

Evaluates the Model Area Development Project for Quality-of-Life according to the New Theory Applied to the “Khok Nong Na Model” in the Ruan Kiang Na Center in Thailand

Chettha Muhamad^aDaycho Khaenamkaew^bDamrongphun Jaihoweewerapong^c Pongprasit Onchan^d
Boonying Praphum^e Peerapong Sutcharitpan^f

^{a-e} Department of Community Development, Faculty of Humanities and Social Sciences, Nakhon Si Thammarat Rajabhat University, Thailand

^f Department of Local Administration, Faculty of Humanities and Social Sciences, Nakhon Si Thammarat Rajabhat University, Thailand

Abstract: This paper evaluates the Model Area Development Project for Quality-of-Life according to the New Theory Applied to the “Khok Nong Na Model” in the Ruan Kiang Na Center in Thailand. The project is based on the concept of “Organic Farming” to continue the king’s philosophy in Na Mai Phai Sub-district, Thung Song District, Nakhon Si Thammarat province in Southern Thailand. The objective of the project was to assess the activities and improve the quality of life as per the new theory of organic farming in the “Khok Nong Na Model” in the Ruan Kiang Na Center in Na Mai Phai Sub-district in Southern Thailand. Organic Farming to Continue the King’s Philosophy in Na Mai Phai Sub-district, Thung Song District, Nakhon Si Thammarat Province. It consists of an assessment of the implementation of 4 activities in the CIPP model: environment, Inputs Process aspect, and productivity. The population of 17 householders who use the CIPP evaluation model was included in the study. The data were collected from the population and project area and analyzed using statistical variables: percentage, mean, tribute, and standard deviation. Evaluation of the data demonstrated that all four aspects of the model were at a high level ($\mu = 4.49$, $\sigma = 0.01$) in the descending mean. The side with the highest mean was the yield at the highest level ($\mu = 4.59$, $\sigma = 0.49$), followed by the environmental factors at the highest level ($\mu = 4.56$, $\sigma = 0.50$). Very ($\mu = 4.47$, $\sigma = 0.50$) and the side with the lowest mean is the process aspect was at a high level ($\mu = 4.34$, $\sigma = 0.48$).

Keywords: Quality of life, Khok Nong Na model, Community development

1. Introduction

The “New Theory” of His Majesty, Maha Bhumibol Adulyadej, the Great Borommanat Bophit king, is a body of knowledge that has been discovered and tested systematically. Science is a systematic set of facts or rules, processes, and activities that enable knowledge to be tested in a systematic manner (Department of Community Development, 2021). The new theory has an objective to build 20–30% of the water receptacle for use in the agricultural sector. The water support area is required for digging ponds, dredging swamps, making hobs, building weirs, and digging Khlong Khut Khai to form/build large kunas to grow other agricultural vegetables for eating. This concept forms the basis of the new theory applied to the “Khok Nong Na Model” for developing a model area for a better quality of life (Technology Policy Division for Sustainable Agriculture and Agriculture, 2020). The model area development project has a focus on the social landscape and takes into account the physical conditions, soil structure and fertility, water, wind, society, culture, beliefs, and traditional wisdom in the Na Mai Phai Sub-district. The model attempts to solve water management problems (Sufficiency Economy Institute and Natural Farming Foundation, 2020). Phra Paraminthra Maha Bhumibol Adulyadej, Rama IX, proposed the New Theory in agriculture to develop a sufficiency economy, manage water, and agricultural areas. The New Theory is the most distinct and concrete example of the application of the Philosophy of Sufficiency Economy to the agricultural sector. His Majesty King Bhumibol initiated this theory to help Thai farmers who suffer from the impacts of economic crisis, natural disasters, and other unproductive natural conditions. The New Theory propounds that farmers apply the essential principles of the Philosophy of Sufficiency Economy (e.g., moderation, due consideration, and self-immunity) to their agrarian practice to shield them from the risks and impacts of globalization and other uncontrollable factors in their farming. By harmoniously incorporating local wisdom in new theory and the model, an area is divided into four parts in the proportion of 30: 30: 30: 10 (Technology Policy Division for Sustainable Agriculture and Agriculture, 2020). The first 30% area is earmarked for a pond to store rainwater during the rainy season while ensuring supply water to grow crops and raise aquatic animals and plants during the dry season. The second 30% is set aside for rice cultivation during the rainy season for the family’s daily consumption throughout the year to reduce expenses, thereby making the farmers self-reliant. The

third 30% area is utilized for growing fruit, perennial trees, vegetables, crops, wood, and herbs for daily consumption in 3 kinds of forests.

