

***Evolution of the Philippines'
Water Sector:
Driving Forces & Constraints***

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Outline of Presentation

- ***Water-related information***
- ***Driving Forces***
- ***Enabling environment*** - water sector assessment, policies, strategies, legislation
- ***Status of sub-sectors*** - water supply & sanitation, irrigation, hydropower, flood control
- ***Water sector framework***
- ***Constraints*** - (challenges)

Water-related Information

- ***Land area - 30 million hectares (50% highlands & mountains)***
- ***Annual average rainfall - 2,400 mm (monsoon)***
- ***Population - 73 million (1997, 2.3% growth rate)***
- ***Metro Manila - 12% of population, 2.8% growth rate, living in only 0.2% of area of country***
- ***GNP - US\$ 88 billion (1997)***
- ***Per capita GNP - US\$ 1,200 (1997)***

Driving Forces (1)

- ***Broad implications on water demand, development & management perspectives***
- ***Demographic*** - (population growth, urbanization, migration patterns) - *increase in demand* of water for people & water for food, increase in competition on limited resource
- ***Social*** - (lifestyles, culture, poverty) - *increase in demand* of water for people
- ***Economic*** - (industrialization, market-based strategies) - *increase in demand & pollution* of water from industries, *equitable allocation of water*

Driving Forces (2)

- *Environmental* - (over exploitation, pollution, climate change) - *public concern* on environmental degradation, *environmental perspective* on development & management
- *Technology* - (water efficient devices, genetically modified crops, computer modeling) - *water savings*, better water prediction, *better water management*
- *Governance* - (institutional reform, devolution, stakeholders participation - *optimum development & management* of water resources

