

Social Capital and Implementation Effects: Participatory Action Research for Poverty Alleviation Through the Earthworm Fertilizer Pilot Project, Mayo District, Pattani Province

ทุนทางสังคมและผลกระทบของการดำเนินงาน : การวิจัยเชิงปฏิบัติการแบบมีส่วนร่วม
เพื่อการบรรเทาความยากจนผ่านโครงการนำร่องปุ๋ยมูลไส้เดือน
อำเภอมายอ จังหวัดปัตตานี

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Abstract

Addressing poverty remains a significant challenge in today's society. It is listed as the first mission among the 17 Sustainable Development Goals (SDGs), which are to be adopted by all developed and developing countries. Thailand's poverty rate has been rising in recent years, with many provinces facing poverty and inequality, including Pattani, Thailand's most poverty-stricken province. The main objective of this article is to study the social capital available in the community and the impact of participatory action research (PAR) for poverty alleviation under the Earthworm Fertilizer Pilot Project in Kor Lae village, Mayo District, Pattani Province, Thailand. The results showed that important social capital leading to a successful implementation process includes human resources in the community, trust, efficient group representation, and a cooperation network. The major outcomes at the group level are community members achieving self-sustainability in the production of organic fertilizers for agricultural use, reducing household expenses, and earning income from the sale of vermicomposting and other related products. In addition, the main outcomes at the social level include the incorporation of ready-to-use equipment with the fertilizer production facility, the establishment of an information and knowledge board, and the establishment of a learning center on worm manure production that can serve as a model for other communities.

Keywords: Operational Impact, Participatory Action Research, Poverty Alleviation, Social Capital

บทคัดย่อ

การจัดการกับความยากจนยังคงเป็นความท้าทายที่สำคัญในสังคมปัจจุบัน โดยถือเป็นภารกิจแรกในบรรดาเป้าหมายการพัฒนาที่ยั่งยืน (SDGs) ทั้ง 17 ข้อ ซึ่งทุกประเทศที่พัฒนาแล้วและกำลังพัฒนาจะต้องยึดถือ ในขณะที่อัตราความยากจนในประเทศไทยมีแนวโน้มเพิ่มขึ้นในช่วงไม่กี่ปีที่ผ่านมา โดยมีหลายจังหวัดที่เผชิญกับความยากจนและความไม่เท่าเทียมกัน รวมถึงจังหวัดปัตตานีซึ่งเป็นจังหวัดที่ยากจนที่สุดในประเทศไทย วัตถุประสงค์หลักของบทความนี้คือ การศึกษาทุนทางสังคมที่มีอยู่ในชุมชนและผลกระทบของการวิจัยเชิงปฏิบัติการแบบมีส่วนร่วมในการบรรเทาความยากจน ภายใต้โครงการนำร่องปุ๋ยมูลไส้เดือนดินในหมู่บ้านกอแล อำเภอมายอ จังหวัดปัตตานี ประเทศไทยผลการวิจัยสะท้อนให้เห็นว่าทุนทางสังคมที่สำคัญที่นำไปสู่กระบวนการดำเนินการที่ประสบความสำเร็จ ได้แก่ ทรัพยากรมนุษย์ในชุมชน ความไว้วางใจ สมาชิกหรือตัวแทนกลุ่มที่มีประสิทธิภาพ และเครือข่ายความร่วมมือ ผลลัพธ์หลักในระดับกลุ่มคือสมาชิกชุมชนสามารถพึ่งพาตนเองในการผลิตปุ๋ยอินทรีย์สำหรับการเกษตร ลดค่าใช้จ่ายในครัวเรือน และสร้างรายได้จากการขายปุ๋ยมูลไส้เดือนดินและผลิตภัณฑ์ที่เกี่ยวข้อง นอกจากนี้ ผลกระทบที่สำคัญต่อสังคม ได้แก่ การเป็นแหล่งรวมอุปกรณ์กลางพร้อมใช้งานกับโรงงานผลิตปุ๋ย การมีชุดข้อมูลและองค์ความรู้และการสร้างศูนย์การเรียนรู้เกี่ยวกับการผลิตปุ๋ยมูลไส้เดือนดินซึ่งสามารถเป็นต้นแบบแก่พื้นที่หรือให้กับชุมชนอื่น ๆ ได้