The remaining 10% area is earmarked for accommodation, animal husbandry, roads, housing, and raising animals such as chickens, fish, cattle, and buffalo (Liyavanich&Amrit, 2018). Therefore, the Khok Nong Na model is considered a ray of hope for the Thai people who are undergoing an economic crisis for survival. Crops can be grown by properly applying the royal science principles in each area according to the philosophy of the Sufficiency Economy of king Rama IX (Salyakamthorn, 2021). Water is stored by applying the principles of the Khok Nong Na model. In designing the area, there is an ample focus on water storage in three areas, including water retention on the hump. More water retention can be achieved by planting trees and storing water in the root system of the trees that are planted at five levels: high-grade, middle-class, low-class, soil, and tuberous area. Each level of the forest should have at least 21 different species to form a wide variety of root systems. When the rain falls, the root system helps to hold more water in the soil. Retention of water in the pit the excavation must be curved, shallow, and deep in different locations depending on the texture and topography. Before digging, the volume of water that can be collected in the swamp is determined in order to make the water usable. By keeping the field at a higher and wider area, more rainwater can be stored because at the low-level field; some water might already have spilled elsewhere to other sources. Vegetables can also be planted in the field in the Model Project area. Small canals can also be dug to manage water and allow meandering water in the area to irrigate the agricultural area evenly. Even a pond can allow the water to penetrate evenly in nearby areas, thus reducing the need to watering adjacent areas. Building dams to slow down the water to trap sediments from the canal or weirs in various waterways reduces the strength of water and sediment and can also bring the sludge to make compost and reduce erosion (Department of Community Development, 2021). Khok Nong Na model pertains to space management suitable for agricultural areas, combines the new theory of agriculture with indigenous wisdom of keeping harmony with nature in the area (Map Euang Natural Farming Center, 2021), and allows nature to manage itself with people making a systematic contribution to the success and Sustainable use of natural resources (Sowayasakul, 2017). In the aftermath of both agricultural crises and impacts in COVID-19 restrictions, communities must adapt to face these crises and increase food security.

The aforementioned analysis shows that the Khok Nong Na model attempts to the development of quality of life according to the new theory. Therefore, it must be adapted judiciously by using the 4 aspects/activities of Context, Input, Process, and Product (CIPP Model) (Stufflebeam, D.L., & Skinkfield, A.J., 2007). The preparation for input activities consists of personnel, materials, equipment, tools, appliances, and budget. The process of operations consists of the implementation of the operational activities according to the activities. Monitoring and the production (product) refer to the performance of activities and quality. It uses the results of activity assessments as important information in planning educational quality development and continual development of the activities. Its new knowledge can be used to reference or develop new work, while the results of activity assessment can be used to develop prototype areas and disseminate the development results widely.

2. Objectives of the Study

The objective of the current study was to assess the model area development project of quality-of-life development according to the new theory applied to the “Khok Nong Na Model” in the Ruan Kiang Na Center: Organic Farming to continue the King’s Philosophy in Na Mai Phai Sub-district, Thung Song District, Nakhon Si Thammarat Province by using CIPP Model.

3. Design and methodology

This study used quantitative research method to assess the model area development project for quality-of-life development according to the new theory applied to “Khok Nong Na Model” in the Na Pai Phai Sub-district or Ruan Kiang Na Center: Organic Farming to Continue the King’s Philosophy in Na Mai Phai Sub-district, Thung Song District, Nakhon Si Thammarat Province, Southern Thailand. Households were chosen as population subjects.

