

New Thinking on Water Governance

Country Presentation-Nepal
Singapore
July 2-3, 2009



Presented by:

Kishore Thapa

Secretary

**Water and Energy Commission,
Nepal**

Members:

Dr. M. Karki, ICIMOD

Mr. D.B. Shrestha, KUKL

Mr. N.M. Joshi, CMIASP

Introduction- Nepal

Landlocked country with land area of 147000 sq. kms and population of 27 million.

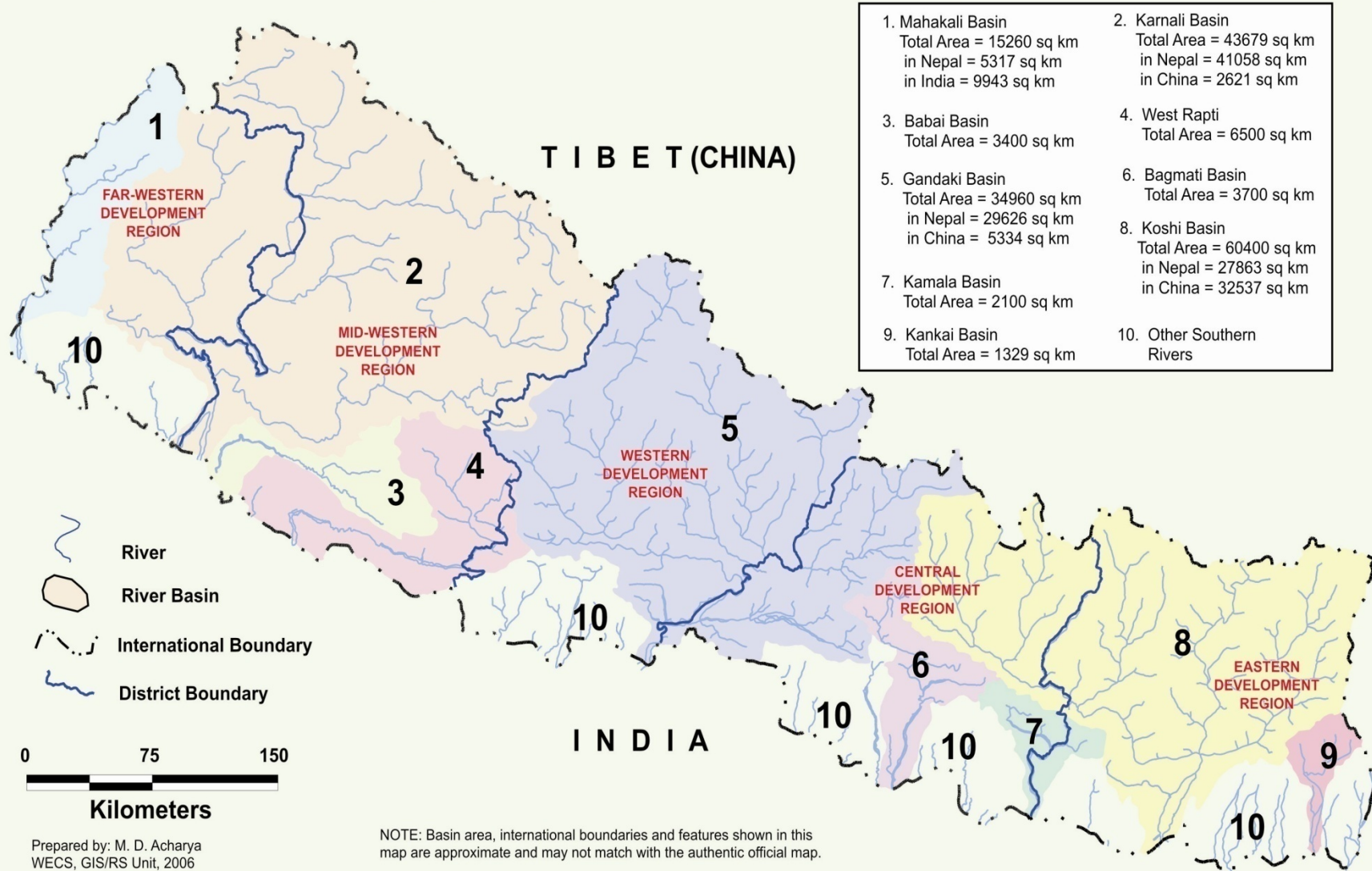
➤ *Physiography:*

- **Plains, Siwalik, Middle Mountains, High Mountains and High Himalayas**

➤ *Administrative*

- **75 Districts and 5 Development Regions**

Regional and River Basin Boundaries in Nepal