คำสำคัญ: การแก้ไขปัญหาความยากจน, การวิจัยเชิงปฏิบัติการแบบมีส่วนร่วม, ทุนทางสังคม, ผลกระทบจากการดำเนินงาน

Introduction

According to the World Bank, poverty and income inequality in Thailand doubled in 2016 and 2018. The household sector is vulnerable due to severe economic upheaval and economic downturn. In 2018, the southern border provinces (Pattani, Yala and Narathiwat) had the highest poverty. (Thai Poverty Map and Analytics Platform, 2017). It reveals that the household sector is vulnerable to drastic economic changes. The economic slowdown is due to the rapidly growing elderly population. Problems in conflict areas in the three southern border provinces have a low quality of education. And a third of the workforce remains in the low-productive agriculture sector. All of which make poverty and equality still a significant challenge for the Thai socio-economic sector. (World Bank, 2020)

Pattani Province Researches and innovations have been piloted for spatial development and inequality reduction. It is operated and managed by the Prince of Songkla University, Pattani Campus (PSU-Pattani). A model for implementing research projects to tackle poverty using government mechanisms that have worked to solve poverty problems by the departments of Pattani Province and the implementation of urgent policies of the government together with the role of the private sector. There are activities for social development that focus on improving the quality of life and enhancing income for the people. Moreover, the role of civil society focuses on solving poverty at the local level through community and local participation processes such as promotion of welfare in the community housing and environmental development, community business development, etc. (Office of the National Economic and Social Development Council, 2022).

Principles related to poverty alleviation strategies. It needs to be able to more quickly identify and reach vulnerable household populations in the short term. Then generate income and protect households from drastic changes. While in the long term, equitable investment for the next generation is paramount, especially the quality of education and social and economic security (DFID, 1999). The next generation will have fewer poor and more efficient groups to maintain Thailand's growth.

Therefore, Prince of Songkla University Pattani Campus chose one of the communities in the pilot area for poverty alleviation in Pattani Province, namely Ban Kor Lae, Langa Sub-district, Mayo District, Pattani Province. Using a database from the Department of Community Development, the Ministry of Interior provided basic information at the village level (Kor Chor Chor. 2 Kor.) indicating that Ban Kor Lae Community, Langa Sub-district, Mayo District, Pattani Province (Pattani Provincial Office Strategy and Information Division for Provincial Development, 2022).

According to the database, this village is considered one of the intensive poverty alleviation areas in Mayo District. Because there are households in the areas that fall in the first poverty of Pattani Province. In addition, the working-age population needs to be relocated to find work abroad and remit money in the community. because there are obstacles to occupation in the area

This is consistent with the survey in the spatial work research project for comprehensive and accurate poverty alleviation in Pattani Province. It said the village had the highest proportion of people aged 25-59, 43 percent. Most villagers work in the agricultural sector and non-agricultural employment (daily) accounted for 20%. The survey of experiences in developing or solving community problems that external agencies support. Communities are only recipients of aid or support, but participation from the start makes developments in many areas unsustainable.

From the situation, problems and conditions of the area above the project to produce worm manure at Ban Kor Lae was born. This is a shared concept between the local people and the research team who want to promote occupational skills for the people in the area and where possible, the development of such occupational skills will lead to income generation for the people in the area. It also reduces the movement outside the area to find work for the working-age population of the local people.

For this reason, it is the origin of the project to promote occupational skills to reduce costs and generate income for the community by using bio-resources and local wisdom at Kor Lae Village, Village No. 1, Langa Subdistrict, Mayo District, Pattani. To raise the quality of life and increase the revolving income for the community from projects or activities in the production of bio-fertilizers (Waste worms) to reduce agricultural costs and increase the household income of the participants.

