

**PARTICIPATORY PROCESS IN DETERMINING
ENVIRONMENTAL EDUCATION STRATEGY
FOR COMMUNITY DEVELOPMENT
IN SELF-DEFENSE BORDER VILLAGE
BAN THUNG MASERYOR BONGTY SUBDISTRICT
SAIYOK DISTRICT KANCHANABURI PROVINCE**

COL.PRACHOOM MATHURAMON

With compliments
of

บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล

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Col. PRACHOOM MATHURAMON: PARTICIPATORY PROCESS IN DETERMINING ENVIRONMENTAL EDUCATION STRATEGY FOR COMMUNITY DEVELOPMENT IN SELF-DEFENCE BORDER VILLAGES: BAN THUNG MASERYOR, BONGTY SUBDISTRICT, SAIYOK DISTRICT, KANCHANABURI PROVINCE. THESIS ADVISORS: MANEE CHAITEERANUWATSIRI, Ph.D., RUENGDET PANKHUENKHAT, Ph.D., PATTARABOON PICHAYAPAIBOON, Ed.D. 126 pp. ISBN 974-04-2148-2

The objectives of this research were to form a participatory process in determining an environmental education strategy for self-defence border village Ban Thung Maseryor, Bongty Subdistrict, Saiyok District, Kanchanaburi Province and to study the efficiency of villager learning through the environmental education strategy based participatory action research. The samples were 84 heads of households from seven groups. The research process covered six steps: community study, SWOT technique analysis, community vision, community strategy, community performance and efficiency evaluation of the community strategy .

The research findings revealed that Ban Thung Maseryor was established as a self-defence border village in 1996. This village covers 12,000 rai of fertile natural resources- forest, soil and water- which are suitable for agriculture. It has 222 households with a total of 765 inhabitants.(87% Thai and the remaining 13% highland people) All of the Thai people believe in Buddha's teaching. The community's leaders are mostly aware of environmental conservation and development. However, the major problems of the community were that a few villagers are still involved in deforestation, narcotic addiction, gambling and illegal foreign labor. Therefore, the concepts of environmental education, community development, a provincial plan for quality environmental management, military maneuver and the New Theory have been established as a for this self-defence border village strategy. In addition, this strategy consisted of four parts as follows; offensive, development, defensive and retrogressive strategy. Also, each part of the strategy contained various activities for different purposes of village development.

Moreover, the research revealed that the villagers had learnt a lot about its process, contents, technique, application , problems and delimitation.

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พ.อ.ประชุม มธุรมน : กระบวนการมีส่วนร่วมในการกำหนดยุทธศาสตร์สิ่งแวดล้อมศึกษาเพื่อการพัฒนาชุมชนในหมู่บ้านป้องกันตนเองชายแดน บ้านทุ่งมะเขยอ ตำบลบึงดี อำเภอไทรโยค จังหวัดกาญจนบุรี (PARTICIPATORY PROCESS IN DETERMINING ENVIRONMENTAL EDUCATION STRATEGY FOR COMMUNITY DEVELOPMENT IN SELF-DEFENCE BORDER VILLAGES : BAN THUNG MASERYOR BONGTY SUBDISTRICT SAIYOK DISTRICT KANCHANABURI PROVINCE)
 คณะกรรมการควบคุมวิทยานิพนธ์ : มาณี ไชยธีรานุวัฒน์ศิริ, Ph.D., เรืองเดช ปิ่นเชื่อนจัตย์, Ph.D., ภัทรบุรณ์ พิชญ์ไพบุลย์, Ed.D. 126 หน้า ISBN 974-04-2148-2

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อกำหนดยุทธศาสตร์สิ่งแวดล้อมศึกษาเพื่อพัฒนาหมู่บ้านป้องกันตนเองชายแดน บ้านทุ่งมะเขยอ และเพื่อศึกษาประสิทธิภาพการเรียนรู้ของประชากรกลุ่มเป้าหมายจากการดำเนินการวิจัยเชิงปฏิบัติการอย่างมีส่วนร่วมตามยุทธศาสตร์สิ่งแวดล้อมศึกษา โดยทำการศึกษาจากกลุ่มตัวอย่างหัวหน้าครัวเรือน 84 คนจากจำนวน 7 กลุ่ม ในบ้านทุ่งมะเขยอ กระบวนการวิจัยแบ่งออกเป็น 6 ขั้นตอน ได้แก่ การศึกษาปัญหาและสภาพข้อเท็จจริงของทรัพยากรธรรมชาติและสิ่งแวดล้อม การวิเคราะห์สภาพแวดล้อม (SWOT) การกำหนดวิสัยทัศน์ชุมชน การสร้างยุทธศาสตร์ การปฏิบัติการร่วมกัน และการประเมินยุทธศาสตร์

ผลการวิจัยพบว่า บ้านทุ่งมะเขยอ ได้รับการจัดตั้งเป็นหมู่บ้านป้องกันตนเองชายแดนในปี พ.ศ.2539 มีพื้นที่ ประมาณ 12,000 ไร่ ทรัพยากรธรรมชาติอุดมสมบูรณ์ด้วย ป่าไม้ ดินและน้ำ สภาพพื้นที่เหมาะแก่ทำการเกษตรเป็นแหล่งผลิตอาหาร มีประชากร 222 ครัวเรือน รวมทั้งสิ้น 765 คน (คนไทย 87% และคนกลุ่มน้อยบนพื้นที่สูง 13%) คนไทยทั้งหมดนับถือศาสนาพุทธ ผู้นำชุมชนส่วนมากมีความตระหนักในด้านอนุรักษ์สิ่งแวดล้อมและการพัฒนา อย่างไรก็ตาม ปัญหาที่สำคัญของชุมชน คือ ยังมีชาวบ้านบางคนยังคงลักลอบตัดไม้ ทำลายป่า เสพยาเสพติด เล่นการพนัน และปัญหาชนกลุ่มน้อย ยุทธศาสตร์สิ่งแวดล้อมศึกษาดังอยู่บนฐานแนวคิดและหลักการที่สำคัญคือ สิ่งแวดล้อมศึกษา การพัฒนาชุมชน การจัดการคุณภาพสิ่งแวดล้อม การดำเนินกลยุทธ์ทางทหาร และทฤษฎีใหม่ ซึ่งยุทธศาสตร์สิ่งแวดล้อมศึกษานี้ประกอบด้วย กลยุทธ์เชิงรุก กลยุทธ์เชิงรับ กลยุทธ์เชิงพัฒนา กลยุทธ์เชิงร่นถอย อย่างไรก็ตาม ในแต่ละกลยุทธ์มีกิจกรรมที่แตกต่างกันไปตามความมุ่งหมายในการพัฒนาของแต่ละชุมชน

นอกจากนั้นการประเมินประสิทธิภาพการเรียนรู้ของประชากรกลุ่มเป้าหมายจากการดำเนินการวิจัยเชิงปฏิบัติการอย่างมีส่วนร่วมตามยุทธศาสตร์สิ่งแวดล้อมศึกษาในเรื่อง กระบวนการ เนื้อหารายละเอียดเทคนิค การนำไปประยุกต์ใช้ ปัญหาและอุปสรรค และข้อจำกัด ผลปรากฏว่าประชากรกลุ่มเป้าหมายมีสภาพการเรียนรู้อยู่ในเกณฑ์ระดับสูงมาก

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CHAPTER I

INTRODUCTION

1.1 Rationale and Justification

National security is significant to nation. This end-source can be reached with its healthy member as individual, family, community and society. When we talk about the national stability, it is meant to the nations in peace that its citizen can live happily without fear. Moreover the national stability covers not only economy, society and politics but also national defense, energy, sciences and environment. However, the policies for national security in the past were based on some clarified enemies. After the cold war finished, the concept of policy had been changed. No clarified enemies but comprehensive security had appeared in the nation. National Defense that was the major function for national stability in the past was changed to some new actions as politics and government, neighbor countries relationship, economy, social psychology, national defense together with sciences, technology, energy and environment. (Policy for National Security, 1998-2001)

Environmental problems are considered to be major problems of national security because natural resources are factors supporting ways of life. However, the natural resources have been destroyed during the past 30 years because of the national development and modernization . As we know, modernization emphasizes the industrial development for economic growth and also urban community development and marketing system progress can make stably and rapidly the gross domestic products (GDP), then; trickling down to the rural area. (Pakorn Preyakorn, 1992: 25) Thus, the actual situation has been not like that except the rapid destruction of natural resources in the country.

The present environmental problems have made more and more effects covering all parts of Thailand. They have reduced quality of life and also produced new problems of environment as the climate changes and greenhouse effects etc. Moreover, there are various forms of pollution appearing in the city and trend to be more acute in the future, especially; Bangkok was once considered to be a city with the highest acute pollution in Asia. (World Bank, Toward and environmental Strategy for Asia, 1993) However, the border areas of Thailand are still having fulfillment of natural resources for life support system and ecological adoption. This is the major reason to conserve and develop the natural resources in the border area.

Presently, the border areas have got so much about environmental problems from some community development projects. This is the reason why the environmental solution is necessary for community development. However, the environmental management has not been achievement because of fragment approaches. In addition, there are large areas of border line such as Thai - Cambodia border being 840 kms. in 6 provinces, Thai – Laos border covering 1,810 kms. in 10 provinces, Thai – Myanmar border covering 2,387 kms. in 10 provinces and Thai – Malaysia border covering 645 kms. in 4 provinces. The total areas of border line are now 5,683 kms. in 30 provinces. (not including the coast area in 22 provinces which are under military responsibility for national security). The decentralization of environmental management is now a new approach for environment improvement according to the constitution of Thai Kingdom 1997. Thus, it has said that the local community must be a part of environmental management. However, the report of environmental quality situations in 2000 presented that there have been various people and organizations participating the environmental protection. Thus, the government should be supporting these activities because of the benefit of people both producers and consumers or called as “*win-win solutions*”.

The environmental improvement is considered as “*Global Partnership*” to make future security for all as the UNDP (United Nations Development Program) has said that “*Think Globally, Act locally*” with various approaches as the following;

1. Law Approach; there are not less than 51 editions of environmental conservation law.
2. Economic Approach; there are various plans and policies for environmental conservation as reducing tax for green business
3. Political Approach; all participatory decision to government policies related natural resources allocation and application should be made through public hearing
4. Educational Approach; this approach is the best way to treat people getting knowledge, attitude and skill as the social needs.
5. Scientific and Technological Approach; technology can be used to take natural resources for human's needs. So pollution being what remains after consumption may be also treated by technology, especially; the appropriate one.

The responsible environmental behavior is the first factor for environmental improvement because most environmental problems are caused by human behaviors. This is the reason why environmental education must be a tool for adopting human behaviors; production, consumption and ways of life accordance with nature. Thus, the consumerism should be adapted to be self-sufficient economy and new-theory which directly walk forwards to the way of sustainable development.

