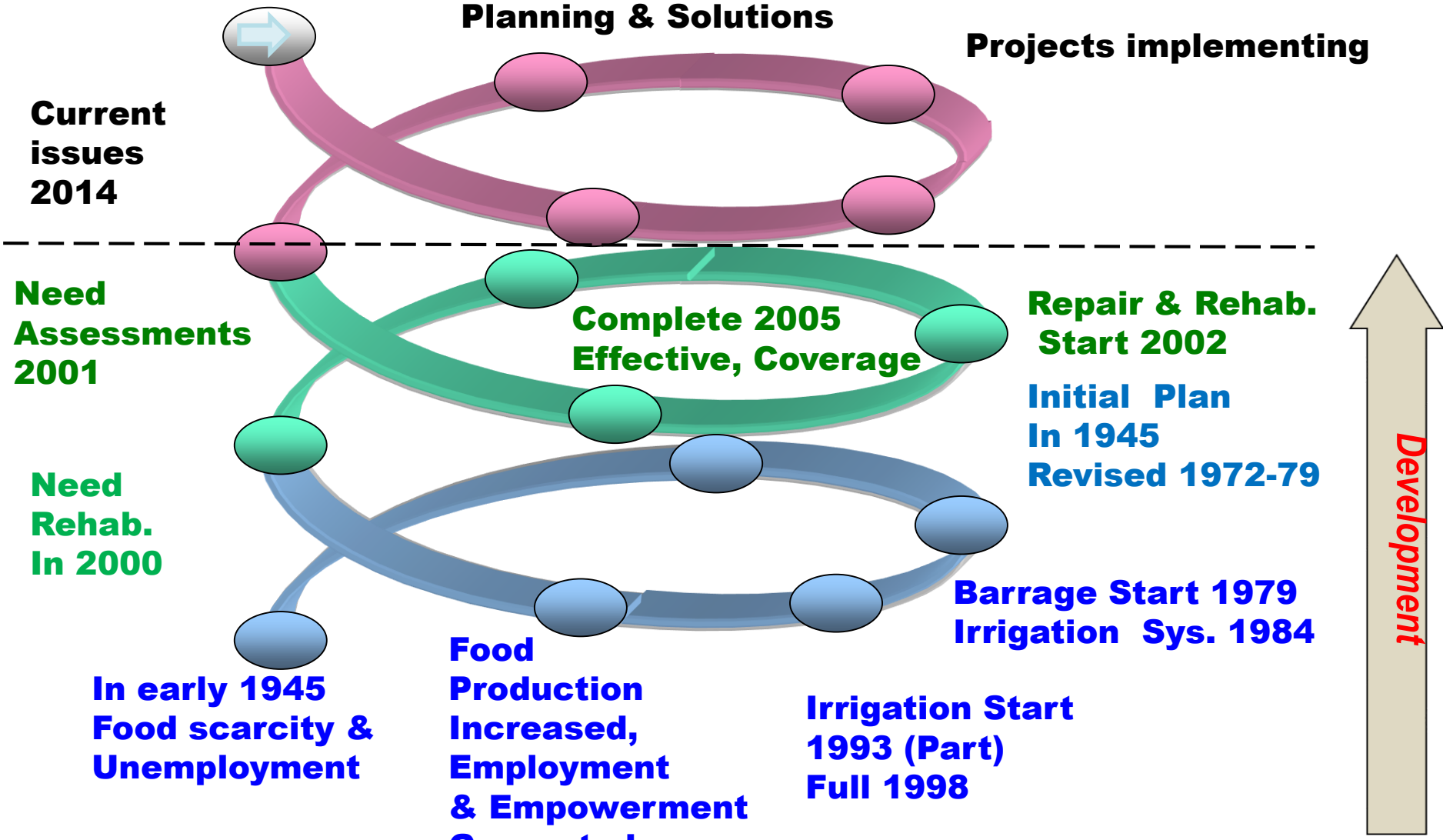
- Objectives: Increase Agriculture production by Supplementary Irrigation
- Gravity System (No need of Power)
- Flood Control & Drainage
- Impacts on Production
- Income & Employment (Specially Women)

(Construction 39.70 And O & M 10.00M.Man-Days)

- Development of Rural Women
- Communication System
- Environment
- A forestation (600,000 No's Tree)
- Fish & Poultry (150 KM M & S.C, 600 KM D.C.)
- Tourism
- Capacity Development
- Improvement of Skill

Stakeholder Activities in Basin area

IWRM Spiral For Teesta River Basin



Current Issues in the Basin

- Water Related Disaster

  (a) Flood and River Bank erosion

  (b) Drought

- Trans-boundary river (water sharing)
- Operation and maintenance (cost & Management)
- Water allocation

Proposed Solution

- Create Reservoir to over come Drought.
- Use part of the Canal as a reservoir and fish culture.
- Take Appropriate Flood Protection Measures.
- For water sharing increase Bi & Multilateral Talks & Negotiate in the light of International laws to settle Trans-boundary rivers issues.
- Need Regional ,International & Organizational Cooperation & Support (Scientific & Leadership)
- Go Forward with Basin Wise Solution
- Involve stakeholder participation & motivation & Invite PPP for O&M (cost & Management)
- Crop diversification.
- Improve crop variety & Irrigation pattern.

Key for Success

- Motivation and stakeholder participation will provide
  - ❑ Better O&M.
  - ❑ Cost Recovery
- Development of Bi-lateral ties among neighbouring Nation will minimize Trans-boundary rivers issues.
- Leadership & Change of Attitude.
- Reservoir will reduce drought.
- Educate & Share Knowledge
  - ❑ Crop cultivation
  - ❑ Consumption of Water
  - ❑ Irrigation pattern
- Adoption of IWRM & Its use

THANK YOU ALL