Research Objectives

- 1) to study the social capital that exists in the community
- 2) to study the impact of the implementation under the participatory action research for poverty alleviation under the manure production pilot project. Earthworms, Ban Kor Lae, Mayo District, Pattani Province

Literature Review

Participatory Action Research (PAR)

Participatory Action Research (PAR) is a dynamic process developed and designed according to specific requirements, a challenge or a niche learning experience (Kidd, 2005). PAR has three implications: 1) research to gain knowledge; 2) Operation to use the knowledge and reflect on the results of the practice that comes from the use of knowledge, and 3) participation. That has the meaning of owning change, building love, bonding, and hope in the process of change. which consists of 3 changes, namely 1) to develop critical consciousness of researchers and co-researchers 2) improve the lives of participants in the research process, and 3) change social structures and social relationships. It's research that started with one person. Coming to the second and coming to the third or as well as creating a major change (Suttinakorn, 2014)

Participatory action research process It is an operational process that starts from formulating problems and analyzing them together, learning together care, product development, knowledge transfer, connectivity and sustainability, which uses the potential of people in the area or community to solve problems or make better changes in their communities. Participation is most effective when there is strong support from all parties involved. This enables relevant parties, especially researchers, communities, and associates, to carry out work of mutual importance and learn on their own. In learning and action go together as follows:

- 1) Preparation and analysis of potential and needs: community forum processes, questionnaires, focus group questions, coordination and networking.
- 2) Planning is the detailing of vermicompost in every step from production to distribution. Division of responsibilities Study tour in a successful model area. Training to increase knowledge through various channels
- 3) Actions include building an earthworm incubator, production, procurement of varieties and equipment, management, distribution, and marketing.
- 4) Summarizing and evaluating summary of production, production, recommendations, plans for further development.

Social Capital

The term social capital has various meanings. For example, social capital refers to the available resources in society that people use to achieve their life goals, including networks and relationships. This increases trust and increases the ability to cooperate. This includes group membership, having systems, rules, norms and controls.

Social capital became more widespread and more evident in 1997 after establishing the Social Fund Office (SIF) (Prompakpaeng, 2008). Social capital is still increasingly important as it can help increase the empowerment of community groups to be more successful from the exchange of dependence and mutual benefits, leading to self-reliance (Khammek, Petchrapool, & Tultham, 2018).

Ngampraphasom, Phromsen, and Wongjummali, P. (2016) defined the meaning of the word "Social capital" as the system of social relations of people in the collective community responsibility. There is generosity to help each other. Trust, power and the ability to use the capital available in the community to be worthwhile, whether it is natural resource capital, cultural capital, tradition, knowledge capital, human capital, etc.

In addition, Phimphisut (2009) defines social capital as the sum of all good things. that exists in society, both from the accumulation and extension, including the gathering of quality people for the benefit of the public based on trust, bonds of friendship and good culture.

Phimphisut (2009) and So Netithanakul and Sawangdee (2004) discussed the composition of social capital without any difference, namely: An essential element that makes social capital for community development is network participation. There is coordination and it is a voluntary and equal mutual benefit which is the collective effect of looking at others first. It reflects

the expression of goodwill and returns in communities that have substantial mutual benefits. Operation process support and help each other. A common norm forms or stipulates that social control is the behavior that is expected to be mutually agreed upon. Joint ownership of the various resources arising from operations. No one is the owner and members can share it. and support for change, which is the true intention of the members to develop