Human Behavior Adaptation can be achieved to the goal if the people firstly start to aware and concern community environment and its problems together with getting knowledge, attitude and participation to the social development project. These functions can be made through environmental education (John Fien Teaching for a sustainable World) consisted if awareness, knowledge and understanding, Attitude and personal lifestyle decision and action for better environment in a community.

There are so many problems in the border areas; especially, Thai – Myanmar border that affects the national security. The problems are minor group of people, narcotics, illegal weapon trading, refugee, communicable diseases, border invading, forest concession, natural resource allocation, deforestation, land use and invade of national preservation forest area, national park and conservative forest area.

Kanchanaburi province is located in the area of Thai – Myanmar border line with completion of natural resources, rain forest; especially, bamboo forest which is considered to be high economic values. It is sometimes called *“The western forest complex”* However, the province area is 19,843 square kms. which is the third size of provinces in Thailand. There are presently some environmental problem because of the governmental and private projects as a forest concession,, mine concession, dam construction, Thai – Myanmar gas pipes deforestation, land use for agriculture in national preservation forest area, national public park and some conservative area.

It is notified that the problems in border areas can't be solved with fragment solutions as Pravet Wasi said that *“ Among the complex problems in society called the social crisis; poverty, environmental demolition , criminal problems, illness and political problems etc. Thus, these problems seem to be complex with no solutions but the key for all is civil society. The people must be a part to discuss, to learn, to analyze and to make alternative of strategy for systematic solution accordance with the community environment”* (Refer to Orapin Sopsokchai,1994:preface)

Self-defense border village formation is one of the approaches to solve the problems in Thai border areas. Its strategy is to make the border villages being *“the wall of people power”* to prevent some threats to national security. As the cabinet conclusion (October3, 1978) approved to form self defense villages around Thai-Cambodia border line and also Thai- laos, Thai – Malaysia border line (July 28, 1981), together with Supreme Commander Head Quarter being as a coordinator of self-defense border project. Thus, there are 8 major ministries and 2 supplementary offices being the responsible agents based 3 system of population, prevention and development.

However, the major concept of border villages development is healthy people with permanent farming land in civil society. This is the way preventing external threats. Moreover the previous actions presented that the border villages have been able to construct the national security. In the border villages where located in 30 provinces of 583 villages around Thailand's border are improved their fulfilled

potential. They may be compared with *“the first wall for external threats and the last wall for environmental conservation in the nation.”*

These are the reasons why the researcher intended to construct a model of environmental education strategy for sustainable development in self-defense border villages. The research emphasized the research design of participatory action research in a self-defence border village named *“Ban Thung Maseryor”* Moo 4, Bongty Sub-district, Saiyok District, Kanchanaburi Province. There are some environmental problems because of deforestation , pollution of chemical agriculture and air pollution; especially wild fire and farming fire. Thus, environmental education process may make the opportunity for the villagers doing their opinion exchange, learning and participating for environmental improvement affecting quality of life and community at all.

1.2 Objectives

1.2.1 Determining an environmental education strategy to develop the border self-defense villages Ban Thung Maseryor.

1.2.2 Studying learning-efficiently of the villagers through participatory action research based environmental education strategy.

1.3 Scope of the Research

1.3.1 The research was performed as a participatory action research participated by villages, community leaders and committee board together with heads of households to produce healthy people in healthy environment in the communities.

1.3.2 The target area was Ban Thung Maseryor, Moo 4, Bongty Sub-district Saiyok District, Kanchanaburi Province.

1.3.3 The scope of research was community studying, community analysis, vision formation, community strategy formation active performance and strategy efficiency evaluation.

1.4 Operational Definitions

Participatory Action Research was defined as sharing all experiences of the learning approaches among the villagers together with the researcher .

Sustainable Development was defined as the approaches affecting biological needs of both present and future villagers in a sustainable community.

Environmental Education Strategy was defined as the approaches of community development through environmental education for people getting awareness to both natural and man-made environment balance.

Self-defence Border Villages were defined as the villages being members of self-defense village project promoted by the cabinet's agreement in October 3, 1978 and July 28, 1981

Holistic Approaches was defined as the community development process viewing perspective and profound aspects.

Self-sufficient Economy was defined as having enough to live on and to live for. Living with self-awareness on self-reliance before going up to the upper stage of quality of life development.

1.5 The Research Conceptual Framework

A sustainable community can be generated through self construction of strategy based economic, social and environmental development process. The strategy should focus to human behaviors according with natural resources. Thus, the philosophy of self- sufficient economy is the basic of living that affects a community awareness of environment (environmental education), holistic approach development and people participation is considered to be the research conceptual framework. (Circle stand for dynamic situation , a triangle stand for environmental education as figure 1) and its systematic performance (as figure 2.)

