



Community Participation Model for Water Management in Uthai Thani Province According to the Philosophy of Sustainable Sufficiency Economy¹

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Abstract

This research aims to analyze the five objectives of community participation model for water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy. **First** are the present obstacles for water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy. **Second** is community participation of water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy. **Third** is water diversions and water storage sources in lowlands to prevent floods and water shortages in Uthai Thani province according to the philosophy of sustainable sufficiency economy. **Forth** is the information system for community participation to make people realize the value of water and using them wisely in Uthai Thani province according to the philosophy of sustainable sufficiency economy. **Fifth** is to push the research results into the development plan in the model of community participation of all sectors involved for water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy. This research finds that the overall of community participation for water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy is in moderate level. Taking part in the operation is the highest level and the lowest level is meeting participations. The crucial problem of water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy is lacking of participants to attend group meetings or they are inefficient for water management.

Introduction

The situation of natural resources and environment in Thailand is influenced by changes in the global and domestic factors, climate change, population increasing, economic development, competition in trade and investment. On the other hand, management capacity and policies still need to improve, which is lead to degradation of natural resources and environment and affect the balance of the overall ecosystem continuously. (National Economic and Social Development Plan, vol. 11, 2012-2016, 2011)

Water is a natural resource that is vital to life and economic development. People use water under natural conditions such as rain, surface water and groundwater which we cannot be increased or decreased by human. Water pollution is also by nature. His Majesty is concerned in resolving problems with the water, which is essential to our lives and our careers, with farmers, which is a large part of the population of the Earth, from the beginning until the present reign. "...Key

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principles must include water consumption and water use water to cultivate, because living there. If there is no water, people cannot survive. No power for electricity..." His Majesty the King granted on March 17, 1986, at Chitralada Palace. Moreover, speeches about the importance of water must be managed to be enough upon the individuals who appear before the congratulatory. On the occasion of the birthday at Dusittalai Hall, Chitralada Palace on December 4, 1993 that "...Said many years ago. In the way of practice in order to provide sufficient and reasonable water resources. The word sufficient means to have enough on consumption in use, including the use of food in the house. For both use in agriculture and industry, water must have enough, if not enough, everything would collapse. Then everything we are proud that our country would halt progress and prosperity could never have developed. There's no prosperity without water..." The king's address made everyone aware of the concern about water issues. His Majesty is true on his subjects, therefore, water is a natural resource of Thailand to have managed both the quantity and quality of the concrete in both the short and long term. Both government, agencies, private sector stakeholders including communities in the watershed should be jointly reviewed and updated processes. Current concept and policies are based on the real practical, information, knowledge and wisdom of all stakeholders to understand the root of the problem. The current water management should include a mechanism. The participation of all parties should work together for implementing various solutions in all aspects. The achievement shall be sustained without social conflicts (excitation skewer, 2007).

Water management is the management process of water for both the quantity and quality to have consistency in maintaining the natural equilibrium in every basin. Importantly, community participation is important for water management. They need to study causes of problems and water resources such as water shortages, floods, and water pollution occurred in the community. They have to find the solution, policies and create action plan including activities. The joint decision to use finite water resources, beneficial joint control, joint management, fair evaluation, and share maintenance projects (Anekpong Thammathiwat and others 2012)

Water shortages, floods, and natural disasters are likely to occur more frequently. The ability to retain water used in the dry season is only 74,000 million cubic meters which is only 55,000 million cubic meters per year for real use. The demand is for irrigation water used in the area-specific only while demand for water will rise from 57,452 million cubic meters per year. In 2016, water will be needed the most in Central region. Next are Northeast, North and South. Water problem may increase and impact living eco-system including the environment of degraded areas (National Economic Development Plan, vol. 11, page 2012-2016)

Benefits to be received

Researcher realized that this study is benefit directly to local farmer and other sectors related to water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy as the following;

1. To understand the present obstacles of water management in Uthai Thani province accordingly the philosophy of sustainable sufficiency economy
2. To have community participation and group meetings from all aspect sectors related for seeking the solution and developing water management in Uthai Thani province accordingly the philosophy of sustainable sufficiency economy
3. To know the main elements of community participation water management in Uthai Thani province accordingly the philosophy of sustainable sufficiency economy



4. To know how to manage water diversions and water storage sources in lowlands to prevent floods and water shortages in Uthai Thani province

5. To get a better understanding on how to manage information system from community participation leading to a better water management in Uthai Thani province accordingly the philosophy of sustainable sufficiency economy

6. To use the research results for community participation in order to develop water management in Uthai Thani province accordingly the philosophy of sustainable sufficiency economy

Literature Review

1) Participation

Participation was stated by Nada Dumrilert (1999) that people volunteer themselves to develop the community in the way of making decision, evaluation, implementation and feeling like their own the community together. Parichard Walaisatien (1999) informed that participation is joining together aiming to develop the projects since the beginning till the end. Chinnawat Somsub (2026) mentioned that Frankly Lisk (1985) said that participation is a strong commitment of people to proceed and make the decision in every form of activities including economy, society, politic in the way of management and evaluation from related people which can enhance all forms of developments and resolutions.