In conclusion, the research framework can be summarized as shown in Figure 1

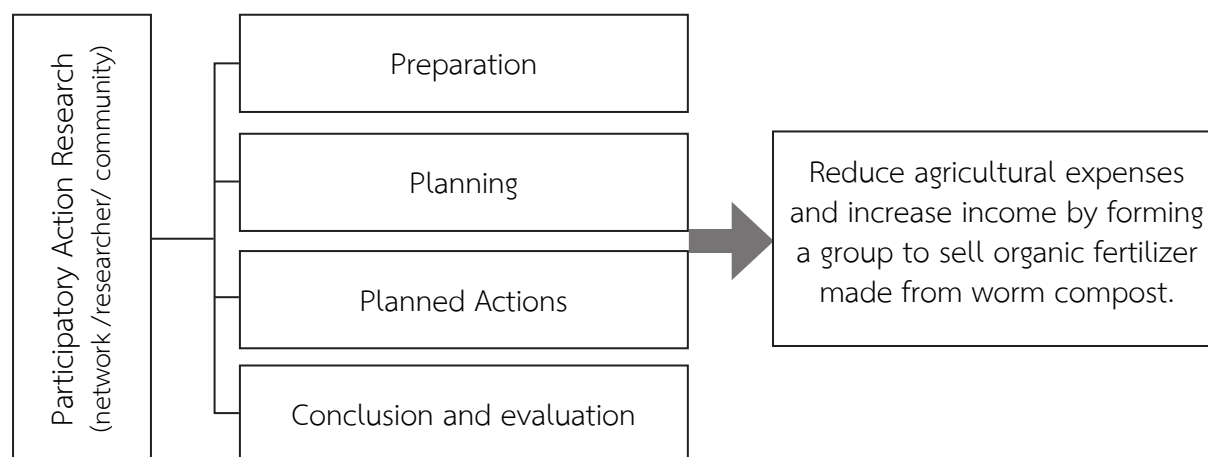


Figure 1 Research Conceptual Framework

From: Author

Methodology

This research is participatory action research: PAR) was conducted in Ban Kor Lae Community Area, Langa Sub-district, Mayo District, Pattani Province, implemented under the research project, research and development spatial for poverty reduction and equality development in Thailand: a case study of Pattani Province. It is operated by the Prince of Songkla University research team. Pattani Campus.

Data Collection Method: The population in the study was 435 villagers in Kolae village, of which 100 per cent of the population were Muslim. In the community, there were 123 households in the first poverty line.

Data Analysis: The researcher analyzed the collected data by dividing it into two parts. The data collected from the questionnaires were first checked for accuracy to ensure completeness. Then, all the questionnaire data were organized by coding the data and analyzing it using statistical methods to compute and process, such as mean, percentage, and standard deviation of general information from the respondents and socio-economic background information of the respondents' households. The SPSS for Windows software was used for the analysis. For opinion level data, descriptive statistics were used, including finding the mean and standard deviation (S.D.). For interpreting the results, the opinion scores were categorized into 5 levels (rating scale) according to the Likert scale measurement criteria.

Fieldwork Duration: The duration of the research is one year, from August 2020 to July 2021. In the data analysis section, the inductive method is used, which is an interpretation to conclude the data obtained from the study of documents, concrete or phenomena that obtained from observation and interview

Results

Operational processes that occur from the beginning to the end of the process under occupational skills promotion project to reduce costs and generate income for the Yo community using the bio-resource base and local wisdom, Kor Lae Village, Village No. 1, Langa Subdistrict, Mayo District, Pattani Province Able to bring the production process to be packaged and distributed. In summary, the main steps are as follows:

- 1) Clarification meeting understand the project share roles and planning operations together.
- 2) a meeting to summarize the progress of the work according to the plan, propose problems and find solutions or improve the work and other related.
- 3) Field trips on fertilizer production and workshops the working group learned the principles, technology and process of making bio-organic fertilizers to reduce agriculture expenses such as earthworm manure. For use in rubber plantations, field crops, horticultural crops and vegetable garden plants, etc.
- 4) Building a greenhouse to be a place to produce manure, vermicompost to cultivate, store and maintain the quality of bio-organic fertilizers. do packaging and is a source of storage of goods for sale
- 5) meetings in exchange forums and follow up and evaluate the success by comparing the data and a summary of the operation lesson, including planning for future operations as shown in Figure 2.