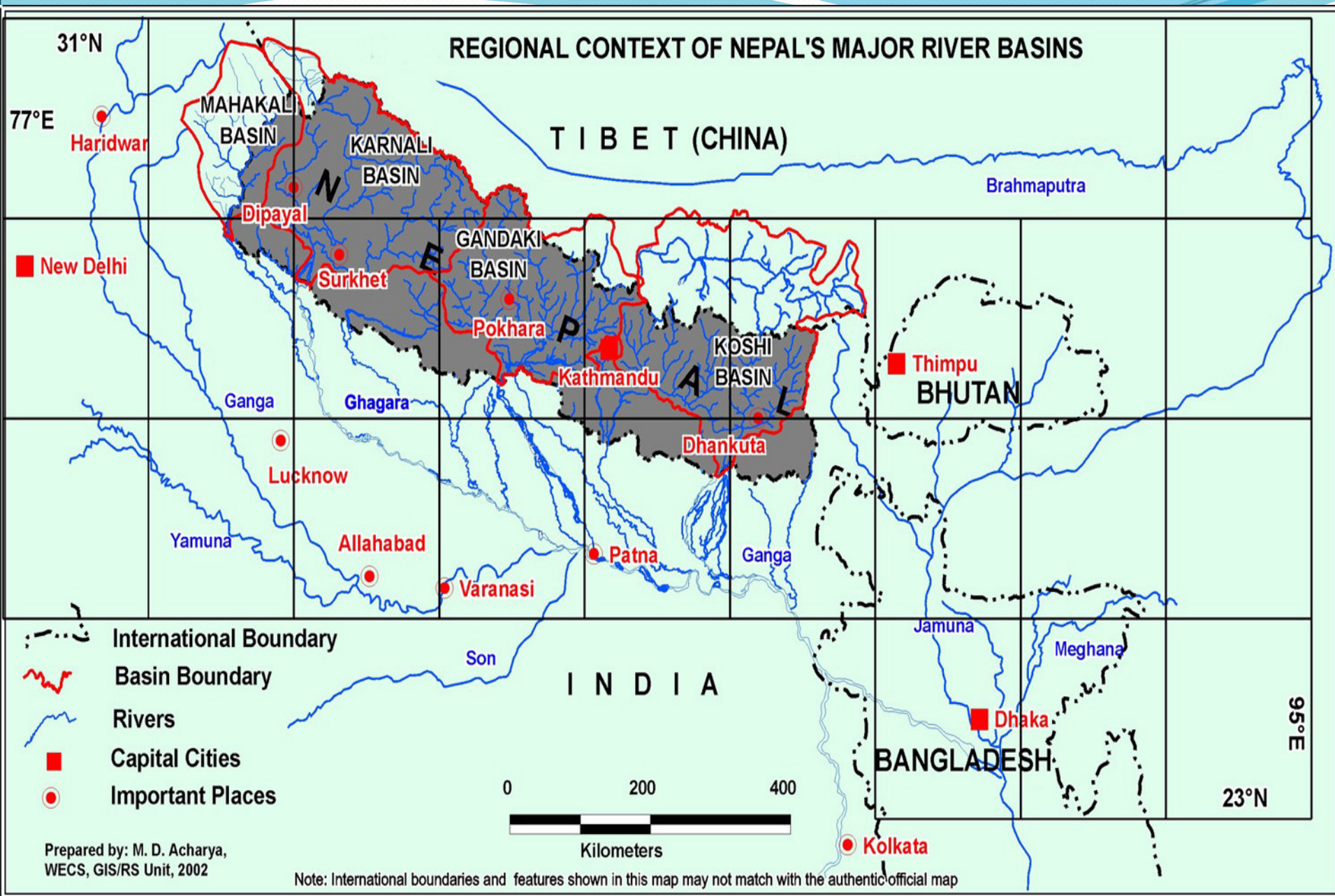
1. Mahakali Basin Total Area = 15260 sq km in Nepal = 5317 sq km in India = 9943 sq km	2. Karnali Basin Total Area = 43679 sq km in Nepal = 41058 sq km in China = 2621 sq km
3. Babai Basin Total Area = 3400 sq km	4. West Rapti Total Area = 6500 sq km
5. Gandaki Basin Total Area = 34960 sq km in Nepal = 29626 sq km in China = 5334 sq km	6. Bagmati Basin Total Area = 3700 sq km
7. Kamala Basin Total Area = 2100 sq km	8. Koshi Basin Total Area = 60400 sq km in Nepal = 27863 sq km in China = 32537 sq km
9. Kankai Basin Total Area = 1329 sq km	10. Other Southern Rivers

