

INTRODUCTION

Thailand encounters water problems annually. There are water shortages and flooding in various areas. Currently, water becomes a limited resource. Water use still increases continuously for supporting population growth, economic expansion, and urbanisation. Therefore, water management efficiently is an essential issue for Thailand.

Thailand manages water resources which are divided into surface water and groundwater. For the last decade, over 48 agencies manage water in a different direction and lack connectivity. It is the cause of budget loss and disintegrated water problem-solving.

In January 2019, the Thai government adopted the Act on Water Resources B.E.2561 (2018) to be the leading law for national water management. It is a challenging aspect that this new national water law is expected to improve water management problems in Thailand sustainable.



How does the new water law can improve problems of water management in Thailand?

What are the issues of water management in Thailand?

How can the new water law improve the problems of water management in Thailand?

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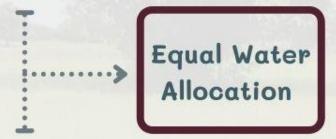
How can we adapt the international policies or water management of other countries for proposing Thailand's water management guideline?

A qualitative method by analyzing secondary data and interviewing.



PROBLEMS OF WATER MANAGEMENT

- Water demand increases & water use prioritization lack control
- 2) Water users do not concern about water value
- 3) Wastewater from the leakage
- 4) Illegal deforestation
- 5) Land-use change affects biodiversity loss



Water Quality
and Water
Resources
Conservation

- 6) Building structure obstructs water flow
- 7) Insufficient control of water use
- 8) A conflict between water users in the upstream and downstream areas
- Institution complexity of water administrators

Water Crisis Management

Integrated
Water
Resources
Management

CONCEPT OF WATER RESOURCE ACT AND SENSITIVE ASPECT

EQUAL WATER ALLOCATION

- Section 7 formulates the basic rights of people to access public water resources.
- Chapter 4 classifies the use of shared water resources into three types.

SENSITIVE ASPECT

- The conflict between water users in a different economic sector can occur.
- The explicit criteria of water payment must be expressed.
- Some businesses invest by paying more money for using more water.
- Charging water can be the cause of product price raise.

WATER QUALITY AND WATER RESOURCES CONSERVATION

- Chapter 6 focuses on prescribing and regulating for conserving and developing public water resources.
- Section 73 concerns the environmentally protected area.
- Section 78 advocates water users to preserve the ecology in their area.

SENSITIVE ASPECT

 The conflict between government officer who uses the law and people who take advantage of the area for their livelihood.





Water Framework Directive (WFD) is the tool that uses for finding the guideline for water management.

<u>Article 5</u> of WFD prescribes the economic analysis of water use and the environmental impact of human activities.

Article 9 of WFD determines the cost of water service. Water price will ensure efficient water use and contribute to the environmental objective.

Economic Instrument



1. NON - MONETARY VOLUNTARY AGREEMENT

2. PAYMENT FOR ECOSYSTEM SERVICE (PES)

3. PRODUCT EVALUATION

4. WATER TAX REDUCTION

5. SUBSIDIZATION

6. OTHER INCENTIVE MEASURES

7. POLLUTER PAY

NON - MONETARY VOLUNTARY AGREEMENT

Water users support the management with willingness without enforcement. This process can reduce the conflict of water users between different sectors.







PAYMENT FOR ECOSYSTEM SERVICE (PES)

The government uses PES for motivating water users to conserve water resources. This measure can encourage the cooperation of water users in the different sectors by supporting the compensation. The compensation can be a convenient infrastructure or money for supporting the community's activities.

PRODUCT EVALUATION

Product evaluation is the instrument to check and control the balance between water use and the value of goods. The instrument considers water use efficiency. Moreover, it will support the government to control the prioritization for allocating water to the suitable part which gives more value.



WATER TAX REDUCTION



Government should support industries by reducing the water cost for an industry that uses innovative processes or improving the procedure for saving water, treating wastewater, and producing products to encourage the awareness of water value.



OTHER INCENTIVE MEASURES

The government will support the other incentive measure such as the 3R (reduce reuse and recycle) continuously. Furthermore, government convinces entrepreneurs to build water resources in their area.



POLLUTER PAY



Polluter pay stimulates the responsibility of contamination sources. Industries or activities which are the cause of pollution have to pay for polluted treatment.



CONCLUSION

Water allocation and water resources conservation are the essential water management problems in Thailand. Water will have more value by promoting equally water rights and efficiently water allocation in the Water Resources Act. Moreover, the ecosystem of water sources will be concerned and water quality will be prevented. However, there are sensitive aspects of the law that governments have to consider when using the law in a practical process. **Economic instrument concepts and incentive measures** are adapted to improve water management and complete the sensitive areas of the law. It corresponds to the Water Framework Directive (WFD) which mentioned about economic analysis of water use and the environmental impact of human activities.

Non – monetary voluntary agreements and PES can reduce conflict of water users and they can increase water awareness. Product evaluation can support the government to prioritize water use. Water tax reduction and subsidization can motivate industries to provide efficient water use. Besides, Pollution pay can control water quality.

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