In summary, participation in this research is the way of people who effects from all kind of activities or projects of the government. They will get together to manage, develop, and evaluate the plan continuously for resolutions and needs in the community.

2) The Philosophy of Sustainable Sufficiency Economy

“Sustainable Sufficiency Economy” is a philosophy of King Rama 9 providing to Thai people for over 25 years. This is the advice for people to know how to live happily in the modern society. This is a meaningful message to apply using in all level and aspects such as family, community, and society especially for country development.

3) Sufficient Economy and Water Management

Kitichai (2006) claimed that sufficient economy is a philosophy which can be applied to use in daily life, economy, society, politic including natural resources management and environment.

Natural resource management and the philosophy of sustainable sufficiency economy can be integrated for the benefits of community. The natural fertility will not be affected if the community has a plan to control and manage how to use natural resources effectively. Natural disaster in several areas of Thailand reflected unbalance of using natural resources and lack of proper soil and water conservation by the community. The investments to prevent natural disasters from the government and other sectors will not be used if having a plan to manage natural resources consistency by the community. Restoration of natural ecosystems will be healed by themselves by using natural resource management and the philosophy of sustainable sufficiency economy. The reverses of the ecological environment will be well managed by using the philosophy of sustainable sufficiency economy of the community efficiently and effectively.

In terms of water management, according to the philosophy of sustainable sufficiency economy, the importance of creating a balance of water resources is needed to maintain the forest and watershed areas by using the same plan of sustainable sufficiency economy of community.



Research Mythology

Populations and samples are the executive of from government, central and local public administration related to water management in Uthai Thai province. There are 18 representatives of community and local residents who can provide specific information for purposive sampling for one of each in every district of Uthai Thani province. Taro Yamane formula will be used for confidence of 95 percent and tolerances of .05 (Suchart Prasitrathasin, 2007) having appropriate sample size of 70 people, which was conducted using simple random sampling.

Tools and methods to collect the data used in the research are interview and questionnaire. The researcher created the tool step by step by analysis community participation for water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy in order to determine the variables and the question to study by collecting accurate information including validity. The language use and wordings as the tools had been checked including the appropriate and proper questions to be used. The researcher tried out with a small group for 30 participants who are not the targets of this research and analyzed for the reliability of the questionnaire using the Cronbach (Cronbach, 1971) by having the coefficient of alpha (Cronbach's Alpha - Coefficient).

Information and data analysis, the researcher analyzed with technique of Triangulation. This technique consists of multidisciplinary team, diversity of sources of information, and diversity of information and techniques (Bechstedt, 1997) The researcher use quantitative method to analyses the information received from questionnaire by using computer program to check the accurate information by percentage, frequency, mean, and standard deviation shown by descriptive method with explanation and evaluation at the same time for 5 levels of information.

Research Summary

It was appeared that; The present obstacles of water management in Uthai Thani province according to The philosophy of sustainable sufficiency economy is in the moderate level. Taking part in the operation is the highest level and the lowest level is meeting participations. Community participation of water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy was found that local residents do not pay attention to the group meetings. Also, water management there still needs to be improved. The related organizations should create the better understanding of water management to the community to prevent disasters to the farmers caused by water shortages.

Water diversions and water storage sources in lowlands to prevent floods and water shortages in the river basins of Uthai Thani province are important for water management and this information should be provided to the community. "Sustainable water management" should also be emphasized for natural balance which will be directly benefited to the community.

The information of community participation for water management was appeared that water information of Uthai Thani province should be kept as environmental geographic information linked to a database, and the system can accommodate more data. The data can be updated through the Internet at a later time.

Community participation model of water management according to the philosophy of sustainable sufficiency economy still need to community and participants related to realize how important to attend the group meetings to develop water management. To enhance the knowledge and skills those are necessary to the community in a way the power of learning. Encourage members of the community aware of the importance of learning and skills in thinking



processes. Analysis, problem solving, and use of knowledge in water management lead to the balance, sufficiency, and sustainability.

Research Discussion

1) The present obstacles of water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy is in the moderate level. Taking part in the operation is the highest level and the lowest level is meeting participations. This is because community still needs to know more about the advantage and disadvantage of water management which in line with Wicha Phongmesa (2007) studied about Farmer participation who are using irrigation water Huay Bang Puan, Tha Bo district, Nogn Khai province. The research found that participation was in the moderate level as well.