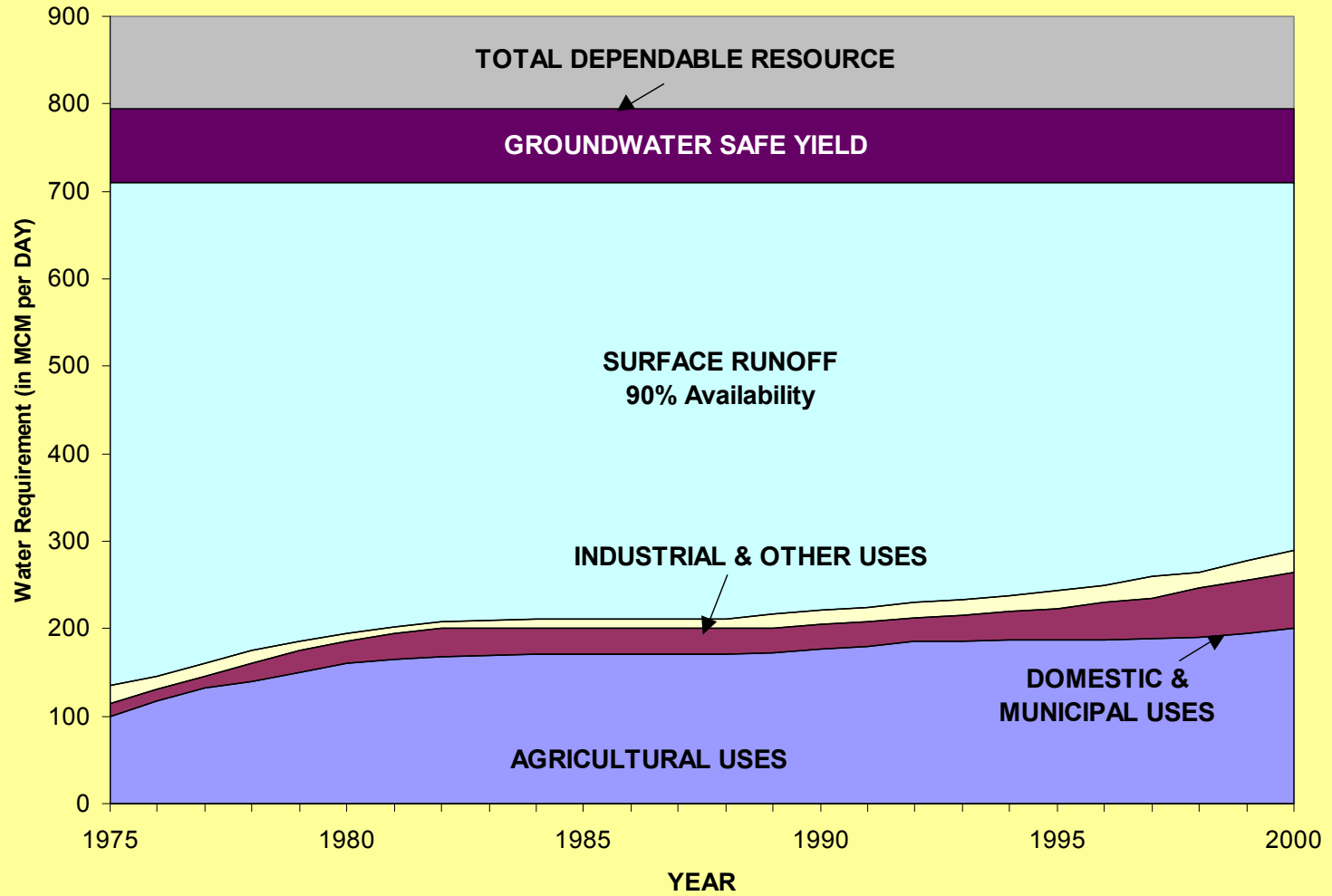
Enabling Environment

- **Participation of all stakeholders** - *protect rights, investments, assets*
- **Attract private sector** - *investments in infrastructure, services*
- **Water sector assessment** - *water users, water sources (quantity, quality, price), land, economic & related resources*
- **Water policies & strategies**
- **Water legislation & standards**

Water Sector Assessment

- ***Nature & scope of problem to be managed***
- ***First national assessment, 1975 - Regions 3 & 7 with emerging water problems***
- ***1998 study - Regions 2, 3, 4 & 7 with emerging water problems***
- ***Undertake more detailed studies on critical river basins***

NATIONAL WATER PICTURE (1975-2000)



Water Resources Policies & Strategies

- **Overall policies - NEDA Board Resolutions**
 - *basic policies on water, efficient management of water resources, sewerage & sanitation investments, common definition of terms on water supply, sewerage, on-site sanitation, etc.*
- **Need to codify all NEDA Resolutions** - for the benefit of all stakeholders across all sectors
- **Wide dissemination of NEDA Resolutions**
- **Strategies - Philippine Development Plan**
- **Need for periodic consultations on policies & strategies**

Basic Laws on Water

- **1987 Constitution (1934, 1973) - State ownership of water and other natural resources**
- **1974 Decree on sector coordination**
- **1976 Water Code - water quantity regulation**
- **1977 Environmental Code - water quality**
- **Need new laws, revision of existing laws - regulatory framework for water quantity, water quality, water price, service delivery efficiency**
- **Strict implementation & enforcement**

Water Supply & Sanitation

- **Access to safe water supply** (urban 85%, rural 79%) - levels of service? service delivery efficiency?
- **Access to sanitation** (urban 79%, rural 62%)
- **Rate of program unable to catch up with rate of population growth** - in spite of massive investments in sub-sector
- **Need an accelerated program**
- **Need awareness campaign** -to gain active support at all levels - political, technical, general public

Irrigation

- **Total irrigable area - 3.16 million hectares**
- **Total irrigated area - 1.36 million hectares**
- **Irrigation program unable to support policy of self-sufficiency in rice - annual importation of rice is very common, irrigation facilities & management are sustainable only because of subsidies**
- **Need to increase productivity of rain-fed areas - small farm reservoirs**
- **Need to review national policy on food - food security or self-sufficiency?**