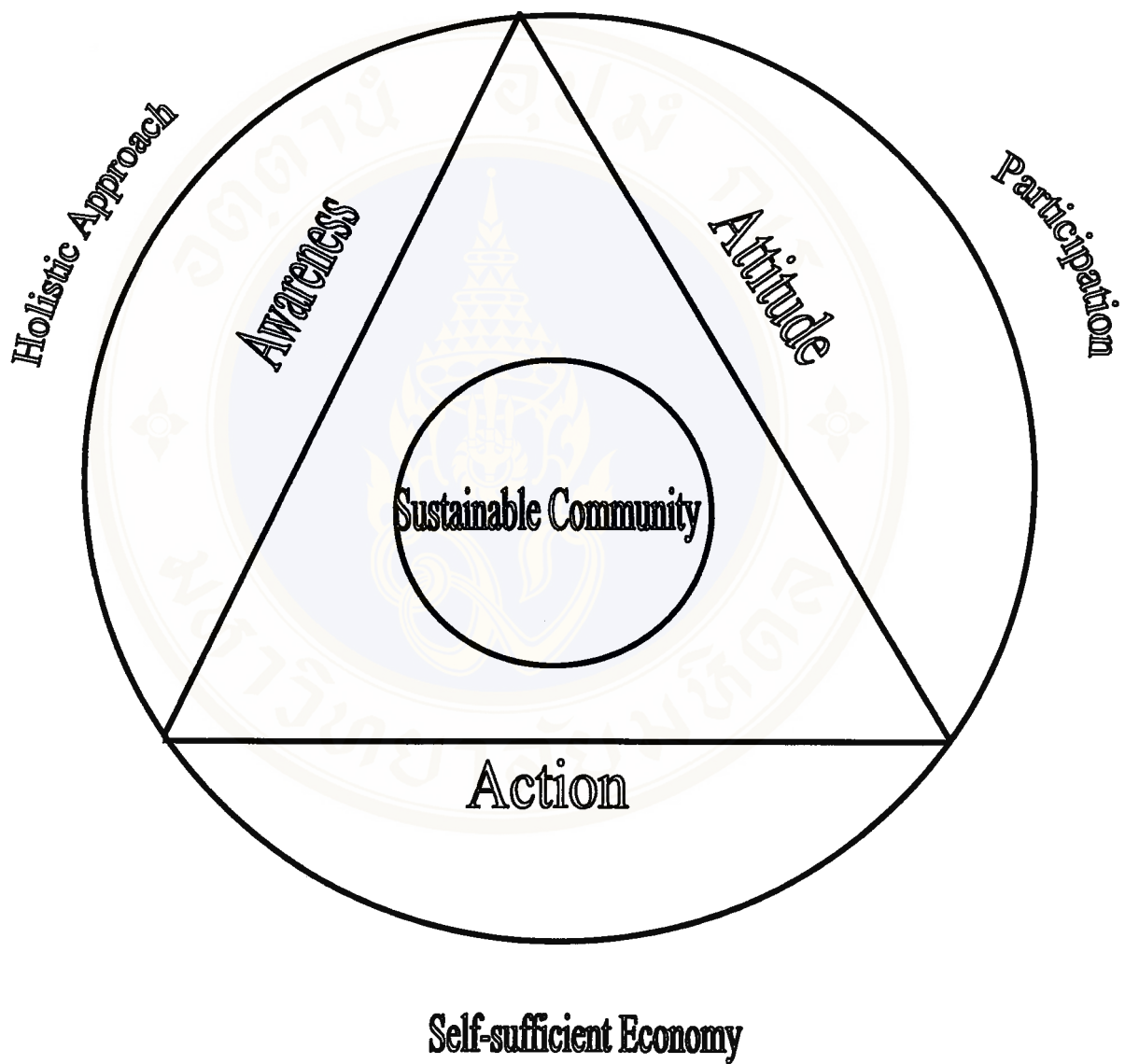


Figure 1 The Research Conceptual Framework

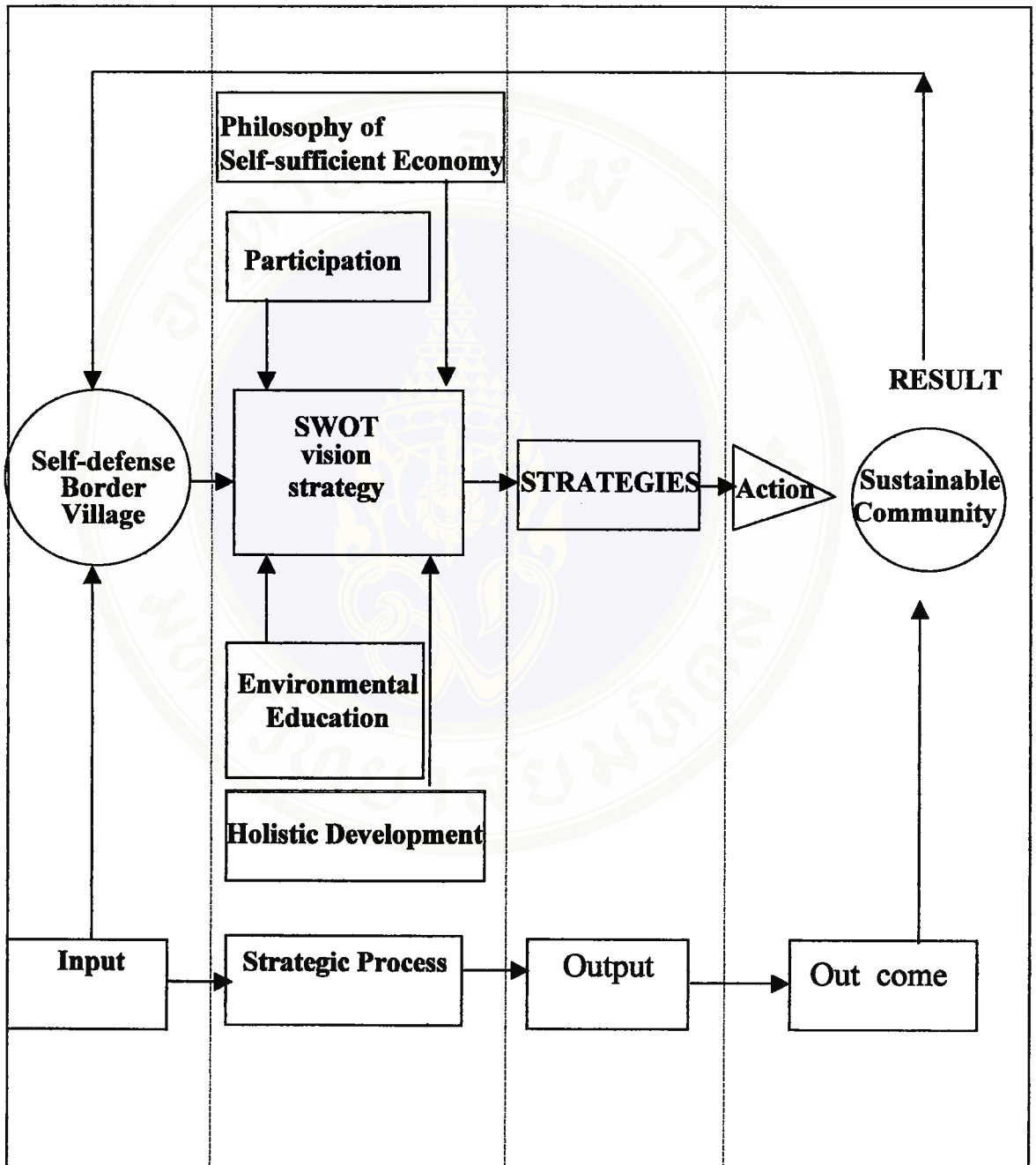


Figure 2 Environmental Education Strategy Based Development Process

1.6 Expected Results

1.6.1 The government may apply the research findings of environmental education strategy for sustainable community development to make policy for border self-defense villages development

1.6.2 To know the villages efficiently learning through the environmental education strategy based participatory action research

1.6.3 The local administrators may aware to significance of border self-defense villages, not only an aspect of environmental conservation but also other problems in the villages. However, an integrated plan from all information and organizations may be the best way to achieve the goal mentioned.

1.6.4 All villagers in the community may learn themselves through the participation process for their healthy living in a sustainable community among the balanced nature.

CHAPTER II

REVIEWED LITTERATURES

An environmental education strategy for sustainable community development made the researcher getting 10 parts of its reviewed literatures as the following;

- 1 Concept of National Security
- 2 Principle of Strategy
- 3 Environmental Education
- 4 Environmental Problem and Direction of Environmental Development
- 5 Environmental Analysis Process
- 6 Concept and Principal of Vision Making
- 7 Participatory Action Research
- 8 Philosophy of Self-sufficient Economy and New Theory
- 9 Self-defense Village
- 10 Research Related

2.1 Part 1 Concept of National Security

2.1.1 National Security

National Security is considered to be the national existence with liberty security and wealth. However to reach this status, the state must have strong national power to protect national interest. Thus, the people in a stable nation can live with happiness, safety, prestige, freedom, aspiration and insurance to their future lives and new generation. This is the reason why a national security directly effecting to both ways of life and happiness of the people in a nation.

In the primitive period, it was generally understood that national security was related wars or soldiers only. This was because of the abroad expressive power being the national threat. So, the nation that had own strong power could hold its national security.

At present, there are many more factors effecting to national security. War and soldier become to be some factors for national power. This is the reason why national security covers now 5 parts [Militarisan Academy, 1992:69] as the following;

- 1.) Economic stability
- 2.) Political stability
- 3.) Social psychology
- 4.) Sciences technology and environment stability
- 5.) Military and national defense stability

National Security (Chumporn Sangkhaprecha, 1979:321) was firstly defined as maintaining national liberty from abroad enemy expression. Thus, national liberty covered various aspect; national border, one state integration, rights of state, political freedom, values and independent function of state among international

relation. However, the present definition of national security is different to the past because of the present national security attacked by various threats as follow;

- 1.) International political power such as refugee and terrorist group.
- 2.) Under developed economy, non-stability of national politics and ineffective action of social and politic institutes that affect the national ability to respond the people needs in the modern society.
- 3.) Internal and external country of environmental threats; natural resources decrease, deforestation, narcotic, petroleum and international economy.

The national security is now widely considered, not only military part but also other factor; environmental threat, air pollution and flooding cause by deforestation of external countries, climate change, depression of ozone layer and soil quality. There are all effecting to human ways of life, plants, animals and other biotic and non-bionics in the world. (Phichit Phitaksombat and Apichat Chamratritthirong, 1991: 26)

Nat Thantawirul said that national security covers not only military part but also the security of politics, economy and society. These 3 factors have stayed on natural resources and environment (as figure3). Moreover, he has explained that healthy people are depended on healthy environment as figure 4.

From figure3, the model covers 3 parts; part 1. People, part 2 politics, economy and society, part 3 natural resources and environment. Thus, the people stand on the top of the political, economical and social system which are depended on natural resources and environment. This means quality of natural resources affecting quality of ways of life.

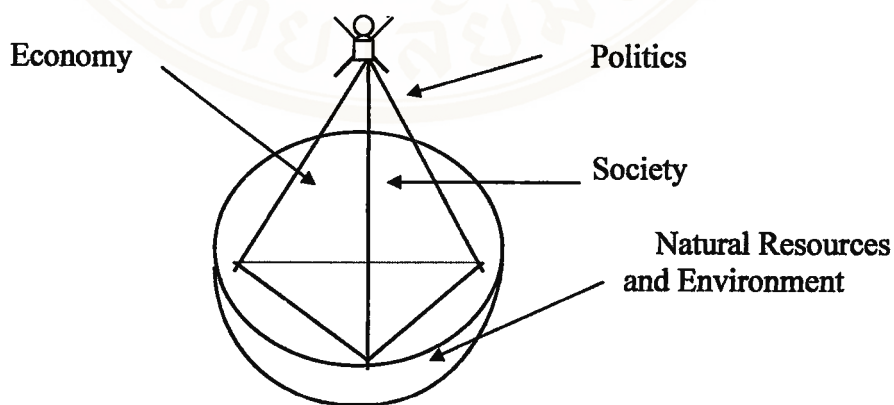


Figure 3 Relation of Economy, Society, Politics, National Resources and Environment.

From figure 4, the model presents that population and economic increase to gether with technology progress make biosphere getting natural resources depleting and pollution.

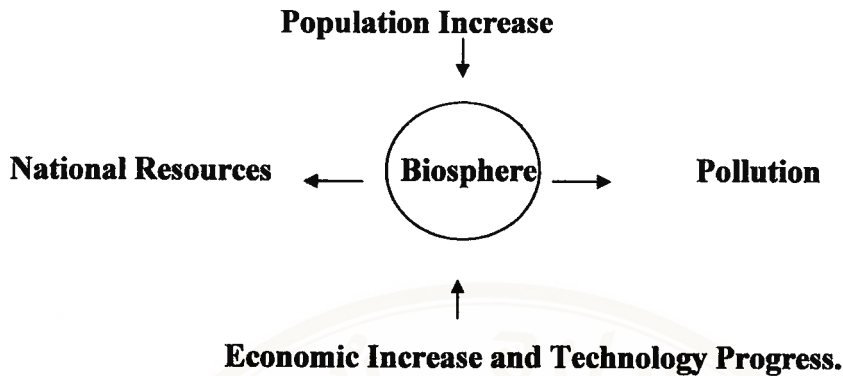


Figure 4 Biosphere

2.1.2 National Security Policy

However, the security platform (1998 – 20001) is also affecting the national security in various aspects as the following;

Domestic politics:

1)To boost quality in, and bring efficiency, virtues, ethics and transparency to, the political system, the bureaucracy, and the decision making machinery, to eradicate abuse of authority, and to ensure that the public is the beneficiaries.

2)To give politics a boost so its organizations, mechanisms and process are run efficiency, honestly, transparently, and publicly accountably with members of the public being allowed to inspect them and understand and trust the democratic principle they represent.when appropriate

3)To boost the redistribution of government power and national revenue to the local governments in the best interest of the people, to boost the process encouraging participation by the people in the solution of problems affecting their lives and in determining the direction into which the local government and the development of local wealth will take.

4)To create the climate of dialogue, and peaceful resolution to the problems, under the principle of a spread-around benefit, following the established political rules and culture that leads to a smooth resolution to the political problems and politics-related movement.

On the Economic Affairs:

5)To expedite the resolution of the poverty in the rural areas, the redistribution of income and government share of investment capital. Land resources must be exploited to achieve the greatest economic gains, combining the agricultural edge made possible by improved production technology with efficiency in business management selectively

6)To boost those branches of the economy that hold the greatest promise and a high competitive edge, with emphasis being given to the development of human resources in terms of education, public health, and skills training in preparation to cope with the competition and the changed, new situation.

7) To seriously upgrade the efficiency in running and managing the economy, and cut the operating cost through eradicating corruption and misconduct in office and inefficiency in the bureaucratic and political machinery.

8) To stringently follow a set monetary and fiscal discipline and carefully pursue other economic activities to prevent a sudden economic volatility from occurring, causing local and international loss of confidence in the system, to ensure the existence of an efficient monitoring mechanism to keep hap and watch on developments and make an advance warning of risks and difficulties ahead, and to build public confidence so the national economy can move on smoothly and deal with problems and changes without risking serious harm.

9) To enter into an economic partnership with neighboring countries and, where appropriate, form economic groups to carve own niche, accumulate bargaining power and create fresh international economic options, and, in parallel, to implement economic and social policies in a thorough and careful fashion, to avoid running into problems or resistance over the public health standard, the environment, social and political issues that may weaken or jeopardize the economy, trade and investment.

On Social Psychological Aspect:

10) To boost social equity and justice and safety for life and property of the public through upgrading the quality and efficiency and accountability of state machinery and re-orienting the government attitude in ways the public needs will be met.

11) To inculcate in, and impart to; Thais the right and appropriate values through education, religious indoctrination, appeal to exemplary behaviors of leaders at all levels in the administrative echelon, particularly as concerns adherence to the ethical and moral high-grounds, discipline, frugality, respect for own and public rights and liberties and upholding of family values.

12) To encourage educational reform and create a social environment in which learning is always encouraged and members of the public are aware of and keep abreast with developments in the world, are rational and scientific-minded and constantly improve themselves to keep up with the times. Changes on the globe. So they do not falter and changes in the modern world.

13) To boost cooperation. Solidarity and unity in the country, to be determined, altruistic, enduring, frugal, conciliatory, and hence to forge strength with which to develop the country, to use all avenues of communications and public relations to create desirable and uniting national characteristics.

