International Best Practices in Water Regulation

ALL INDIA WATER REGULATORS MEET

26.04.2019
Global Network

We operate in 154 countries

Americas: 55,856
EMA: 100,762
ASPAC: 40,645

~10% Global workforce based in India

Completed 25 years in India

India Presence

25 Offices
13 Cities
2,000,000 people globally

Created more than 8000 new jobs

More than 37,000 graduates and entry-level professionals joined KPMG

2,689 people on Global Mobility assignments to 99 countries and territories

2700 clients

Leading advisor to the Government of India on all National Mission Mandates

Industry Recognition

Ranked in LinkedIn Top 10 Companies in India (2018) 3rd year in a row.

KPMG’s thought leadership quality moves up four places in industry rankings

Gartner Magic Quadrant names KPMG a Leader in Business Analytics for second year running

Forrester Research names KPMG a Leader in Microsoft Dynamics 365 services

KPMG recognized as a Vanguard Leader in Corporate Services Consulting by ALM Intelligence - report and toolkit now available to share

Our Values

The KPMG Values lie at the heart of the way we do things and define our culture and our commitment to the highest principles of personal and professional conduct

We lead by example

We work together

We respect the individual

We seek the facts and provide insights

We are open & honest in our communication

We are committed to our communities

Above all, we act with integrity

This is the KPMG Story

Our Purpose, Values, Vision, Strategy and Promise combine powerfully, helping us articulate what we stand for, where we are today and where we are going in the future.
Our advisory services across typical stages of the life cycle - water sector

**Integrated advice across the asset lifecycle**

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**Water resource value chain**

- Collection and storage
- Filtration & Disinfection
- Distribution
- Delivery
- Metering & Billing
- Recovery, Sewage

**Water Functions**

- Water Resource Management
- Water for production
- Rural Water Supply
- Urban water supply
- Sanitation and Hygiene
- Climate change and resilience
We have strong credentials within the practice and globally to drive established solutions in Water sector.

- **2 Key Central Ministries** i.e. MDWS and MOUD-Govt. of India in achieving their vision on Water and WASH Sector
- **More than 10 states** in Water and related sector domains
- **MWRRA** - Policies, Regulatory framework, Dispute resolution and conflict management strategies
- India’s First Integrated State Water Plan- Godavari
- Global Water Sector Authorities viz. USA, Australia, Dubai, Poland, Russia, South Africa, Oman, Jakarta, Singapore, Canada

**across Core areas in Water sector**

- **4+ projects**
  - Equitable distribution of water in sub-basins/ basin

- **11+ projects**
  - Enhancement and preservation of water quality in waterbodies and rivers

- **20+ projects**
  - Urban and Rural Water Supply

- **12+ projects**
  - Water Production and Distribution

- **7+ projects**
  - Water Sustainability

- **31+ projects**
  - Tariff modelling with Bulk water Tariff across 5+ projects

- **6 projects**
  - Groundwater Management and Cropping Pattern assessment

- **8+ projects**
  - De-Salination and Water Treatment

**Water Resource Management**

**Water Supply Management**

**Water & cross-cutting domains**
Some of the Best Practices in Water Regulation from around the world

1. Australian Urban Water Regulation Reform
2. Building Block Approach to Water Tariff
3. Jordan Water Authority
4. Africa’s Web based monitoring and Reporting Framework
Australian Urban Water Regulation Reform

Overview and interaction between economic regulation, environmental regulation, and health regulation

A Hybrid regulatory Approach

- Standards Based Approach
- Principle based approach to regulation
- Economic regulation based approach

Interaction between health, environment and economic regulation

Step/process

1. Health and environmental regulators set standards (Potentially in line with community expectations)
2. Water business propose prices reflecting the efficient and prudent costs of delivering services in line with standards (and sometime beyond standards where can show this is reflection of customer expectations)
3. Economic regulators determine prices required to recover efficient and prudent costs of meeting the standards

Function

Health Regulation

Aim

Mitigate the risk of the provision of unsafe drinking water (and associated human health implications)

Involves

- Monitoring & enforcing water and recycled water quality standards

Environmental Regulation

Mitigate the impact of water and wastewater collection, conveyance and treatment on the environment

- Monitoring & enforcing discharge standards
- Regulating aspects of sewerage treatment & recycled water schemes
- Overseeing management of odors and bio solids

Economic Regulation

Promote effective competition (where possible) and/or encourage efficiency

- Setting prices that reflect the efficient costs if water service provision
- Aligning water providers incentives with those of customers
- Licensing and monitoring supplier’s compliance
- Overseeing competition

Service Provision

Provide services consistent with standards and customer and shareholder expectations

- Understanding customer expectations
- Seeking out efficiency and innovations that benefit customers and stakeholders
- Monitoring against the standards and incident management and emergency response

- Monitoring & enforcing discharge standards
- Regulating aspects of sewerage treatment & recycled water schemes
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- Monitoring against the standards and incident management and emergency response
Building-block” approach to Tariff setting

Most successful regulatory systems across the world adopts this approach to determining tariff.
Countries like UK, US & Australia commonly use this approach.
Regulators in Australia focus on forecasts of costs while regulators in US may pay more attention to historic costs.

Form of control
- Indexation
- Price of revenue cap
- Regulatory lag

Maximum Allowed Revenue

Tariff Structure

Customer Contract

Depreciation/ Capital Asset Maintenance

Reasonable Rate of Return (WACC)

Target return on Assets

Regulated Rate of Return

Efficiency Adjustment

New Capital Expenditure

CAPEX

Service Standards

Actual Operating and Maintenance Expense

OPEX efficiency Adjustment

OPEX

Operating and Maintenance Expense

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Jordan Water Authority - Drought Mitigation through Decentralized Water Savings

- Jordan is one of the driest countries on earth. Second most water scarce country.
- The Authority adopts an incentive based approach to mitigate drought.
- Households provided with interest free loans to set-up rainwater harvesting systems and solar units.
- The devolution of loans serves as a revolving fund to give further loans to other families.
- The RWH provides water for the equivalent of 25 weeks of consumption.
- Supplementary source provision and reduced dependence on the utility during a drought season.
- More than 300 families benefitted in the region.
- One of the most successful initiatives in the sector as it also provides support for hydroponic agriculture (75% less water use) with no fertilizers.
Africa faces multiple challenges that adversely affect public health. One major challenge is the ability for both rural and urban Africans to access a clean water supply.

The WHO (2006) stated that, in 2004, only 16% of people in sub-Saharan Africa had access to drinking water through a household connection.

Weak policies, mismanagement of resources, poor long-term investment, and a lack of environmental research, etc exacerbated the problem.

The Government realized the need for centralized management and developed a web-based monitoring.

This system has reduced the efforts and duplication of monitoring efforts at various levels.

Provides real time data which promotes effective decision making, crisis management, capacity building and so on.

Gold Award by International Water Association in the category of Governance, Institutions and Social Enterprise
Thank you

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