In the Na Mai Phai Sub-district in Nakhon Si Thammarat province of Southern Thailand, 17 people were selected as participants in the Khok Nong Na Model Project using a simple randomization method (Cohen & Manion, 1989).

Questionnaires were developed using books, articles, and other datasets and resources. The questionnaire had two parts: Part 1 carried general information of the respondents, and part 2 intended to evaluate the Model project development of the area and the quality of life according to the new theory applied to the “Khok Nong Na Model” by using the CIPP model. The CIPP model has 12 items under four categories: two items under Environment (Context), four items under Input factor, four items under process, and two items under the Product category [10].

The content and language check were performed according to the recommendations of 5 experts to verify the validity of the questionnaire for Internationalization of the Curriculum. The accuracy value of 0.80 was rechecked, and 30 tests were conducted to confirm validity. The coefficient was 0.72 (Boonmak, et al., 2017), which was >0.70 (Patthaphong, 2015). The questionnaire was re-verified and was submitted and completed online by the respondents.

Data analysis to assess the model area development project for quality-of-life according to the New Theory applied to “Khok Nong Na Model” by using CIPP model in Na Mai Subdistrict in Thung Song district of Nakhon Si Thammarat Province, Thailand. Statistical analysis was done using Excel program to determine the average and present data using annotations.

4. Results

The results of Evaluation of the Model Area Development Project for Quality-of-Life Development according to the New Theory applied to “Khok Nong Na Model” in the Ruan Kiang Na Center are as follows.

Data analysis of the descending mean showed the environment aspect at the highest level (mean (μ) = 4.56, standard deviation (σ) = 0.50). The method of operation had the highest average, at the highest level (μ = 4.59, σ = 0.51), followed by the appropriateness of the principle.

The factor aspect was at a high level with the mean value (μ) of 4.47 and SD (σ) of 0.50 considering the descending mean. The material for the operation had the highest average value (μ = 4.53, σ = 0.51), followed by the suitability of the budget. It was at a high level (μ = 4.47, σ = 0.51) with the suitability of the place of operation were at a high level (μ = 4.47, σ = 0.51), and the item with the lowest mean indicated the number of personnel sufficient for the operation and the appropriateness of the budget.

The process aspect was at a high level (μ = 4.34, σ = 0.48) taking into account the descending mean. analysis and evaluation of the results for development showed the highest average (μ = 4.41, σ = 0.51) under process aspect, followed by a systematic and comprehensive evaluation of performance. It was at a high level (μ = 4.35, σ = 0.49) and the item with the lowest mean was Perform tasks as scheduled in the activity. It had a high level (μ = 4.29, σ = 0.47) and all periodic supervision.

Considering the descending mean, the yield aspect was at the highest level (μ = 4.59, σ = 0.49). The item with the highest level (μ = 4.65, σ = 0.49) denoted the satisfaction of the client and related parties, followed by the performance achieved according to the activity objectives at the highest level (μ = 4.53, σ = 0.51).

The total of all aspects was at a high level (μ = 4.49, σ = 0.01) considering the descending mean. The yield side with the highest mean was at the highest level (μ = 4.59, σ = 0.49), followed by the environment factor at the highest level (μ = 4.56, σ = 0.50). Process aspect was at a high level with the lowest mean/SD (μ = 4.34, σ = 0.48).

5. Conclusion

To summarize, our evaluation of the model area development project of quality-of-life development according to the new theory applied to the Khok Nong Na Model showed that the environmental aspect was at the highest level (mean (μ) = 4.56, standard deviation (σ) = 0.50) by considering the descending mean values. High the overall result is at a high level (μ = 4.49, σ = 0.01) When considering the mean descending. The side with the highest mean (μ = 4.59, σ = 0.49) was the yield at the highest level, followed by the environment at the highest level (μ = 4.56, σ = 0.50), the factors at the very high (μ = 4.47, σ = 0.50). Overall, the process aspect was with the lowest mean value (μ = 4.34) with a high level of standard deviation (σ = 0.48).