On Science, Technology, Energy and Environment Issues:

14) Exeditiously to develop human resources in the fields of science and technology, to boost the research and development and apply appropriate science and technology to all projects undertaken by the country, in aid of national development effort and, in a balanced way, to boost the greatest efficiency in exploiting natural resources.

15) To boost development and employment of science and technology as a safeguard against threats and boost its capacity for being deployed anywhere and any time at time of crisis.

16) To boost development of basic information base and encourage equal access from people anywhere representing all trades and occupations to the information technology, to establish precautions for dealing with negative information impact, to encourage universal knowledge and to learn how to adjust and use appropriate information.

17) To safeguard and preserve natural resources, the environment, and the energy through enhanced military prowess, the international politicking and the diplomatic channel and to develop a procuring system to acquire and accumulate energy reserve to meet emergency and future security needs.

18) To boost wide participation and support by groups and organizations in conserving and maintaining the environment and the natural resources, and to offer protection for consumers regardless of their statuses in society over all manner of issues.

19) To blend time and effort from the government, the business and the public in the management, prevention, and resolution to the conflict over the use, the conversation, and the development of natural resources and the environment, and to raise public consciousness and urge public participation for that effort in conformity with the local customs, culture and wisdom.

20) To set a national agenda for utilizing land owned by the government, the business and the people in a manner most reflective of a balanced and productive way of owning and occupying land for residential purposes, as capital for production both in the agricultural and industrial sectors and for conserving natural resources and the environment, through a "fresh management" jointly by the government and the private-sector, through public participation in determining the course of action and through serious utilization of the land resources.

21) To cooperate with neighboring countries, international organizations and non-governmental organizations in conserving, utilizing and developing national resources and the environment, on a basis of mutual responsibility and benefit.

National defense:

22) To develop and boost national defense so the armed forces reach the optimum size, maintain combat-readiness, and have the capabilities of conducting a sustained and modern warfare.

23) To utilize a system of concentrating the forces in defense of the country, keeping internal peace and protecting national interests.

24) To boost the role the armed forces play in helping in national development and in bringing about a united Thai citizenry and in encouraging Thais to participate in, and boost, the armed services role in national defense.

25) To enter into military cooperation agreement with neighboring countries and maintain close military ties with them (neighbors) at all levels, on basis of common security that includes denying anti-government groups in the neighboring countries from using Thailand as their base to resist their own governments.

26) To support and cooperate with the United Nations in its peace keeping operation and with the international agencies and organizations in cracking down on the international terrorism.

Foreign Affairs:

27) To keep international community united by maintaining close cooperation among the intergovernmental agencies, on a basis of common interest, to observe the international obligations without jeopardizing national interest or only doing so to the minimum, to render cooperation with and support for the united nations.

28) To remove the cause of suspicions Thailand and its neighbors might harbor against each other.

29) To restore mutual trust through good relationships, particularly cultural relationships and ties between the peoples of the neighboring countries, to resolve the unsettling issues and conflicts through common mechanisms at all levels and to boost amiable ties among neighboring countries.

30) To keep the grouping of Association of Southeast Asian Nations united on a basis of common interest and equality with a view to tackling transnational problems and strengthening the position of member states in their collective deals with international organizations and in the political and economic arenas.

31) To enter into ties with countries in other parts of the world and countries in the Third World with unity and clear goal and to increase roles played by Thailand in political and economical multilateral relationship

2.2 Principle of Strategy

Definition of strategy: Even though, there are various definition of strategy, but they are still covering what related ideas, philosophy and logical science related ideas and logic.

Primitive: The historical evidence appears that the most famous Chinese expert named “Sun Wu Tzu” or “Sun Wu” had written the art of war which was the first book related strategy in the world in 500 B.C. This book was considered to be the best of military strategy of the world. (Pot Pongsuwan, 1993 ;1)

European Strategy: In 1233, there was a French word as “*stratagem*” presented by J.de Royroy who wrote the book “*Le Lives des Stratagems*”. There were 2 meanings of this word, firstly; it was defined as a science of war to win the opposite with no fight and secondly, it was defined as any policies to win an enemy with any ways. In 1737, “*Stratege or Strategue*” there was another word which was derived from Latin as “*strategus*” and directly mean to “*stratigos stratigia*” in Greece. This word mean “*Field Mashall*” but that time it was defined as :Art of Army”. However, Mozin presented “*strategy*” in a French-German Dictionary in 1808 and the Royal Academy of French had certified it in 1835 which was the time of Napoleon, the great. Thus, this word now is defined as “*strategy*” in English meaning. (Pot Pongsuwan ,1993:2)

Modern Strategy : This period started at the late of 15th century and the beginning of 15th century and the beginning of 16th century. Nicolo Machialli [1469-1527] had improved criterion related political power by written in many books. These books have said about form and means of state power. Then, it is generally agreed that

“Components of National Power” are consisted of politics, society and military. The more stronger of national power is always able to maintain and promote the national interests better than the less stronger one. This reason makes a new meaning of strategy as **“An application of national power for national objectives”**. (Pot Pongsuwan, 1993:34)

For the war or fighting, a strategy is a plan with art to achieve goals of fighting while tactics is changeable approaches to reach the strategic goal. However, the military definitions of strategy can be presented as the following;

To cultivate and enhance ties with the super power and the powers especially the United States, China and Japan and the group of powers with whom bilateral and multilateral ties can readily be formed.

A strategy is defined as both art and science of economic, social psychology and national development and political power, not only in peace but also in war condition to mostly support the national policy, to increase an opportunity to be a winner more than a loser.

Presently, the strategy is generally available to various purposes as a family planing, selling, product increasing and electing etc. However, these are not called a strategy but may be tactics or approaches.

An environmental strategy can be performed to science and technology, education and ethic and law (Kasem Chankaew et al,1998:131) with 8 approaches as the following.

1.) Using is defined to the sustainable application as direct consuming, seeing, hearing, and being safety and comfortable ways of life.

2.) Storing is defined to the collection of some rare resources for controlled application in the future.

3.) Maintaining / repairing is defined as the approaches caring all resources to be normal application in daily life.

4.) Restoring is defined to any performances to complete what degenerated until it recovers to normal condition and can be available in daily life.

5.) Developing is defined to the ways managing any resources to be more beneficial with knowledge technology and planing.

6.) Preventing is defined to the approaches limiting and preventing any damags of the resources.

7.) Preserving is defined to resource storage without any applications all time or sometimes.

8.) Zoning is defined to resource divided for any purposes with the specified measures for sustainable application.

2.3. Environmental Education

Environmental Education is an educational process related environment to make people participating on environmental problem, prevention and solution or improvement of environmental quality. Thus an environmental education process is

considered to be the major principal for environmental quality improvement. (Winai Weerawatananont, 1995: 117)

Environmental Education has just been for 30 years. This process appeared when some nations getting concern and awareness about quality environment effecting to quality of ways of life. This idea made them getting “*1st international conference on Human Environment*” in 1972 by the United Nations, Stochhome, Sweden. The conference conclusion made the United Nations promoting a new environmental organization named UNDP (the United Nations Environment Programme). In 1975 or 3 years later, UNDP and UNESCO had cooperated the International Environmental Education Programme. Before providing the International Environmental Education Workshop, Belgrade Yugoslavia, “*Belgrade Charter*” that was the workshop conclusion became to be what being strongly necessary for environmental education as a process to develop people getting environmental comprehension and awareness. (UNESCO, 1981 : 6)

Moreover, the Belgrade Charter has determined that the goal of Environmental Education is to develop a world population that is aware of, and concerned about, the environment and associated problems, and which has knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current problems and prevention of new ones. (From: Connect 1, 1 January 1976, p. 701)

In 1976 Asian Conference was held in Bangkok to consider and detail the proposal of Belgrade Charter and also presenting to the Inter – Government Conference in 1977.

In October, 1977, there was the Inter – Government Conference on Environmental Education in Tbilizi, Union of Russia, with 6 items of agreement as the following;

1 Awareness for individual and groups getting awareness and concern to environment and related problems social

2 Knowledge for individual and social groups understanding the environment and related problems together with people’s role and function to environment

3 Attitude for individual and social groups absorbing the social values and concern to environment together with having inspiration to participate seriously and continuously on environmental quality protection and improvement

4 Skill for individual and social groups getting knowledge and skill to solve the environmental problems

5 Evaluation Ability for individual and social groups being able to evaluate the environment program and educational curriculum in various aspects; ecological system, politics, economy, society art and education

6 Participation for individual and social groups is responsible to solve the environmental problems for appropriated performance in society

Moreover, the major contents for environmental education management should be consisted of specific topics (Kasem ChanKaew, 1993 : 176 – 178) as the following ;

1 Clarify action of the specific topic should be presented to learners understanding since its title, key words, indicators and its function as a producer / consumer and decomposer or supporter etc.

2 Concept which is the highlight of each title should be concise and cover the contents.

3 Contents can be different for catch topic but there are some factors being the same for all as (a) structure (b) sequence (c) quantity and qualify (d) cause and effect (e) proposed plan (f) master and action plan and (g) concise contents.

4 Role to environment is necessary and significant to improve environmental knowledge for training.

5 Dissemination Technology should be recommended as supportive activity and field practice etc.

6 Evaluation, which indicates the project achievement, should be various methods; test, interview, observation and ability test etc.

Fundamental knowledge related environment in Thailand has been provided since 1978. It is made through national education curriculum in primary and Junior secondary level together with senior secondary level in 1981. However, environmental education for both formal and non – formal education has promoted in Thailand for 20 years, Moreover, the report of environmental quality situation in 2000 presented that more participation for environmental protection, not only in the city but also in the rural area was made through NGQs and Networks. Which have been more supported by the government.

2.4 Environmental Problem and Direction of Environmental Development

2.4.1. Environmental Problem

1)Resources Depletion

(1) Forest Resources Thailand attempted to conserve its remaining forest resources by banning logging concessions in 1989. However, there has been little variation in deforestation rates following the ban. The biodiversity contained in forests has declined and their ecosystems degraded through agricultural, commercial and tourism uses.

Wildlife

(2)Wildlife In 1996 a survey for ‘Red Data of Vertebrate Suicides’ was conducted which found six vertebrate species had become extinct.

Water Resources

(3) Water Resources The ratio annual internal renewable water resources per capita in Thailand is lower than the Asian average. River basins with low water per capita ratios that are expected to face shortages in the future include Sakaekrang, Pasak, Thachine, Chi, Wang and Yom. There are multiple use conflicts among water users, such as between manufacturing industries, agriculture and services, as well as between upstream and downstream river residents. At present, there have been few rigorous studies on ground water potential. Over pumping in large cities, especially; Bangkok has caused land subsidence, seawater intrusion and

contamination of ground water with chemicals and waste from agricultural, and industrial activities as well as from residential communities.

