

COMPARATIVE ANALYSIS OF WATER ACT OF INDIA WITH DEVELOPED, DEVELOPING AND UNDERDEVELOPED COUNTRIES

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ABSTRACT

Different countries face more or less similar kind of Environmental problems. Well formulated laws for protection of environment and environmental resources and their well enforcement may prove to be a very important tool in dealing with environmental problems. Different countries adopt different legal strategies to deal with environmental problems according to their cultural, economic, geographical, political and technological scenario. Sometimes they obtain similar results though adopting different environmental legislation provisions. Thus, comparison of Environmental legislation of different countries serves as the basis to understand different strategies which can be adopted to deal effectively with environmental problems and achieve the common goal of sustainable development. This study involves the Comparison of water act of India with the water related legislation of selected developed, developing and under developed countries to understand their laws and find out how Indian water act is different or similar to them and also find out the scope of improvement in Indian Water Act.

Keyword: - *Water Act, Comparative Analysis, Developed, Developing, Under-developed, Legislation*

1. INTRODUCTION

Environmental problems faced by different countries are of similar kind. Only the extent, to which a particular issue exists, differs from country to country. For the countries which are contiguous, pollution of natural resources and other environmental issues travel from one country to the other. Environmental laws enacted in different countries to deal with these issues might serve the similar purpose but can be very different according to need it has to satisfy.

By comparing environmental legislations of different countries, we can get the chance to critically study our own legislation system. Acts are the same from the time they have been enacted; only some amendments have been done. Thus, we can think of rejecting the bad aspects from the law, which we initially included at the time of enactment but over the years found to be inappropriate or meaningless or redundant. Also by comparing with the environmental legislation of other countries, we can think of incorporating several good aspects of other countries legislation into ours. This study is also useful in developing future policies to deal with environmental issues.

However, the scope of this study is limited to comparison of Water Act of selected countries of the world with Indian Water Act. Comparison of legislations related to other aspects of environment is beyond the scope of this study.

2. METHODOLOGY OF STUDY

Methodology for the study involves, selection of countries for comparison, developing criteria for comparison, study the general and specific aspects Water related Acts of all the selected countries, perform comparative analysis and suggest the areas of improvement in Indian Water Act.

2.1 Selection and Grouping of Countries for Comparison:

Countries have been selected and then classified in various groups based on their geographical locations. The groups of the countries for comparison are as follows:

GROUPS	COUNTRIES
Group - 1	Australia; New Zealand; Malaysia; Solomon Islands
Group - 2	India; Bangladesh; Pakistan
Group - 3	USA; Canada
Group - 4	UK; Germany

2.2 Classification of Countries based on selected criteria for comparison:

Climate, Population Density and Development are selected as criteria for comparison because they have considerable impact on the environment related legislation of the country. Classification of countries based on these criteria is given in the following table.

Table – 1 Classification of Countries based on Selected Criteria for Comparison

CRITERIA	CLIMATE	POPULATION DENSITY	DEVELOPMENT
GROUP – 1			
Australia	Moderate with extreme diurnal variation	Low	Very High
New Zealand	New Zealand has mild temperatures, moderately high rainfall, and many hours of sunshine throughout most of the country.	Low	High
Malaysia	Malaysia essentially observes tropical weather, without extremely high temperatures. Humidity however is a common feature; nights in Malaysia are fairly cool.	Moderate	High
Solomon Islands	It has a tropical monsoon climate, with few extremes of temperature and weather.	Low	Low
GROUP – 2			
India	Seasonal variations	Very high	Medium
Bangladesh	Subtropical monsoon climate characterized by wide seasonal variations in rainfall, moderately warm temperatures, and high humidity	Very high	Low
Pakistan	Arid, characterized by hot summers and cool or cold winters, and wide variations	High	Medium

	between extremes of temperature at given locations		
GROUP – 3			
USA	Cold to extreme cold	Moderate	Very high
Canada	Average winter and summer high temperatures across Canada vary according to the location. Cold country	Low	Very High
Group – 4			
UK	The United Kingdom has a temperate climate, with plentiful rainfall all year round. The temperature varies with the seasons but seldom drops below -10 degrees Celsius (14.0° Fahrenheit) or rises above 35 degrees Celsius (95° Fahrenheit).	High	Very High
Germany	Germany has a temperate climate throughout the country with warm summers and cold winters, however long periods of frost or snow are rare.	Moderate	Very High