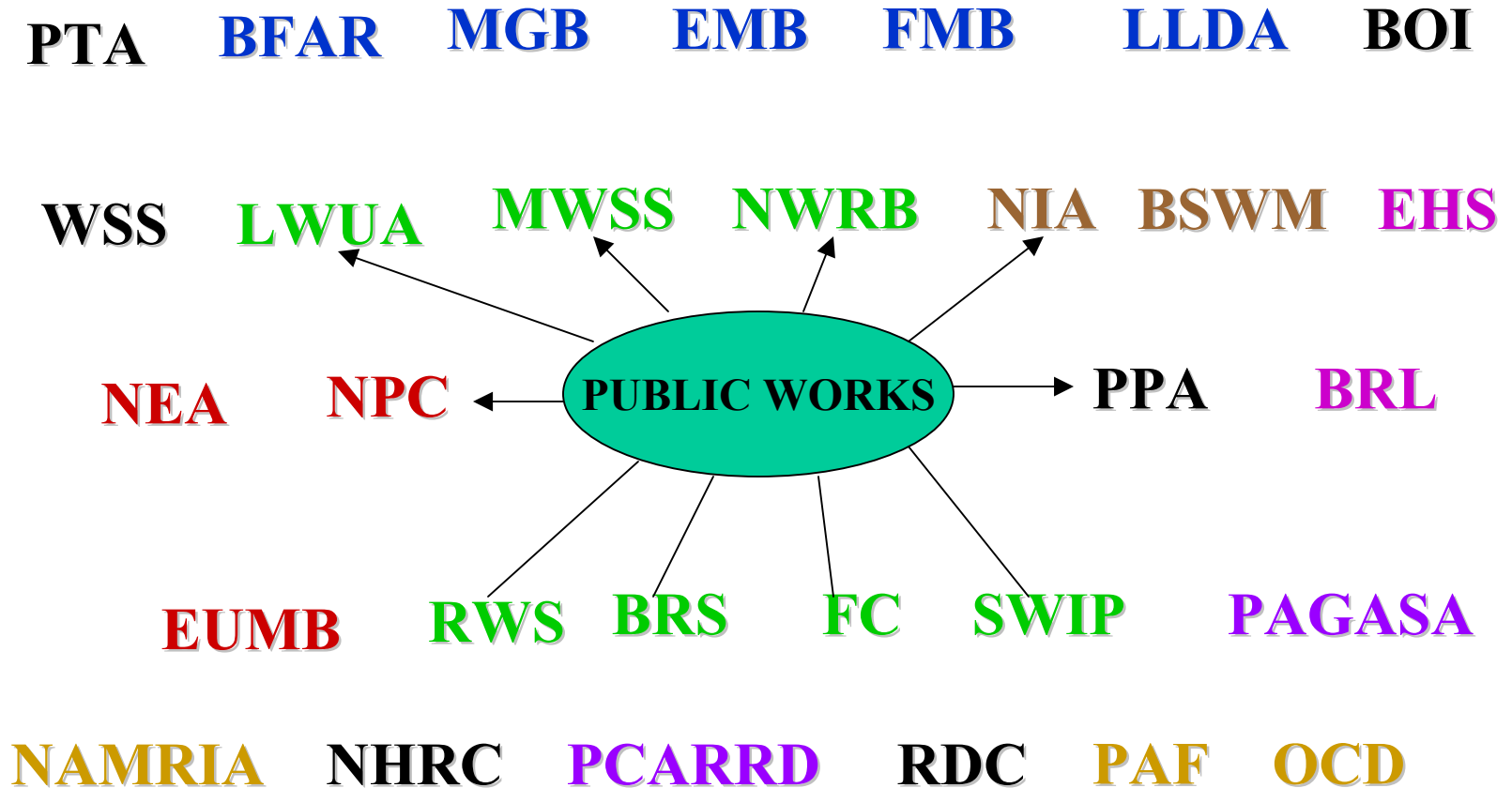
Hydropower

- ***Potential - 12,308 M W***
- ***Installed capacity - 2,304 M W***
- ***Average annual production - 4,302 G W H***
- ***Share of electric production - 9%***
- ***Need to increase share of***
hydropower - minimize dependence on oil imports

Flood Control

- ***Total flood prone area - 1.32 million hectares***
- ***Total area protected - 0.45 million hectares***
- ***Metro Manila - 0.01 million hectares flood prone area, 1 million population in flood plain***
- ***No significant reduction in annual flood damage* - in spite of massive investments**
- ***Need to review national policy on flood control***

Proliferation of Water Sector Agencies



Coordination of Agencies

- ***NWRB, 1974*** - *not functioning effectively & efficiently, reform studies in 1995 & 1997*
- ***Executive Actions*** - *restructuring NWRB membership, delegation of responsibilities, decentralization & devolution of activities*
- ***Legislative Action*** - *Water Resources Authority of the Philippines (WRAP), integrated planning, integrated regulation of water quantity, quality, price & service efficiency*
- ***Need for GOP to institute reforms*** - *based on studies & consultations with all stakeholders*

Constraints (1)

- Natural resources - limited arable land, variability of water in time & space, increasing pollution of water sources
- Demographic - high population growth, increasing urbanization, rural-urban migration
- Economic - limited growth of national economy, limited financial resources of government & private sector, wide disparity in family incomes
- Governance - most significant, not a “water crisis” but a “crisis” in governance

Constraints in Governance (2)

- *Corruption* - breakdown of executive and judicial systems, “damaged culture”
- *Awareness of issues at all levels* (political, technical, general public) - lack of active support
- *Legislation* - institutional framework, water allocation system, environmental issues, strict implementation & enforcement
- *Data & information* - water data network - surface water, groundwater, water quality

Constraints in Governance (3)

- *Synthesized knowledge, best practices, methodologies, guidelines* (experience & state-of-the art) - policies, strategies, laws, management instruments
- *Capacity building* - individuals, institutions
- *Research* - development of knowledge, methods, tools - understanding, forecasts, impacts of alternative policies, strategies, institutional frameworks

Recommendations

- ***Reform the regulatory framework***
- ***Implement and enforce existing laws strictly***
- ***Improve water data collection network***
- ***Increase awareness of all stakeholders on water issues***
- ***Undertake policy studies & research on critical water issues***