Land Resources

(4) Land Resources The proportion of agricultural land per person was reduced from 2.5 rai in 1983 to 2.2 rai in 1993. During the same time period the proportion of small land holdings remained the same, whilst the proportion of medium size plots decreased and large plots increased. There have been few studies on soil erosion and changes in soil quality resulting from inappropriate use and agricultural activities. However, these do not clearly illustrate the effects of different types of agriculture on soil quality.

(5) Mineral Resources Mineral resources have been very important for the Thai economy. In the past, 80 percent of Thailand's mineral production by value was exported. Growing industrialization during the past decade has spurred domestic demand to the extent that exports now account for less than 20 percent of the total value of mineral production. In 1997, domestic industry utilized about 87 percent of the production by value, up from 60 percent in 1987. The production of minerals often conflicts with the conservation of other resources, especially as needs grow whilst environmental quality shrinks. Public awareness draws attention to the problems caused by mining. These are as follows;

- Mining alters the land use pattern. Open surface mining destroys fertile topsoil rendering it unproductive.
- Mining produces pollutants including dust and noise pollution caused by rock mining. Land surfaces and the environment are affected.
- Mining produced income for local people changes their social and cultural environment. These changes cannot be reversed when the mine is closed.

(6) Energy Resources Thailand has a high dependency on imported energy and this is likely to increase. The system, i.e., its production, consumption and import patterns, remains unchanged and the most important sources of energy are natural gas and lignite. Demand for electricity is predicted to grow, with eighty percent of energy used in industry and business. The State is therefore likely to increase electricity purchases from Independent Power Producers (IPP) and Small Power Producers (SPP). Additional energy is bought from Laos, PDR and in the future possibly Myanmar and China. As for other forms of energy, the committee studying the possibility of nuclear power in Thailand is reviewing public acceptance, technological and personnel availability and economic viability for this option. Biomes, which uses excess garbage as raw material for electricity production, is being developed by interested agriculturists and Small Power Producers. There has been increased and various uses of solar power but this has not yet been commercially applicable.

2) Pollution

(1) Water Pollution In 1997 the Pollution Control Department undertook a water quality survey of the country and found 14 percent of water resources are in good condition, i.e., suitable for aquatic animals and general human consumption. These are Kwai Noi River, Siew River, Kwai Yai River, Langsoan River, Nonghan, Bung Borapetch and the Noi Sea of Songkhla Lake. In

Thailand, 49 percent of water resources are in average condition and usable for agriculture and general consumption. The remaining 37 percent are of low quality. Water resources in Central Thailand are the most degraded, containing high levels of chloroform bacteria (especially the Chao Phraya and Lower Thachine Rivers where population and industry are concentrated). Another increasing filth and poison from putrid foods and which endangers aquatic lives.

(2) Air Pollution Dust pollution has become a severe problem particularly in congested traffic areas. The average amount of dust particles in the air has exceeded the 1996 standards. Carbon monoxide concentrations have increased, while the amount of lead in the air has significantly decreased due to the ban on leaded petrol.

(3) Noise Pollution Noise pollution in congested areas of Bangkok and adjacent provinces monitored by 18 stations found that in residential areas close to the street e.g., front of Chulalongkorn Hospital, Thonburi Highway District and Dindaeng Housing Community found noise pollution in a 24 hours average to be above the standard allowance. Around education and official institutes such as Nonsee Wittaya School, Klongjan Housing Community, Provincial Administration Organization of Samut Sakhon, noise pollution level is within the standards allowed. However, the same measurement for Klong San Sab found lower levels of noise pollution as boats along the waterway have fixed hours of operation. In regions outside Bangkok, there are 19 noise monitoring stations covering 13 provinces. In these areas pollution levels are generally below the critical level, with the exception of Amphoe Muang, Saraburi, along major highways which is affected by transport trucks as well as noise pollution from rock explosion and mining near Na Phra Lan area.

(4) Solid Waste The amount of solid waste in Thailand has increased every year, particularly the proportion of waste which is difficult to process. In 1997 Thailand created approximately about 37,102 tons of solid waste each day, of which 24 percent came from Bangkok, 35 percent from other urban areas and the remaining 41 percent from rural areas.

3)A problem of Global Change

The global change effects to climatic change and Loss of biodiversity as the following;

(1) The Climatic Change; Thailand Development and Research Institute (TDRI) and Thailand Environment Institute (TEI) studied the climatic change and found that Thailand's national greenhouse gas inventory in 1990 were 189 million tons of carbon dioxide (or 73% of Co₂), methane 25% and nitrous oxide 2%. Thus, all carbon dioxide that was invented could be absorb 25 million tons by forest only.

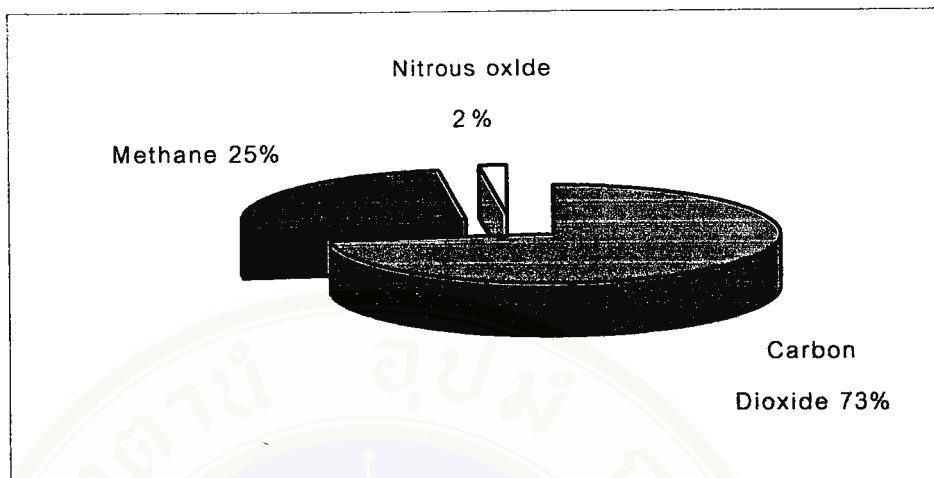


Figure 5 Thailand’s National Greenhouse gas Inventory classified to types of gas.

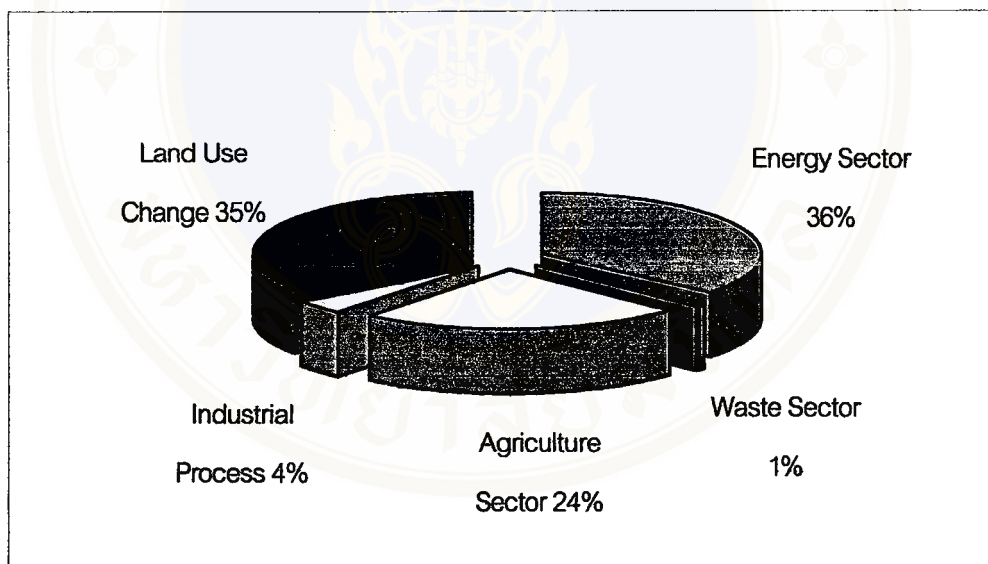


Figure 6 Thailand’s National Greenhouse Gas Inventory classified to Production Sectors

Source: Thailand Environment Institute, 1998

(2) Loss of Biodiversity

The biodiversity is all living biotic in various levels as genetic, genera, family and different kinds of life in ecological system. (Thavee Homchong et al., 1995 : 227) However, the bio can be classified to 3 groups as the following;

- Animal covers both low classes animal as sponges and high class one as mammals; Thus, there are presently 1,032,000 species in the world
- Plant covers all kinds in plant kingdom getting now about 248,000 species in the world.

- Microorganism covers about 132,500 species.

All species of biotic in an ecological system or in the world are living in both direct and indirect independence. The independent system is necessary for existing, relating, energy exchanging and substance circulating etc. The biotic covering a producer, a consumer and a decomposer have made balanced ecological system for various benefit of man as the following;

- Developing new varieties for agriculture
- Studying the biotic history and new biotic mechanism in the field of education and biology.
- Medical research and experiment
- Synthesizing new substances or product from plant and animal
- Prompting an excretion activity on biodiversity

The major problem of biodiversity is a rapid extinction of plants and animals in various species without caring from human cultures. Some studies pointed that this problem mostly appears in the Pacific region of the world. The problems cover natural reduction, the habitat destruction, application, pollution, natural disaster and biotic migration by men etc.

Edward O. Wilson of Harvard University is the first one responding people to aware to the biodiversity in the Earth Summit 1992. Thus, the biodiversity has been one of various aspects to be signed in the world agreement.

Wisuth Baimai and Warren Y. Brock Kelman, Mahidol University has said that there is still having no fundamental knowledge on biodiversity, biotic distribution and roles to human ways of life in Thailand. Moreover, We have not enough biologists and modern technology to study the impact of extinct in microbes and effective management natural resources.

4) The Degeneration of Natural and Art Object Environment

The natural and art object environment are considered to be the national heritage that should be conserved for learning of the new generation. There were 263 natural places specified by the cabinet agreement in 1989 and they have degenerated without an effective caring, no responsible organizations and unclassified management. This condition has appeared to all 3,361 art object places in Thailand.

It is concluded that the environmental condition in Thailand has been seriously effected more and more all time, especially, the city environment. There are presently much autocar in the city as air pollution, water pollution etc. The city pollution is always from autocar, industrial factories, hospital and community. While the major environmental problems in the rural area are always from chemical agriculture and natural resources demolition. However, there can say that the natural resources around the border villages are still completeness, not only soil, water and air but also mineral and energy as the figure 7.