Prepared by: M. D. Acharya
WECS, GIS/RS Unit, 2006

NOTE: Basin area, international boundaries and features shown in this map are approximate and may not match with the authentic official map.

- **More than 6000 rivers and rivulets**
 - **Estimated annual runoff about 225 billion cubic meters**
- **Rainy season**
 - **June to September (80% of the total rainfall)**
 - **Other months (remaining 20% of the total rainfall)**
- **Surface runoff comprises 45% of average annual flow of Ganges and around 70% of the Ganges' dry season flow.**

REGIONAL CONTEXT OF NEPAL'S MAJOR RIVER BASINS



Prepared by: M. D. Acharya,
WECS, GIS/RS Unit, 2002

Note: International boundaries and features shown in this map may not match with the authentic official map

Water Resources Strategy

- **Approved by government in 2002**
- **National goal:** *" living conditions of Nepali people are significantly improved in a sustainable manner"*

WRS outputs would contribute through the achievements of:

- **Short-term (2002-07): Tangible benefits to people in line with basic need fulfillment**
- **Medium-term (2007-17): Substantial benefit to the people for basic needs fulfillment**
- **Long-term (2017-27): Benefits from WRS maximized in sustainable manner**

Ten Strategic Outputs of WRS:

Water Security:

- Effective measures to manage and mitigate water induced disasters are made functional.
- Sustainable management of watersheds and aquatic eco-systems is achieved.

Water Use:

- Adequate supply of and access to potable water and sanitation and hygiene awareness is provided.

Water use contd....

- **Appropriate and efficient irrigation is made available to support optimal and sustainable use of irrigable land.**
- **Cost effective hydropower is developed in a sustainable manner.**
- **Economic uses of water by industries and water bodies by tourism, fisheries and navigation are optimized.**

Mechanisms:

- **Enhanced water related information systems are made functional.**
- **Appropriate legal frameworks are made functional.**
- **Regional cooperation for substantial mutual benefits is achieved.**
- **Appropriate institutional mechanisms for water sector management are made functional.**

National Water Plan(2002-27)

- Approved in 2005
- Prepared to operationalize the Water Resources Strategy.
- Doctrine of NWP: Integration, Coordination, Decentralization, Popular Participation within good governance and equitable distribution;
- IWRM as one of the principal themes.

