Attitude Changes' Investigation in Iran's Parliamentary Laws towards Integrated Management of Urban Water/Wastewater

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ABSTRACT

The main purpose of this study is to investigate the attitude changes in integrated management of urban water/wastewater in Iran's parliamentary laws since the Constitutional Revolution. During this period, the National Parliament and the Islamic Parliament have ratified eight and ten laws regarding this field, respectively. According to the obtained results, water resources and wastewater collection have been considered more than other sections of the cycle, and the wastewater treatment sector has had the lowest frequency. In this regard, the main attitude of the laws and the presented solutions have been "political". In addition, before the Islamic Revolution, there were no laws with a "preventive and protective" approach, and none of the laws provided an "educational-promotional" solution. However, after the Islamic Revolution, this essential and practical approach has been considered in some laws. The initial national authorities for water distribution and treatment were the Municipality and the Ministry of Health, respectively; however, the major responsibilities of this sector were left to the Ministry of Energy since its establishment in 1974. In the first years after the Islamic Revolution, the Ministry of Energy was still responsible for this subject, and no new authority had been created. About a decade later, the holding of National Water and Wastewater Company was formed as the head of the authority, and the provincial companies were created as its subsets, which was the milestone of integrated urban water and wastewater management in the country; the original nature of this authority has been preserved so far since its formation. Examining the parliament's legislative capacity indicates that emerging issues such as water scarcity, drought, supply and demand management, and consumption patterns should be considered in drafting new laws for the future.

KEYWORDS

Attitude Change, Integrated Management, Urban Water and Wastewater, Laws, Iran.

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1. Introduction

Urban water/wastewater cycle sections are intricately linked, including water resources, water treatment, distribution systems, water consumption, wastewater collection, and treatment. Unlike the integrated approaches, these sections are considered separate from the conventional management approaches [1-5, 7]. The most important goal of using a new approach is to achieve sustainable development in the long term [5, 6]. For example, Nazlabadi et al. have paid attention to the integrated approach, in which all aspects of the urban water cycle are considered an integrated system [4].

With Iran's long history of legislation, the critical question is: "what roles do different sectors play in urban water/wastewater management's integrated approach within the laws and regulations since the Constitutional Revolution?" In addition, was the implementation progress in accordance with the laws? What are the main challenges, and at which levels? Similarly, what is the attitude and approaches of the laws in this area? In addition, what are the solutions provided in each law to realize this attitude? From a structural (institutional) point of view, where are the main custodians of the laws and regulations?

The main purpose of this study is attitude changes' investigation in Iran's parliamentary laws towards integrated management of urban water/wastewater before and after the Islamic Revolution.

2. Methodology

The descriptive-analytical research methodology is used in this study, employing a range of historical data. Moreover, quantitative and qualitative methods have been used to analyze data. This study aimed to answer the following questions:

1. What has been the attitude towards urban water/ wastewater in-laws and regulations?
2. How does each section of the integrated urban water/ wastewater management consider in laws and regulations?
3. In which period the level of attention to different parts of the urban water/ wastewater was much higher?
4. Which part of the integrated urban water/ wastewater management has been neglected in laws and regulations?
5. What have been the attitudes and approaches to laws and regulations in this area?
6. What kind of solutions have been provided in these laws and regulations?
7. How have the key custodians of the laws divided responsibilities between them?
8. How should the issue of urban water/ wastewater be considered in future laws?

To find the answers to the above questions, while examining the formation of legislative thinking in the country, all laws related to different parts of the urban water/ wastewater cycle since the Constitutional Revolution till now, before and after the Islamic Revolution, have been evaluated and quantitatively analyzed. In the next step, the trend of attitude changes towards this area is examined based on the information found. Each law is investigated from the content and structural (institutional) perspectives, including the related custodians, the attitude and approach of the laws, and the solutions provided to achieve the integration.

3. Discussion and Results

Since the Constitutional Revolution, the National Parliament and the Islamic Parliament have ratified eight and ten laws regarding this field, respectively. Based on the results, the evolution of attitudes toward integrated urban water and wastewater management in Iranian laws can be examined from both content and structural (institutional) perspectives.