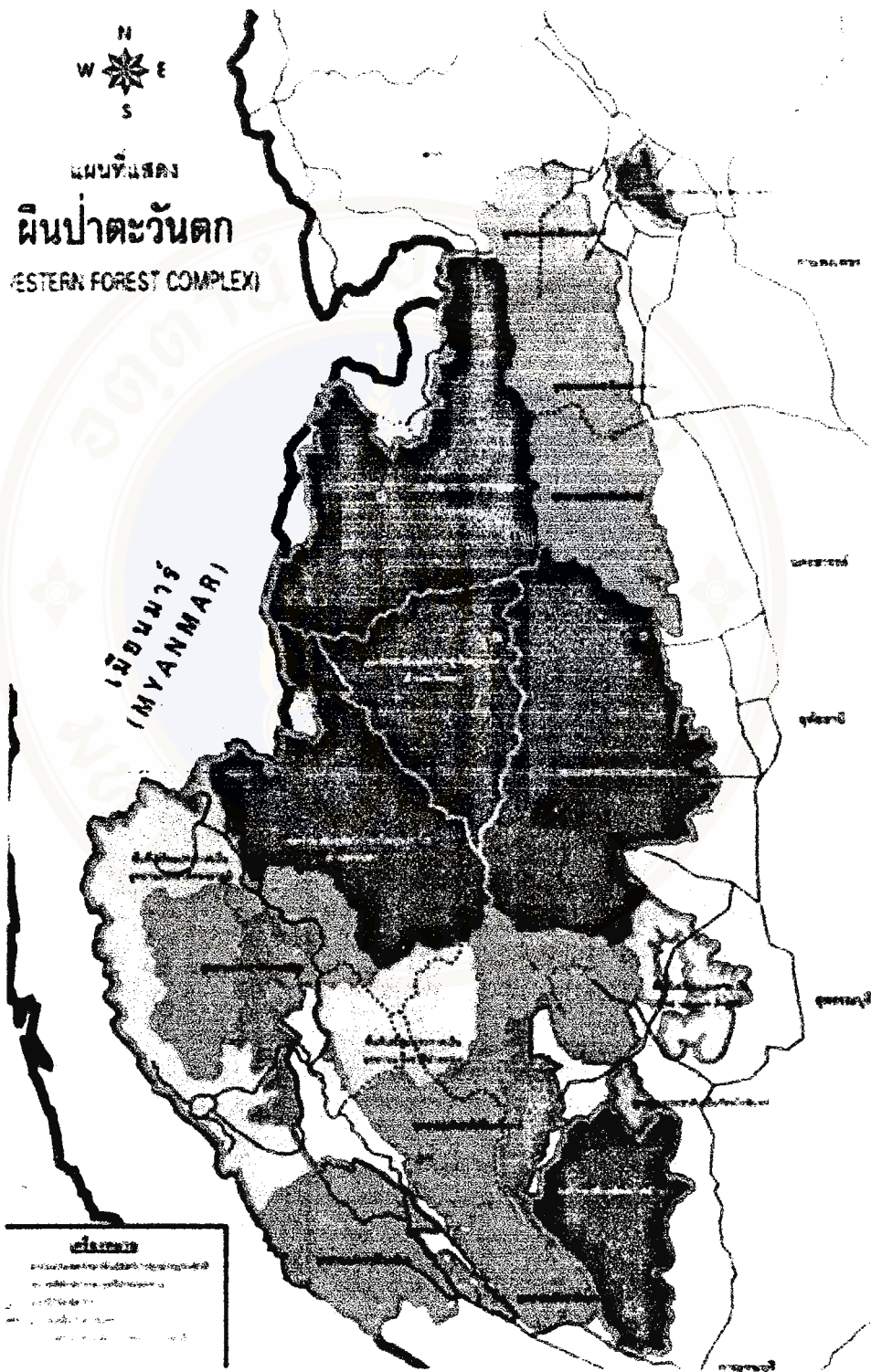


Figure 8 A Map of the Western Forest Complex

2.4.2 The National Social and Economic Development Plan

Thailand has been developed in various appearances depended on the agreement policy, In 1961, there was the first national plan of social and economic development and presently the 8th one. (1996 – 2001) Thus, the natural resources were always taken to a development process for uprising the national economy. The natural resources application without an effective management made Thailand now getting both environmental and economic problems.

Though, the average income per head (percapita) in Thailand has increased from 2100 bath (in 1961) to 68,000 bath (in 1999) the prosperous economy still standing in Bangkok and surrounded areas. Moreover, the economic growth which affects the social condition has been very different in each part of Thailand; especially, the income per head in the North – East which is the lowest in Thailand. However, the higher income made people getting higher consumption, lack of moral, ethic and discipline etc. This condition effects to individual way of life, family and community.

The previous economic development made natural and environmental degeneration. This conventional development had no care to natural resources cost and management together with looking over the human value development, local indigenous knowledge and ways of life in the future. However, there was different to the environmental significance levels of national development. The 3rd plan of national development (1961 – 1976) had no environmental policy. The natural resources were available to unlimited to economic growth until the 4th national development plan (1976 – 1981) was mentioned to environmental restoration and prevention but no action. The 5th national development plan had made again the environmental policy. The 6th plan mentioned that the environmental degeneration could make a limitation to national development in the future. Notifying that there was so much environmental degeneration during the 4 – 6th plans. (1976 – 1991) This event was presented that the environmental policy was just an ornament of the national plan only.

The 7th national economic and social development plan (1991 – 1995) covered 3 objectives as follow;

- 1). Maintaining the economic growth and the economic system stability
- 2). Supporting the income distribution
- 3) Developing human resources, quality of life and environmental improvement

It was generally said that the 7th national plan had not been clarified to the connection of development, natural resource conservation and environmental prevention.

While the 8th national plan (1997 – 2001) had improved the major philosophy of the last plan emphasizing the economic growth and stability to be *“human development and quality of life”* together with natural resource conservation and restoration to be balanced condition. Moreover, the healthy environment should support the healthy people in a community to be the base for a country development in the future.

2.4.3 The Direction of Environmental Development Next 2 Decades

1) The policy and plan of national environment quality maintenance and promotion in 1997 – 2016 specified 6 major policies as the following;

(1) The natural resources policy will be emphasized to an effective management, economic approach, low improvement and supporting some researches related environmental awareness.

(2) The pollution eliminating and preventing policy will be emphasized to pollution reduction and control, supporting a systematic management of waste together with developing the system mentioned to be unity.

(3) The natural and art object policy will be emphasized to its prevention, presentation, conservation and restoration to be the natural resources and cultural heritage of the nation.

(4) The community environment policy will be emphasized it community environment and special area management for guilty of life.

(5) The education and public relation policy will be emphasized strongly to the community potential development and participation.

(6) The environmental technology policy will be emphasized to supporting of any technologies for environmental quality promotion.

2) The environmental management plan has been made on the national environment quality promotion act, item 35 and 36 to transfer the policy to performance for sustainable application as the following;

(1) To conserve, restore and develop an environmental physics.

(2) To improve an effective respondents to participation of environmental management

(3) To improve the environmental laws

(4) To build up the people's environmental awareness

2.5 Environmental Analysis Process

The environment for an organization can be classified into 2 parts; external and internal environment. The organization administrator has to study the major factors related to the responsible project to analyze their positive and negative effects as the following;

2.5.1 External Environment is even what being uncontrolled factors but they can be predicted for their friend of change. However, the external environment is compared to the outer atmosphere of organization (Totsaporn Sirisampan, 1996: 22) for opportunity and threat assessment which was generally known as PEST Analysis. (Pakorn Preyakorn, 1998: 53)

1) Political component (P) is an analysis of the government policy which may make both positive and negative effects to organization. These factors are policies of finance, pollution control and environmental quality management etc.

2) Economic Component (E) is an analysis of macro economy as GDP (gross domestic products), unemployment rate together with energy prices

2)Economic Component (E) is an analysis of macro economy as GDP (gross domestic products), unemployment rate together with energy prices

3)Social Component (s) is an analysis of society and culture as literacy rate educational level, mores, tradition values, belief, language, ways of life together with other social structures etc.

4)Technological Component (T) is an analysis of technology changes affecting the organization activity as knowledge, and research in any related fields etc.

2.5.2 Internal Environment is what can be controlled in the organization as organizational structure, system and procedure working condition and administrative resources etc. However, this is analyzed to seek the strength which must be strongly available and the weakness which must be improved in the organization.

Step 1 Prepare an Enterprise Profile			
Step 1 to 6 . Test for Consistency. Also Prepare Contingency Plan. (Step 7)	Step 2 Identify and Evaluate the Following Factors: (a) Economic, (b)Social,(c)Political,(d)Demographic,(e) Products and Technology,(f) Market and Competition		
Step 3 Prepare a Forecast. Make Predictions and Assessment of the Future	Internal Factors External Factors	Strength Factors "S"	Weakness Factors "W"
Step 4 Prepare a SW Audit in : (a) Management and Organization: (b) Operation:(c) Finance: (d) Marketing(e)Other	Opportunity Factors "O"	SO : Maxi – Maxi	WO : Mini – Maxi
Step 5 Develop Alternatives Step 6 Make Strategic Choices. Consider: Strategies, Tactics, Action	Treats Factors	ST : Maxi – Mini	WT : Mini – Mini

Figure 9 Process of corporate strategy and SWOT Technique Analysis

Source Heinz Wehrich The TOWS Matrix : A Tool for Situational Analysis University of San Francisco(1982)

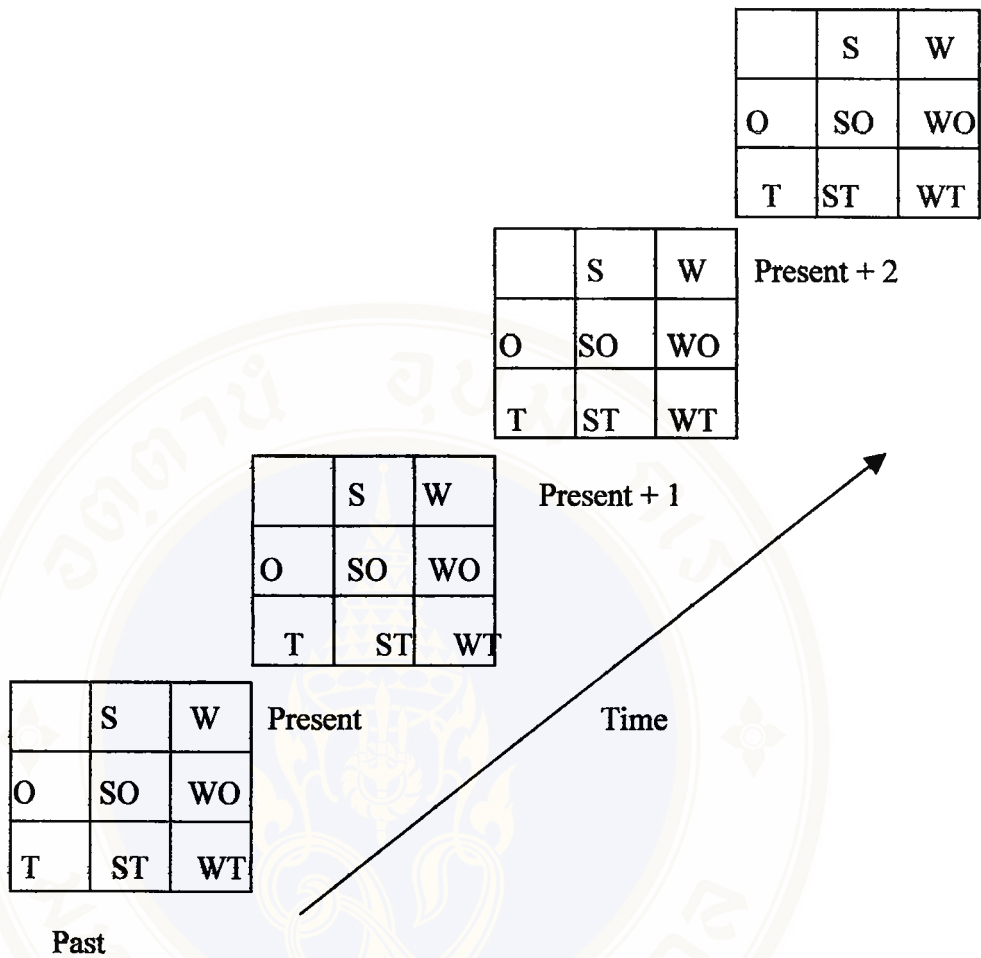


Figure 10 Dynamics of SWOT Technique Analysis
 Source Heinz Wehrich The TOWS Matrix : A Tool for Situational Analysis University of San Francisco(1982)