2.3 Study of General and Specific Provisions of the Water related Legislation of Selected Countries:

GROUP - I

1) AUSTRALIA:

- All of the states and territories of Australia that are self-governing are separate jurisdictions, and have their own system of courts and parliaments.
- The systems of laws in each state are influential on each other, but not binding.
- Thus, every state of Australia has got rights to formulate their own laws. Therefore different laws for the water pollution control formulated as Victoria; Queensland, New south wales (NSW) and Tasmania prevail in the whole country which shows the lack of uniformity in laws. Water Act 2000 (Queensland) was the first individual Act enacted for Water resources management which involves the aspects of water courses, water rights, water planning, water licences and permits, water supply and demand management, underground water management, water authorities, Investigation, enforcement and offences, reviews and appeals etc.
- Also the offences relation to water contamination are covered under part 3C of Environment Protection Act, 1994; Queensland.
- Water Act, 2007 is An Act to make provision for the management of the water resources of the Murray-Darling Basin, and to make provision for other matters of national interest in relation to water and water information, and for related purposes. It is for enabling the Commonwealth, in conjunction with the Basin States, to manage the Basin water resources in the national interest and involves The Murray-Darling Basin Agreement; Management of Basin water resources; Water resource plans for particular water resource plan areas; Allocation of risks in relation to reductions in water availability; Audits by National Water Commission; Basin water charge and water market rules; Commonwealth Environmental Water Holder; Civil penalties, etc.

2) NEW ZEALAND:

- **Environment Act, 1986**
 - There are separate Acts related to the subjects of Climate change and Solid Wastes.

- But no separate Acts for control of emission of Air pollutants and control of discharge of Water pollutants; and these provisions are also not covered under Environment Act.
- This Act provides for the establishment of the office of Parliamentary Commissioner for the Environment and also the Ministry for the Environment.
- This Act includes the provision of 'Bind the Crown' means the government has to comply with the Act.
- Parliamentary Commissioner for the Environment appointed by the Governor-General on the recommendation of the House of Representatives possesses all the powers under this Act.
- The Commissioner shall in each year make a report to the House of Representatives on the performance of the Commissioner's functions under this Act.

3) MALAYSIA:

- **Waters Act, 1920 And Revised Act, 1989**

- It is for the protection of surface waters containing Rivers and streams only.
- No provisions are there for the protection of ground water.
- It is comparatively an old Act and there is a provision to make rules under this Act. Around 10 amendments have been done in the original act till the date.
- It also contains provisions for any property present into river and also for the restoration of river banks.
- This Act shall only apply to the States of Negeri Sembilan, Pahang, Perak, Selangor, Malacca, Penang and Federal Territory.
- All the powers under this Act has been authorized to State Authorities.

4) SOLOMON ISLAND:

- **The Environment Act, 1998**

- No separate Act for control of water pollution.
- It provides for the regulation of the discharge of pollutants to the air, water or land.
- The Director possesses all the Powers under this Act.
- The Director shall in every three years submit a report on the state of the environment to the Minister, who shall cause such report to be laid before the National Parliament.
- Several provisions under this Act important for this study are mentioned as under.
- Section 34. Causing Pollution And Noxious Discharges.
- - Section 35. Discharge Of Waste In Circumstances In Which It Is Likely To Cause Pollution.
- No specific provisions for Control of water pollution are observed.