2) Community participation of water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy was found that local residents did not pay attention to the group meetings which they are inefficient for water management. All sectors related should encourage community to know the importance of water management to prevent water shortages. In line with Jariya Chartsuwananont (2012) this research studied about the conflict of water management in case of water shortages in Nakhonratchasima leading to the conflict between government and community 1) The process and decision of the project are inefficient 2) Lack of proper solution for the conflict 3) The conflict in the interests of each party. In addition, awareness and communication is also a factor that affects the conflict too. As part of the mobilization of resources to be applied in a situation of conflict of the group responsible for the project sponsor, project groups and groups who oppose the project to have used a similar format in resources such as newspapers, radio, media, and people.

3) Water diversions and water storage sources in lowlands to prevent floods and water shortages in the river basins of Uthai Thani province according to the philosophy of sustainable sufficiency economy was found that the important of water management should be provided to the community, and "Sustainable water management" emphasizing on natural balance which will be directly affected to the community. In line with Sutham Chantra (2013) this research studied about farmer participation for water management at Chi River irrigation project from a pumping station with electric Kut Khae village, Roi Et province. The research found that farmer participant is in the high level but lacked of cooperation between the government and farmers for the projects.

4) The information of community participation for water management leads to sustainable sufficiency economy. This research found that water information of Uthai Thani province should be kept as environmental geographic information linked to a database, and the system can accommodate more data. The data can be updated through the Internet at a later time. In line with Sutham Chantra (2013) this research studied about farmer participation for water management at Chi River irrigation project from a pumping station with electric Kut Khae village, Roi Et province. The research found that farmer participation lacked of cooperation between the government and farmers for the projects. The research results show that the government should open for farmer working together in every step including activities for water management. Also, Pakpoom Panrat (2015) this research studied about the effectiveness of water resource management for agriculture in the Chi River Basin. The results of study showed that the establishment of the central authorities to manage water resources in one unit and work together having main water management effectively.



The research results will be pushed into the development plan in the model of community participation of all sectors involved for water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy. The 1997 Constitution of the Kingdom of Thailand in section 72 stated that "the State must promote and encourage public participation in the conservation, maintenance, and takes advantage of the natural resources and biodiversity, balanced, including participation in the promotion, maintenance and protection of environmental quality, according to the principles of sustainable development, as well as the control and elimination of pollution that affect dementia health welfare and quality of life of the people."

Water is a key factor in people's daily lives. Whether for everyday consumer use and use for the benefit of economic and natural resources, it is an important, related to the ecosystem. There needs to be a process both quantity and quality, water management. In order to maintain the natural balance and integration in all segments, we need participation of all parties' particularly local residents 1) to study the problem and cause of the problem for water management such as water shortage, floods, water pollution and the need of community to solve the problems, 2) to create new activities making community realize how important for water management, 3) to make the action plan or policy to prevent water shortages or water problems in the community, 4) to make the decision together on how to use limited water supply they have more effectively, and 5) to manage or develop water management in the river basins efficiently and effectively.

Therefore, participation of all parties and the public administration are important for water management (currently there is no mechanism for this apparent) by providing more knowledge to develop water resources and focusing on local leader to lead their people to participate in the group meetings and activities in the community. In line with Sutham Chantra (2013) this research studied about famer participation for water management at Chi River irrigation project from a pumping station with electric Kut Khae village, Roi-Et province. The research found that farmer participation lacked of cooperation between the government and famers for the projects. The research results show that the government should open for farmer working together in every step including activities for water management. Also, Pakpoom Panrat (2015) this research studied about the effectiveness of water resource management for agriculture in the Chi River Basin namely 1) the research found that farmer participant is in the high level but lacked of cooperation between the government and famers for the projects. Next is management, then is society accordingly, and 2) main factor that influences the effectiveness of management of water resources for agriculture in the watershed area consists of three factors: social factor, management, policy which effect to water management for agriculture in the basin for 74.4%, level of .01 3) Water management is for agriculture in the basin effectively

Recommendation

1) Policy of the State should focus on promoting community activities, encourage the stimulation, and can manage water along sustainable sufficiency economy philosophy and potential of the community.

2) Responsible organizations should focus on the involvement of the community, to open forum for comments and suggestions from the public and others. The information would be useful for the projects and reach the objectives effectively.

3) Cultivating the attitude of water management in Uthai Thani province according to the philosophy of sustainable sufficiency economy for youth groups by integrating into the curriculum teaching. The young adults are a major force in driving the success of the next opportunity.



Further Recommendation for next research

Further research should study the role or the participation of local governments in bringing the concept of water management according to the philosophy sustainable sufficiency economy for community to practice in their areas

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