

Principles of IWRM

At the international Conference of Water & the environment (ICWE) held in Dublin, Ireland in 1992 over 500 participants representing 100 countries & 80 international and nongovernmental organizations the following principles were recommended to guide water management & development efforts.

Principle 1 "Ecological" :- Fresh water is a finite & vulnerable resource essential to sustain life, development & environment. ~~It~~ It calls for a holistic approach to WRM, "linking social and economic development with protection of natural systems" (ICWE 1992), Recognizing the catchment area or river basin as the most appropriate unit for WRM. Principle I calls for coordination across the range of human activities that use and affect water in a given river basin. IWRM approaches incorporate this principle into its emphasis on integration between all concerned water sector.

Principle 2 "Institutional"; ~~dev~~ water development & management should be based on a participatory approach, involving users, planners and policy-makers at all levels.

This participatory approach is to raise awareness of water issue among policy-makers & the general public. It emphasizes subsidiarity - management decisions should be taken at the lowest appropriate level with central government retaining regulatory & support roles. It advocates increased accountability of management institutions & full consultation & involvement

of users in the planning & implementation of water projects. IWRM applies this principle through its concepts of decentralization & participation discussed below.

Principle 3 "Gender":- The approach emphasizes the important synergy that exists between gender equity and sustainable water management. Worldwide, women play a key role in the collection of water for domestic - and often agricultural - use, but in many societies, women are excluded from water management decisions. IWRM includes an emphasis on empowering women in its focus on participatory management and capacity building.

Principle 4 "Economic":- known as the "instrument principle", the approach emphasizes the importance of economic tools in helping achieve efficient & equitable use of water resources. The human right to access clean water and sanitation at affordable prices must be recognized but the scarcity of water demands that economic perspectives should not be ignored. In conditions where water is especially limiting where supply augmentation is not a feasible option, economic tools should play a larger role in determining how limited water resource should be distributed efficiently and equitably. IWRM emphasizes on economic and financial sustainability.

#### 4) The Need for a National Water Policy.

- 1) → Water is a prime natural resource, a basic human need and a precious national asset. Planning and development resources need to be governed by national perspectives.
- 2) → India has more than 18% of the world's population, but has only ~~4%~~ 4% of renewable water resources  
\* 2.4% of land area.
- 3) → There are further limits on utilizable quantities of water owing to uneven distribution over time and space.  
[Water does not respect state boundaries]
- 4) → In addition, there are challenges of flood and draught. Growing population, rising need, climate change, mismanagement, wastage, inefficient use and also pollution.
- 5) → Water like air is one of the most basic requirements for life. If a national law is considered necessary on subjects such as the environment, forests, wildlife, biological diversity, etc. then a national law on water is even more necessary.
- 6) → Under the Indian constitution water is primarily a state subject but it is an increasingly important national concern in the context of:-
  - a) The right to water being a part of the fundamental right to life.
  - b) The perception of a water crisis of the mounting pressure on a resource.
  - c) The inter-use and inter-state conflicts that this leads to & the need for a national consensus on water-sharing principles and on the arrangements for minimising

conflicts and settling them quickly without resort to adjudication to the extent possible.

- d) The threat to this vital resource by the massive generation of waste by various use of water & the server pollution & contamination caused by it.
- e) The equity implications of the distribution use and control of water, equity as between user, users, sectors, states, countries and generations.
- f) Different state governments tend to adopt different positions on the right of different states over the waters of a river basin. A national statement of the general legal position & principles that should govern such cases in a desirable way should be required i.e. as nation water policy Hence a National water policy is necessary.

⑤ The Committee proposed the the NWC should have eight divisions. These are:-

\* Irrigation Reform Division:-

This division will assist states to focus on irrigation projects and improve water management.

\* River Rejuvenation Division:-

This division will help participatory institutions at various levels to implement region-specific programs for rejuvenation of rivers.

### \* Aquifer Mapping & Participatory Ground Water Management Division:-

This division will lead the National Aquifer Management programme for mapping and management of aquifer systems in the country. To facilitate its implementation it will build relationships with state ground water department, research institutions etc.

### \* Water Security Division:-

This division will devise policies & programs to tackle challenges related to water security. These include: (i) ensuring the right to water for life and (ii) protecting the agrarian economy from the impact of floods and droughts.

### \* Urban and Industrial Water Division:-

This division will help devise cost-effective and appropriate technology to recycle and reuse urban and industrial waste water. It will also map aquifers in urban India and develop strategies for sustainable ground water management in cities.

### \* Water Quality Division:- Data Management & Transparency Division

This division will create and maintain a transparent & accessible system of data management on water for public use.

### \* Water Quality Division:-

This division will develop & implement programs to control pollution of water bodies and aquifers.

### \* Knowledge Management and Capacity Building Division:-

This division will be responsible for development of institutions for capacity building of water professionals in water & land management.

### ③ Roles and Functions of Water Users Association (WUA)

The principal functions to be performed by the Association in its area of operation are,

- \* To prevent water from any water resource being wasted
- \* To protect water resources
- \* To prevent any unlawful water use
- \* To remove or arrange to remove any obstruction unlawfully placed in a watercourse.
- \* To prevent any unlawful act likely to reduce the quality of water in any water resource
- \* To exercise general supervision over water resources.
- \* To regulate the flow of any watercourse by -
  - clearing its channel
  - reducing the risk of damage to the land in the event of floods.
  - Changing a watercourse back to its previous course where it has been altered through natural causes
- \* To investigate and record -
  - The quantity of water at different levels of flow in a watercourse
  - the times when and
  - the place where water may be used by any person entitled to use water from a water resource
- \* To construct, purchase or otherwise acquire, control, operate and maintain waterworks considered to be necessary for -

→ Supplying water to land for irrigation or other purposes

\* To supervise and regulate the distribution and use of water from a water resource according to the relevant water use entitlements by erecting and maintaining for -

→ measuring and dividing or

→ Controlling the diversion of the flow of water.

⑨

An IWRM implementation is focused on three basis and aims at avoiding a fragmented approach of water resource management by considering the following aspects.

→ Enabling Environment:- A proper enabling environment is essential to both ensure the rights and assets of all stakeholder (Individuals as well as public and private sector organizations and companies) and also protects public assets such as an intrinsic environmental values

2) Role of institutions:- Institutional development is critical to the formulation & implementation of IWRM policies & programmes. Failure to match responsibilities authority and capacities for action are all major sources of difficulty with implementing IWRM.

3) Management Instruments:- The management instruments for IWRM are the tools and methods that enable & help decision-makers to make rational and informed choice between alternative actions.

Some of the cross-cutting conditions that are also important to consider when implementing IWRM are:-

- Political will and commitment
- Capacity development
- Adequate investment, financial stability, and sustainable cost recovery.
- Monitoring and evaluation.

IWRM should be viewed as a process rather than a one-shot approach

- There is no correct administrative model
- The art of IWRM lies in selecting, adjusting and applying the right mix of these tools for a given situation.
- IWRM has no fixed beginnings or endings.