GROUP II

5) INDIA:

- **The Water (Prevention and Control of Pollution) Act, 1974:**

- This Act is India's first attempt to comprehensively deal with environmental issues.
- It is to prevent the pollution of water by industrial, agricultural and household wastewater that can contaminate our water sources.
- The Act prohibits the discharge of pollutants into water bodies beyond a given standard, and lays down penalties for non-compliance.
- It provides for the formulation of CPCB and SPCB. The CPCB (Central Pollution Control Board) lays down standards for the prevention and control of water pollution. At the State level, the SPCBs (State Pollution Control Board) function under the direction provided to it by the CPCB and the state government.
- The Act was amended in 1988 to conform closely to the provisions of the Environment Protection Act, 1986
- The Water Act, 1974 with certain amendments in 1978 is an extensive legislation with more than sixty sections for the prevention and control of water pollution which involves the provisions like

powers to take water samples and their analysis, discharge of sewage or trade effluents, appeals, revision, minimum and maximum penalties, publication of names of offenders, offences by companies and Government departments, cognizance of offences, water laboratories, analysis etc.

- Prevention and control of water pollution is achieved through a permit or 'consent administration' procedure. Discharge of effluents is permitted by obtaining the consent of the State Water Board, subject to any condition they specify.

6) BANGLADESH:

- BANGLADESH WATER ACT, 2013 is in its nascent stage.
- It is to make provisions for integrated development, management, abstraction, distribution, use, protection and conservation of water resources.
- It is based on the National Water Policy.
- There are no provisions found for punishment related to industrial discharges.
- No private complaints before the court of law can be filed.
- Executive committee is headed by Director General of Water resource planning organization that is the Prime Minister; all the powers have been given to him. This shows over centralization of powers.
- This law does not correlate well with the Environment Protection Act, 1995.
- There are no provisions for establishing discharge standards and also for the establishment of ETPs.
- It generally talks about water management.
- Bangladesh Environment Conservation Act, 1995 involves;
- Section – 9 Discharge of excessive environment pollutants
- Section – 11 Sample Collection
- No other provisions are there regarding Water pollution control in Environment Conservation Act.

7) PAKISTAN:

- No separate Act for water pollution prevention and control; these provisions are included within PEPA.
- Some of the words such as 'Environment', 'Discharge', 'Effluent', 'Sewage', 'Standards' are very nicely defined.
- The Pakistan Environmental Protection Council shall be headed by Prime Minister. And only two meetings shall be carried out per year to review the act and its enforcement status. This suggests over centralization or 'No absence of decentralization' of the act.
- Provisions are more or less similar to EPA, India.
- Provisions are generalized and it misses out the specific provisions.
- For example:
- Section 11 Prohibition of Certain Discharges or Emissions
- Section 16 Environmental Protection Order
- It talks about effluent discharge, solid waste disposal and emission of pollutants at the same time and in the same section. Specifics things are missing here.

GROUP III

8) USA:

- **Clean Water Act**

- The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters.
- The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act which was enacted to provide for water pollution control activities in the Public Health Service of the Federal Security Agency and in the Federal Works Agency, and for other purposes.
- But the Act was significantly reorganized and expanded in 1972.

- "Clean Water Act" became the Act's common name with amendments in 1972.
- Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry.
- The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.
- Water quality standards for all contaminants in surface waters have also been set.
- The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained.
- It covers EPA's National Pollutant Discharge Elimination System (NPDES) permit program which controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

9) CANADA:

- **Canada Water Act, 2009**
 - In Canada, different states have their own acts.
 - This Act is to provide for the management of the water resources of Canada, including research, planning and implementation of programs relating to the conservation, development and utilization of water resources.
 - It talks about comprehensive water resource management and establishment of inter-governmental committees.