2.6 Concept and Principle of Vision Formation

Vision Formation is defined as future viewing, predicting and preparing for future performance with clarified goal and effective means.

Definition

Vision is a purpose or what status we need to reach in the future. (Weerawut Makasiranont, 1998 : 12)

Vision is future viewing of organization leader and members for forming the destination connecting with mission values and belief, then; going forward to the goal which is clear, challenged, powerful and possible. (Chamlong Nakfon, 1999 : 14)

Vision can be classified to personal and corporate vision as the following,

- 1 Personal Vision is what a person’s need to be or to get in the future and trying to get there such as vision for future life, working, family and life after retirement etc.
- 2 Corporate Vision is considered to be what similar. to personal need, thus; an organization has to get good vision for effective unit in the future.

Effective Vision

It is true to say that vision is what appearing in the future, so vision forming should be carefully made since the first step. No one can confirm you right or wrong but it is effort to form the best with reasonable consideration. However, the effective vision should be like this;

1 Future Perspective View should be accordance with the organizational condition together with its objective and functions.

2 The organization leader and members should have shared and supported participation with willing minds.

3 Comprehensive and clear contents can reflex the goal and future direction of the organization.

4 Vision should have positive and inspiring qualification to make all participants getting challenged, ambitious, stimulated and aspirated.

A Process of Vision Forming

1 Preparation; this stage is made all participants understanding its definition and necessity to form the organization vision together with positive attitude to the organization.

2 Process of visions forming

2.1 Analyzing the present positioning of organization

2.2 Presenting the various future perspective views

2.3 Doing priority of the various future perspective views

2.4 Selecting and decision making the future destination of the organization

2.5 Editing the statement to be clear, stimulated, challenged, inspired and completes thought of the vision

3 Performance

3.1 Communicating all members correctly and directly understanding

3.2 Specifying the organization plan and project accordance with the vision

3.3 Performing

4 Vision Evaluation

This stage is made to know the vision power and efficiency through the performance. Thus, the performance has to walk forward to the vision, if some steps doing the wrong direction, then; it should be improved.

2.7 Participatory Action Research

Definition; Participatory Action Research is an experience based learning through participation process of all related the research activities covering the steps of problem stating, analyzing, performing and evaluation.

However, "*action*" for the research like this is defined as the activities of the project such as water source, energy or nutrition development etc. While the word "*participation*" is defined as all participants related the research activities.

Thus, the participatory action research always covers two concepts mentioned. (Supang Chantrawanich, 1991: 68)

History; Participatory Action Research was generated in 1970. This research style is similar to “*Action Research*” which was available in 1940 and looks like “*community development*” which was known in 1920.

Principle; Participatory Action Research covers 5 stages (Tandon, 1988) as the following;

- 1) Being significant and respectful to local expert
- 2) Improving the villagers ability and potential
- 3) Educating the villagers with appropriated knowledge
- 4) Interesting the villagers views
- 5) Removing all thoughts

Methodology; the process covers 9 stages as the following;

- 1) Preparing the community
- 2) Training the researchers for the community
- 3) Research designing
- 4) Data collecting
- 5) Data analyzing
- 6) Research findings discussion to community
- 7) Community planing
- 8) Community plan performing
- 9) Monitoring and evaluating

Participatory Evaluation; the systematic and interval evaluation may make an empowerment to the research participants. They have learned themselves how to make the better project for more participation in the future as the following;

- 1) Beginning Phase; they have to learn the research objectives, system of record, report system, documentation and records of decision making.
- 2) Middle Phase; they have to evaluate the research contents, some what may get the right way but some may get wrong and what parts of the research should be improved for accordance with the budget sources.
- 3) Ending Phase; they have to make the summary evaluation, practical recommendation and further research recommendation.

2.8 Self – Sufficient Economy and New Theory

2.8.1 Self – Sufficient Economy

The concept of self – sufficient economy is not limited only to the farmers. It is applicable to every person of every profession, living in both urban and rural areas. For instance, if owners of industrial factories and companies operating under a self-sufficient economic system wish to expand a growing business, they should then proceed gradually. In case they need to obtain loans, the amount of money should be reasonable; a liability which they can manage without going bankrupt. Under adverse financial situations, people should not spend their money extravagantly. Farmers who adhere to this guideline can be successful by growing rice and

implementing integrated farming according to the New Theory practice, even on parched land. Those who are not satisfied and always ponder about buying a new pickup or other living facilities, are then not regarded as conducting themselves according to the principle of the royally initiated self-sufficient economy.

His Majesty graciously granted his advice on self-sufficient economy in order for the people to lead their lives productively, peacefully and happily, with dhrama to help steer the course and heart as an essential driving element. By Maintaining a Balance in the Five Following Aspects Describes the principle of Being Self-reliant

A balance in the state of mind: one needs to be strong, self-reliant, compassionate and flexible, Besides, one should possess an good conscience and place public interests on a higher priority, above one's own.

A balance in social affairs: people need to help each other, strengthen the community, maintain unity, and develop a learning process that stems from a stable and strong foundation.

A balance in managing natural resources and the environment: the country's resources need to be used efficiently and carefully, in order to create sustainable benefits and to develop the nation's stability progressively.

A balance in technology: technology should be used appropriately while encouraging new developments to come from the villagers' local wisdom.

A balance in economic affairs: one needs to increase earnings, to reduce expenses, and to pursue a decent life.

The Conceptual Framework of Self-sufficient Economy

His Majesty King Bhumibol Adulyadej has advocated the idea of self-sufficient economy since his accession to the throne 50 years ago. From that time, he has put his faith in this idea. In the agricultural area where farmers emphasize productivity for commercial export, rice is grown for sale, and the money earned is used to buy rice for family consumption. When they spend all of their money, they ask for loans. This happens repeatedly, until Thai farmers are overwhelmed with debts. Well aware of the problem, His Majesty therefore initiated the establishment of a rice bank and a cattle bank in order to help his subjects. This was the beginning of "self-sufficient economy" Dating back to the early projects in Phetchaburi province, His majesty always emphasized to the government not to use heavy machinery in farming. He considered that if heavy machinery was rapidly introduced to the farmers, they would soon abandon all the manual farming tools and would no longer be able to help themselves. This fact remains a truth to the present time.

To Live in Accordance with the Principles of Self-sufficient Economy

1) One must adhere to a frugal style of living and try to cut down daily expenses especially for extravagant items as stated in the Royal speech,

2) One must be true to oneself and work righteously as well as honestly, even under harsh living conditions according to the Royal speech,

"...Success of all people comes from good conduct and proper work..."

3) One must stop selfish competition and the habit of taking advantage of others when doing business as commonly happened in the past. This is defined in the following excerpt from the Royal speech,

“...The meaning of genuine happiness in the happiness derived from one’s fair conduct, both of intention and action, and not from coincidence or taking advantage of others...”

4) One must not give up in finding ways to pull oneself out of hardship, by striving to learn more and more in order to earn sufficient income, as stated in the Royal speech,

“...The reason for encouraging people to learn more and become stable in their life is for their own lasting happiness from, first, leading a sufficient lifestyle, and then from being proud of themselves for being able to stand on their own...”

“...The reason for encouraging people to learn more and become stable in their life is for their own lasting happiness from, first, leading a sufficient lifestyle, and then from being proud of themselves for being able to stand on their own...”

5) One must behave with good morality and refrain from all greeds. Thai society collapsed with this adverse economic situation because a lot of people betrayed their own country without any shame. His Majesty the King graciously delivered a Royal speech that conveys a similar message, as follows:

“...Avoid committing wrong doings that will destroy oneself or others, eliminate one’s inner greed, remain true to oneself, as well as preserve and enhance the good virtues within oneself...”

His Majesty accentuated that the most important word is “sufficient” If we are satisfied with living at a sufficient level which is reasonable for our status, we will then learn the true meaning of happiness.

It is also possible to apply the principle of “self-sufficient economy” in industrial businesses. In such case, producers should emphasize contiguous agricultural production and should not engage in a large industrial business, because a business at this scale usually depends on imported raw materials and technology from abroad to use in production. Instead, we should consider using what we have in our country first. This way, we do not have to rely on foreign countries like at present. Achieving a self-sufficient economy will help to reduce the import of raw materials and parts, and the practice of dependency that has grown for almost 20 years and been ignored by the people. This external influence has implanted the impression of materialism in Thai people, who absorb foreign products so unconsciously and rapidly that it has become a stimulus for the Thai economic downturns.

2.8.2 New Theory

“*New Theory*”, to be implemented at the Royally-initiated Wat Mongkol Chaipattana Area Development Project, to serve as a model of land and water management for the farmers, According to the theory, the land is divided into four parts with a ratio of 30 : 30 : 10. Based on this ratio, 30% for rice cultivation, 30% for growing fruit and perennial trees, and the remaining 10% for housing, raising animals and other activities.

Later, His Majesty graciously granted additional suggestions on the theory, to strengthen the ability of farmers who are the majority of the country’s population, before they move on to production for commercial purposes, The core element of the suggestion is to adhere to the concept of the “*New Theory*” which consists of the three following phases.

Phase 1 : To live at a self-sufficient level which allows farmers to become self-reliant and maintain their living on a frugal basis.

Phase 2 : To cooperate as a group in order to handle the production, marketing, management, and educational welfare, as well as social development.