Analysis of the results for each of the four aspects of CIPP MODEL revealed the following: Environmental conditions were at the highest level. Consistent with the concept of Stufflebeam & Skinkfield (2007), the context to be assessed was clear and feasible to realize the goals. The factor is at a high level indicated the assessment of inputs as an assessment of the project suitability. The process was at a high level, in line with the findings of Banchong (2015), The project was assessed according to the Sufficiency Economy Philosophy in Sibunrueng Witthayakhan has a large high school in Nong Bua Lamphu. The school is located in Mu 13, Ban Santisuk, Muang Mai, Sriboonrueng District, Nongbua Lamphu province by CIPP Model, in which the results of the evaluation process were analyzed. The project execution process is required in accordance with the defined action plans. There was clear planning of the work for project completion in the model area. Teachers taught with an emphasis on practical applications and real-life experiences. Appropriate teaching tools were used in teaching and learning activities for student development. The productivity was at the highest level, consistent with the results

by Kunwiboonsri, Y.R. (2013), who said that the factor assessment was used for considering the appropriateness and adequacy of the resources to successfully implement the project.

This study had the following limitations. 1. Inadequate knowledge management of households, there was a scope of conflicts in working in the non-agricultural sector for, which no assessment. Mitigation criteria were devised.

6. Acknowledgment

This study forms an integral part of the student community development program evaluation. Using the CIPP evaluation model to assess the prototype area development project (for quality-of-life development based on the new theory applied of Khok Nong Na model in the Ruan Kiang Na Center: Organic Farming to Continue The King's Philosophy in Na Mai Phai Sub-district, Thung Song District, Nakhon Si Thammarat Province). We are thankful to Narongsak Rakban, the project leader and the head of all 17 households supporting the information and students of the community development project and Nakhon Si Thammarat Rajabhat University for the completion of this study.

References

1. Banchong, S. (2015). *Assessment of Agricultural Project based on Philosophy of Sufficiency Economy in Ban Kok Wittayakarn School by CIPP MODEL*. Maha Sarakham : Maha Sarakham Rajabhat University.
2. Boonmak, S. et al. (2017). *Research Methodology in Social Sciences*. Songkhla: Faculty of Humanities and Social Sciences, Songkhla: Thaksin University.
3. Cohen, L. & Manion, L. (1989). *Research Method in Education*. (3rd.Ed). London: Routledge.
4. Department of Community Development. (2021). *New Theory of His Majesty King Rama IX applied to "Khok Nong Na Model"*. Bangkok: Department of Community Development Ministry of the Interior.
5. Kunwiboonsri, Y.R. (2013). *Project Assessment: Concepts and Practices*. Bangkok: Chulalongkorn University Press.
6. Liyavanich, C. & Amrit, D. (2018). *Land applications according to the king's science*. Bangkok: Architecture and Landscape Architecture, Office of Engineering for Land Development. Department of Land Development.
7. Map Euang Natural Farming Center. (2021). *Agricultural development towards the sufficiency economy system*. Retrieved from <https://www.mabueang.com/blog>.
8. Patthaphong, D. (2015). *Academic papers of research science and applied statistics*. Retrieved from <http://it.nation.ac.th/faculty/danai/download/statistics%20talks7.pdf?fbclid=IwAR0MHon>.
9. Salyakamthorn, W. (2021). *Khok Nong Na Model*. Retrieved from <https://mgronline.com/specialcoop/detail/9640000006445>.
10. Sowayasakul, P. (2017). *Follow the king's science*. Retrieved from <https://www.posttoday.com/ent/celeb/521581>.
11. Stufflebeam, D.L. & Skinkfield, A.J. (2007). *Evaluation Theory, Models, and Applications*. San Francisco: Jossey - Bass.
12. Sufficiency Economy Institute and Natural Farming Foundation. (2020). *Sufficiency Economy and Natural Farming*. Retrieved from <https://thepeople.co/tag>.
13. Technology Policy Division for Sustainable Agriculture and Agriculture. (2020). *Khok Nong Na Model*. Bangkok: National Electronics and Computer Technology Center.