GROUP IV

10) UK:

- **Water Act, 1989 amended as Water Act, 2003**
 - The Act only applies to England and Wales; and various functions of the Secretary of State introduced or amended by the Act are devolved to be exercised by the National Assembly for Wales.
 - The four broad aims of the Act are:
 - The sustainable use of water resources
 - Strengthening the voice of consumers
 - This law talks about different Licence types which are required for any abstraction from a source of supply such as Temporary licence, Transfer licence and Full licence.

11) GERMANY:

- **The Federal Water Act 2002**
 - It is an Act on the Regulation of Matters Pertaining to Water.
 - It applies to all Surface waters, ground waters and Coastal waters.
 - It has the provisions like Obligation to obtain a permit or licence; Conditions and conditions pertaining to use; Supranational and international requirements; Requirements applying to the discharge of waste water; Registration of existing rights and authorisations; Construction and operation of waste water installations; Supervision; Supervision; Duties; etc.

4. CONCLUSIONS

Considering all of the above, it is found that India has well formulated water act considering its state of development.

Following are the areas in which Water (Prevention and Control of Pollution) Act, 1974 can be improved.

- It shall be applicable to whole of India, just like the Air Act.
- As Chairman is a key person for enforcement of law, it shall provide for the full time chairman only.
- It shall provide for developing stream standards for the specific water body based on the status of its water quality, its carrying capacity to maintain its suitability for all the useful applications at any time.
- Currently it is focused on the point discharges and industrial discharges only but it shall also include provisions for the discharge of municipal wastewater, agriculture runoffs, storm water overflow, oil discharges or spills during oil extraction, mining wastewater, etc. and prevention and treatment thereof.
- It shall put more emphasize on research and development related to the economical options of cleaner technologies, less water intensive technologies, water recycle and reuse applications, efficient water treatment technologies, etc.
- Good amount of funding may be provided to eliminate the factor of unavailability of adequate funding for research and development as a limitation to it.
- The main focus of Board shall be regulating the provisions of the Act by intense monitoring of the quality of all the water bodies, all the point and non-point discharges, waste water generating industries, CETPs, STPs, etc.
- To support the Board in its functioning related to monitoring and regulating, a separate institution/agency may be established that exclusively works for collection of data related to the water quality of various water bodies time to time, the characteristic of final effluent coming out from STPs and CETPs and all the major industries who have been given the permit to directly discharge into natural water bodies.
- Such Data may be displayed online so that people can get information about the water quality of water resources surrounding them.
- As this institute will only be mandated to collect such data and report the board and inform the board on daily basis if it finds the higher level of harmful or toxic pollutants or any emergency situations that require immediate cure in order to protect the human health and the ecological health, the task of data collection and reporting will be accelerated and board will be provided with the enough reliable data to accelerate its main function of regulation. Also, by this way, many emergency situations are likely to be handled more proficiently.
- Subsidies may be awarded to small and medium scale industries to help them achieve the requirements of the act.
- Awards may be given for any outstanding and useful research work in this area.
- Performance certificate may be provided to the industries for their continual outstanding performance beyond just complying with the provisions of this Act.
- Sustainability ranking or mark may be provided to the products based on their extent of sustainability and industries may be required to publish the sustainability mark along with the product details on the product.
- It shall include provisions for declaration of certain water bodies or a part thereof as a conservation zone for conservation of their pristine conditions for ecological development and restrain several activities such as extraction of water or discharge of water to such water bodies.
- It shall incorporate the detailed provisions for organization of public awareness and training programs, ecological tours of the water bodies to make them understand the importance of water bodies and develop people's will to protect them.
- It shall incorporate the provisions for obtaining water usage permit specifying the permitted source of extraction and permitted quantity extraction for specific use along with the discharge permit.
- It shall include the provisions for prioritization of water usage applications, giving priority to domestic and irrigation application followed by industrial and other applications.
- It may include the provisions for the agreement with other contiguous countries to maintain some discharge standards and carryout several activities in order to protect the trans-boundary water resources.
- It shall include provisions for use of information and technology for better enforcement of the Act.

6. REFERENCES

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