Institutions in Water Sector:

- **Planning, Policy and Coordinating**
 - **National Planning Commission**
 - **National Water Resources Development Council**
 - **Water and Energy Commission**
 - **Environment Protection Council**
- **Ministry of Energy**
- **Ministry of Irrigation**
- **Ministry of Physical Planning and Works**
- **Ministry of Environment,**
- **Ministry of Local Development**
- **Ministry of Forest and Soil Conservation**

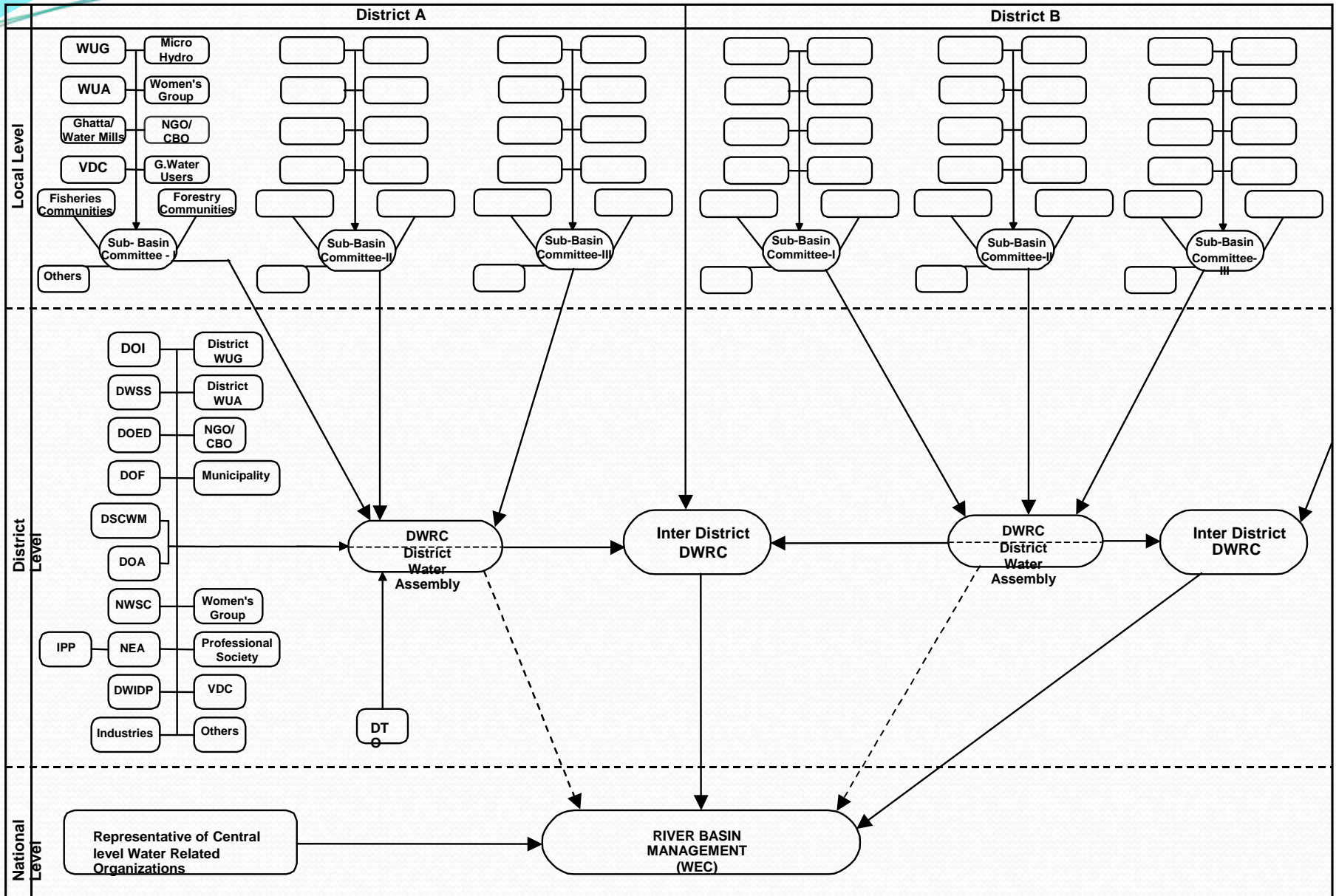
Implementing Agencies:

- **Department of Irrigation**
- **Groundwater Resources Development Board**
- **Department of Hydrology and Meteorology**
- **Department of Electricity Development**
- **Department of Water Supply and Sewerage**
- **Department of Local infrastructure Development and Agriculture Roads**
- **Nepal Electricity Authority**
- **Nepal Water Supply Corporation**
- **Kathmandu Valley Water Supply Management Board**

IWRM and River Basin Concept:

- **Water and Energy Commission Secretariat (WECS) to be transformed to WEC**
- **WEC as Apex Level institution in Water Sector**
- **WEC members in Consultative and Advisory Committee**
- **Establishment of River Basin Management Offices(RMBO):**
 - Koshi, Narayani and Karnali**
- **RBMO to be responsible for allocating waters**

Institutional Framework for Basin Management



Legislation:

- **Current Legislation**

- **Water Resources Act and Regulation (1992)**

- Umbrella legislation for hydropower, Irrigation, drinking water and other water use

- **Electricity Act and Regulation (1992)**

- Legislation of Power sector emphasizing Hydropower

- **Regulations under Water Resources Act**

- Drinking Water Supply Regulation and Irrigation Regulation

- **Nepal Water Supply Corporation Act, 1989**

- **Water Supply Management Board Act, 2007.**

- **Environmental Protection Act, 1996**

Policies and strategies:

- **National Water Supply and Sanitation Policy, 1998**
- **Rural water Supply and Sanitation sector strategy and action Plan, 2004**
- **National Sanitation Policy 1994**
- **Kathmandu Valley Strategy on Water Supply and Sanitation**
- **Irrigation Policy 2003**
- **Hydropower Policy 1994**
- **Water Resources Strategy 2002**
- **National Water Plan 2005**

Water Management and Regulatory Agencies:

- Water and Energy Commission Secretariat (WECS).
- Ministry of Energy (Hydro-electricity),
- Ministry of Irrigation,
- Ministry of Physical Planning and Works (Drinking water),
- Nepal Water Supply Corporation.
- Kathmandu Valley Water Supply Management Board.
- Water Tariff Fixation Commission.
- District Water Resources Committees.
- Rural Water Supply and Sanitation Fund Development Board.

Water Service Providers:

- **Nepal Water Supply Corporation**
- **Kathmandu Upatyaka Khanepani Limited(KUKL)**
- **Water User Committees(small towns and rural settlements)**
- **Private sector(water tanker operators, bottled water suppliers in urban areas).**

Cost Recovery Mechanisms:

- Government policy requires all urban water supplies to raise adequate tariff to pay for the capital and operation and maintenance cost.
- ADB funded Small Town Water Supply Project require community to contribute 50 percent of the project cost(30% loan, 20% cash, kind or labour).
- In rural areas tariff is fixed through community meetings which cover maintenance and operation.

Cost Recovery(Contd)

- In all municipalities covered by Nepal Water Supply Corporation, government is traditionally responsible for fixation of tariff. This tariff is low and inadequate to maintain desired level of services.
- KUKL requires its tariff to be fixed by newly established Water Tariff Fixation Commission.

Strategy for Cost recovery

- **Irrigation:**

- Promote more shallow tube-well development.

wherein the O&M costs are borne by farmers;

- Policy reforms to promote farmers managed small irrigation systems.

- **In drinking water:**

- Private sector management of the supply systems in urban areas;

- User groups-based system in rural areas will bring in efficiency and reduce O&M costs.

Participation of the Poor:

- KUKL has established Low Income Consumer Service Unit to facilitate poor communities access to distribution network including addressing affordability issue.
- Poor people are provided with free water through public stand-post.
- Poor households in rural areas are paid in cash for the 50% of the voluntary labour they contribute for the construction .
- Very poor households are given subsidies or soft loans for the construction of latrines.



Thank You