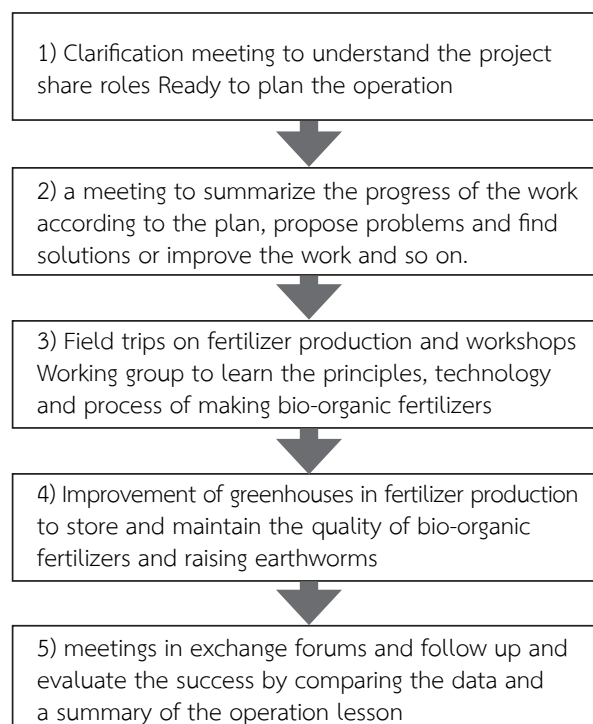


Figure 2 Research process

From: Author

1. Major Operational Outcomes or Impacts of Group Operations

The results of the participatory action research project were identified at two levels, namely the true household outcomes of the group members and the community and social outcomes, with details as follows:

1.1 Members' Household-level Results

in participatory action research (Participatory Action Research/ PAR) Poor people in Kolae village have a better quality of life and livelihood. In particular, members of the Jajing Worm Fertilizer Group are among the number of poor people who receive assistance or get career development for not less than 10% of the target poor enabling self-sufficiency in the production of organic fertilizers for use in household agriculture. Reduce expenses from purchasing organic fertilizers for use in agriculture from other channels. In the production cycle, every three months, the house can produce worm manure for 30,000 baht, which is obtained from 2 parts: 1,200 bags of worm manure, 20 baht per bag, equal to 24,000 baht, and 300 bottles of worm urine each. 20 TH Baht, equivalent to 6,000 TH Baht. However, if the greenhouse is expanded, the production volume can be expanded. Examples of products and products as shown in Figure 3



Figure 3 Examples of products and products of Ban Kor Lae community
From: Author

1.2 Community and Social Outcomes

When considering the community and social outcomes that are clear and tangible: Having a greenhouse for raising earthworms to produce fertilizer, 10 meters long, 4 meters wide which is equipped with both equipment and knowledge that facilitates a learning center about the production of earthworm manure that can be a model for other areas, become a learning center for people within and outside the community to study methods and guidelines for earthworm manure production and knowledge about vermicompost for home installation. The product booth is an example of an image of a knowledge sign and a greenhouse shown in Figure 4.



Figure 4 An example of a picture of a knowledge sign and a greenhouse in the production of earthworm manure.

From: Author

2. Important Social Capital

Quantitative survey under the project Spatial Development Research for Poverty Reduction and Equality Development in Thailand: A Case Study of Pattani Province, Phase 1 defines social capital as the resources available in a society that people use to achieve life goals, including networking and relationships, which increases trust and increase the ability to cooperate. This includes group membership, the presence of systems, rules, norms and controls.

The survey results in Ban Kor Lae found that in Kor Lae village had scores in capital dimension, social capital dimension with a score of 1.65 (full score 4.00) at a moderate level higher than the Pattani provincial average of only 1.55, reflecting the meaning that the community has good community management services. There are rules together and solving local problems, but the mechanism of assistance is less than other aspects as shown in Table 1.