In terms of content, the reviews consist of four different sections. The first part is the existing laws that oversee different parts of the urban water/ wastewater cycle to achieve integrated management. According to the obtained results, water resources and wastewater collection have been considered more than other sections of the cycle, and the wastewater treatment sector has had the lowest frequency.

The second part evaluates the attitude towards this field in the laws. Four types of technical, social, economic, and political attitudes are considered. Results show that the laws' central attitude has been "political". Figure 1 illustrates the frequency of the laws based on the different attitudes in two time periods; (a) From the Constitutional Revolution to the Islamic Revolution (1906-1979), (b) From the Islamic Revolution to the present (1979-2022).

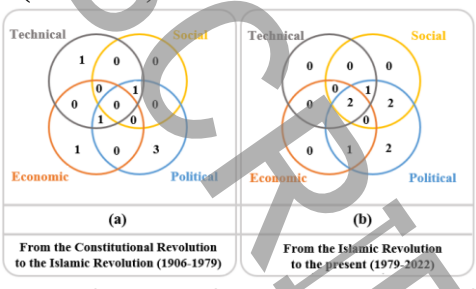

Figure 1. The frequency of the laws based on the different attitudes in two time period

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In the third part, laws are examined and analyzed based on different approaches, including restorative (related to operation and maintenance stages), preventive-protective, and combined. As is shown in Figure 2, before the Islamic Revolution, there were no laws with a "preventive and protective" approach. Nevertheless, after the Islamic Revolution, this essential and practical approach has been considered in some laws.

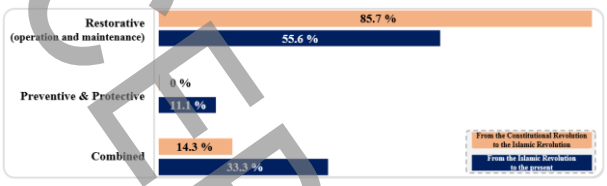

Figure 2. The frequency of the laws based on different approaches in two time period

The fourth part refers to the solutions provided in each law to implement this approach in this area. Solutions can be divided into educational-promotional, disciplinary-law enforcement, socio-economic and political categories. In this regard, the leading presented solutions have been "political," and none of the laws before the Islamic Revolution provided an "educational-promotional" solution.

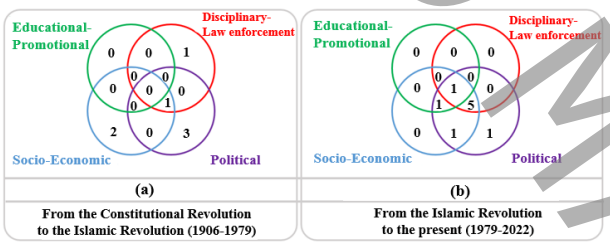

Figure 3. Frequency of the provided solutions in laws to realize the attitude of integrated management

Furthermore, from a structural (institutional) point of view, the issue of recognizing the main custodians of the laws and division of responsibilities between agencies has also been evaluated. Based on the results, the initial national agencies for "water distribution" and "water treatment" were the "Municipality" and the "Ministry of Health," respectively. Nevertheless, the major responsibilities were left to the "Ministry of Energy" since its establishment in 1974, and this continued to the first years after the Islamic Revolution. About a decade later, the holding of "National Water and Wastewater Company" formed as the head of the authority, and the provincial companies were created as its subsets, which was the milestone of integrated urban water and wastewater management in the country. The original nature of this authority has been preserved so far since its formation.

4. Conclusions

Finally, according to the results of this research, it is suggested that the following items can be considered to achieve integrated urban water/wastewater management in Iran:

1- Paying attention to the identified laws in this research to properly understand the content and structural (institutional) attitude of this subject in Iran;
2- Adequate consideration of macro policies in this subject, such as the National Spatial Planning Document in approving and revising the laws;
3- Paying attention to quantitative facts in the urban water/ wastewater situation of Iran for new laws amendment;
4- The need to create new laws in the less considered sectors of urban water/ wastewater cycle, such as "wastewater treatment" and "wastewater recycling and reuse";
5- Requirement of considering privatization in the laws.

Examining the parliament's legislative capacity indicates that emerging issues such as water scarcity, drought, supply and demand management, and consumption patterns should be considered in drafting new laws for the future.

5. References

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