Table 1 The results of the analysis of the capital dimension of 5 parts of Ban Kor Lae, Langa Subdistrict, Mayo District, Pattani Province

Dimensions of Capital and Details of Each Side	Pattani Province	Mayo District	Langa Subdistrict	Kolae
Social Capital	1.55	1.5	1.56	1.65
Joining as a Group Member	2.58	2.95	3.19	2.73
Participation in community activities	1.38	1.3	1.56	1.95
Helping each other when people in the community are in trouble	1.58	1.49	1.23	1
Setting rules or rules for the coexistence of the community	1.78	1.65	2.39	2.69
Compliance with rules, regulations, community coexistence agreements	2.75	2.47	2.83	3.73
Community Conflict Management	1.38	1.31	1.54	1.8
Knowledgeable experts in problem solving and community development	1.39	1.32	1.04	1.03
Used to use knowledge from knowledgeable people to solve problems	2.04	2.03	2	2
Experience in developing or solving community problems	2.05	2	1.96	1.8
Participation in the management of communities, organizations, groups or institutions in the community	2.31	2.38	2	3.63

When considering qualitatively in the context of the community, it can be seen that the key social capital supporting the successful implementation process are: Human Resources in the Community trust or organization within a community cooperation network Details are as follows:

1) Human Resources in the Community, Leadership especially the village headman, with a lot of ability to coordinate with agencies. Management and participation in particular, support at home or adult office is open to all opportunities the research team uses for brainstorming, planning and training sessions. All of them play an important role in the strengthening of the community.

2) Human Resources in the Community Trust Community Norms. In the context of Ban Kor Lae community, it reflects the same story. Since the community context is characterized by a Muslim community, lifestyle, culture, norms according to Islamic principles, the percentage of communities have the same customs and beliefs, making their lives according to the religious principles of helping each other. Within these conditions, the project activities can be accomplished more easily.

3) A group or organization within a community. An essential contributor to the operation's success is the community agricultural groups that cooperate throughout the various forums. Information is exchanged with research teams and networks along with supporting operations. Both directly related to the fertilization of earthworms or others. The women's group supported the trial of earthworm products on various crops planted around the household and support to make local sweets on the opening day of the earthworm house. There is also a group of religious leaders who have allowed the land behind the mosque next to Tadika School to be used as a building site. All of them are connected to make the operation go well.

4) Cooperation Network. It is crucial cooperation in operations divided into 2 groups: A group of Mayo Agriculture Offices that provide support at the end of the project to work together to facilitate the registration of community enterprises. Including to participate in activities related to agricultural networks in the area of Mayo District No. 2 is research from dedicated to working, coordinating and supporting operations, including monitoring the implementation, making the activities successful.

Discussions and Contributions

This participatory action research Researchers see that the conditions for success in operating in the area This is in line with the research of Tipaporn Phimpisut (2009), which summarizes the results of social capital development strategies in the Ping River Basin. Tak Province for sustainable community economic development consists of creating social power. There is a socially driven process. join together to learn together with the action plan have built a network develop into a strong community. If compared from the operation of the Jajing Ban Kolae vermicompost production project, consistent with Netithanakul and Sawangdee (2004) result, it reflects the parties' genuine involvement involved and the reinforcement of strong social capital, especially in the matter of communicating with participants thoroughly, using online media, phone calls and continually visiting the area. Raise awareness, prioritize every team, make everyone feel important in the process and get full cooperation. Build confidence and trust that everyone is important. Building acceptance,

continuous information is provided to improve processes and outcomes effectively. For example, a study visit, searching for new information in a clip as a document and a summary of lessons learned is taken for corrections and corrections in the past and a guideline for further operations in order to be sustainable.

In addition, the process of conducting participatory action research is flexible. It can be adapted to a wide range of community organizations, including the use of tools that are more appropriate to the conditions of the community group. And in addition, another obvious one is Changing attitudes of the community towards participatory processes formerly indifferent to and empowering decision-makers only, now values and importance to the process of participation and the ability to direct development following the way of life and culture in the community context.

Conclusion

Implementation processes create positive outcomes and impacts on people in the community. There are social capital conditions that facilitate the implementation of activities to achieve the goals that have been set together. However, the working group and research team have further suggested that knowledge development is prepared in a manual Method of operation and communication to be a source of learning in the community for youths and interested persons. They are training to develop skills in marketing or online sales to expand the business and generate additional income for group members. Establishing an agreement (MOU) between communities, vermicompost production groups, and educational institutions serves as a community learning center for students that reflect cooperation and use social capital community resources as a strong force in development. Community

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