Phase 3 : To build up connections within various occupation groups and to expand businesses through cooperation with the private sector, NGOs and the government, in order to assist the farmers in the areas of investment, marketing, production, management and information management.

2.9 Self – defence Border Villages

The border security in 1975, some countries in the Indochina as Vietnam, Cambodia and Laos have changed their political systems to be socialism. This event made so much change in ways of life. Some people who couldn't adapt themselves for new situation, immigrated to new countries, especially Thailand could get 1,042,971 immigrated people. (The 5 Th Plan of Interior Ministry, 1992 – 1996: 110)

During 1983 – 1985, there were 507 events of national security; 100 events for border fighting to the foreign power, 130 events attacked by the foreign power, 202 events of the foreign power invading and 47 events for bombing trap of Thai military and people. There were 31 Thai people passed away, 29 injured ones, 750,000 baht for property damage and 4,423,762 baht for welfare expense. (The 4 th Plan of Interior Ministry, 1987 – 1992 : 414)

However, the border area of Thailand has been effected by both internal and external threats. This is a serious problem because of a border distance. There are 1895 kms. for Thai – Laos border line being mountainous and forested area, 798 kms. for Thai – Cambucia border line with deforestation, 2,273 kms. for Thai – Myanmar border line being still not clarified area and 647 kms. for Thai – Malasia border line together with the East coast in 22 provinces. (The Development Plan for National Security 1998 : 11 – 18)





Figure 11 A map of Border Line Provinces of Thailand

After the cold war, the condition in the Indochina Countries have changed. These countries came to be members of Asian Group. The border of each country which was strongly watching from the military power has been clarified for constructive relationship.

The border area is always significant to national security. The activities for border security have been provided by the government. But the border security formation is not only the strong fence obstacle, military power, border police or integrated power but also developing the people's potential among economic, socio – psychological, military, political, technological and environmental condition to be *“the wall of people power”* preventing an external threat.

However, self-defense border villages around Thai – Cambucia were approved by the cabinet in October 3,1978 around Thai – Laos, Thai – Myanmar, and Thai – Malasia in July 28,1981. Together with Supreme Command which is presently Joint Operations Center 105 Supreme Command was promoted to be the coordinator among the responsible organizations for self – defense border village development. Due to the border village development needed both village security and economic and social stability, the responsible organizations had to cover 8 major ministries and 2 supplementary offices. The budget was firstly supported by the government and international subsidy, which had been stopped after the border fighting finished at all. However, there has been border problems, some are not the same as in the past while some are more complex. This is the reason why the solutions have to be changeable to a new condition as well.

Self-defense border village project was previously performed under the master plan which was based on 3 systems as the following;

1. The population system was performed as collecting people to live in a border village which was located not aver 30 kms from the border line together with its location had to be the active way of the opponent power.

2. The prevention system was performed as self-defense village from primary threat with constructing some ground wall around the village and news broads casting tower in the village.

3. The development system was made to educate people to be able to be able to produce them selves for their quality of life improvement.

The previous performances have reduced the problems related national security, made more safety in life and property and gave the villagers opportunity to get more economic and social service from the government sectors. However, there are totally 583 border villages specified to each border part as follow;

Thai – Cambudia covers 6 provinces of 172 border villages.

Thai – Laos covers 10 provinces of 246 border villages.

Thai – Myanmar covers 10 provinces of 93 border villages.

Thai – Malasia covers 4 provinces of 72 border villages.

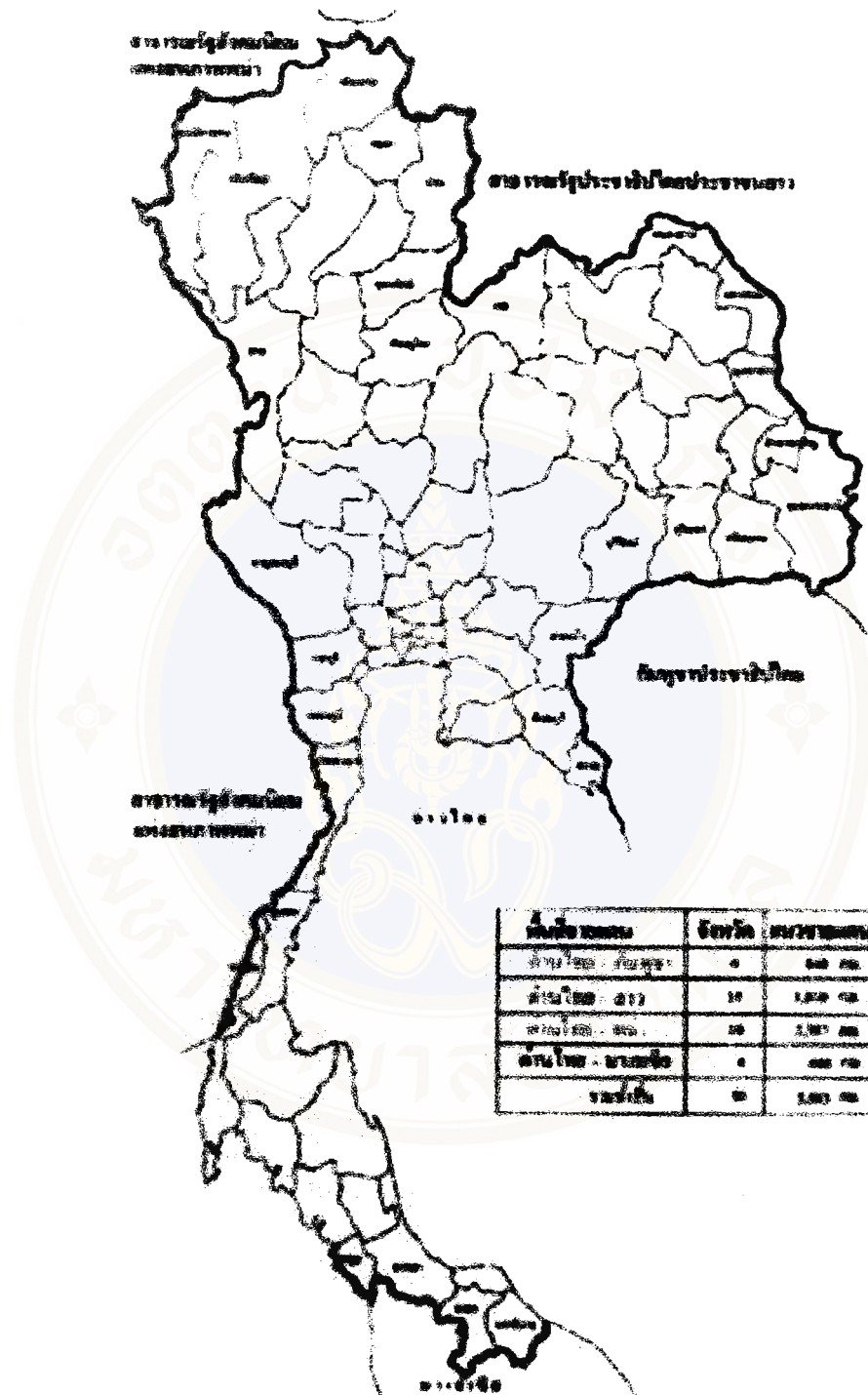


Figure 12 A Map of self – defence Villages in Thailand

2.10 Related Literatures

The related literature was made to study the contents; principle, concepts and theories, processing, research process and strategic management for systematic performance of community as the following:

2.10.1 Ecological Theory; the theory explains about the social organization on adaptation to environment with 3 elements. (Wilaiwat Kritsanapi, 1986 : 89) They are natural and social environment, quantity and quality of population and Technology.

The social organization needs social independent living style to share the achievement each other. However there are 2 forms of independent living in the view of ecologist as;

Form 1. Complementary Deference is what living with different style but supporting each other or called cooperate relationship.

Form 2. Supplementary Similarity is what doing the same style and supporting each other as ones who believe in the same religion may support each other. Both complementary difference and supplementary similarity may develop themselves to be own characteristics before being social organization. Thus, the people may adapt themselves to be in both natural and social environment.

Moreover, this theory may be considered to both open and close organizations and the close one can make more unity and stability than the per one.

In addition, the ecological concept emphasizes that the social organization always changes because of environment. Population and technology. This is the reason why it is necessary to make people understanding that the world substances both biotic and non-biotic are all related and independent to each other.

2.10.2 Interaction Theory; the theory mentions that person to person makes independent interaction through symbolic elements. Then, the individual interaction develop them to be social interaction so, the symbolic elements become the social symbol which represent the social organization.

2.10.3 Exchange Theory; the theory concept is human being always has deferent needs. Our needs sometimes are in the other ones, so to get what the other one's having should be doing the connection and social norms are necessary to control the connections. This may make the social organization.

2.10.4 Maslow's Hierachy of Needs; Maslow said that people analyze need 2 levels; basic need and meta need as the following; Basic Need: hungry, love, safety and esteem need etc. Meta Need; pleasure, goodness, beauty and unity etc.If both basic need and meta need were needed, the people always select the first before the last and the first also being more significant than the last. How ever, there are 5 stages of basic need as the following;

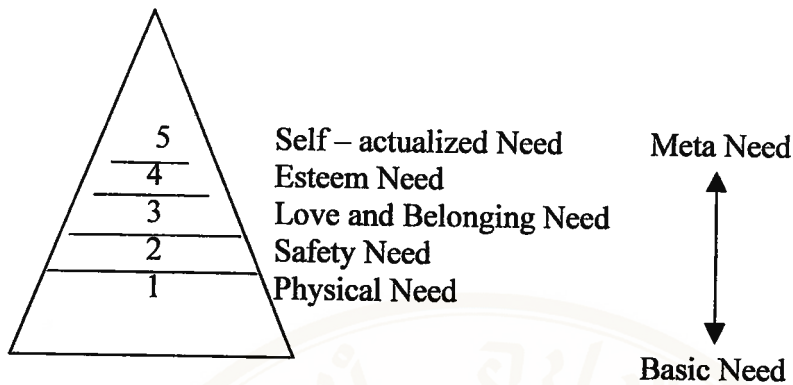


Figure 13 A Pyramid of Maslow's Hierarchy of Needs

- 1) Physical Need; this is for biological needs such as hungry, thirsty, excretion and sex etc.
- 2) Safety Need; this may be supported the security of life from various environment.
- 3) Live and Belonging Need; this is feeling to be a part of group, being a member of group, belonging, loving to other and also getting love from other etc.
- 4) Esteem Need; this is the stage of admiration.
- 5) Self-actualization Need; this is the stage presenting the agreement of one ability, which is the supreme need for human being in society.

2.10.5 Sustainable Development; this is defined as the social economic and political change process based villager's needs and sustainability of natural resources in communities, together with considering to the villager's right and authority for self-management of natural resources. (Precha Piampongsan, 1998: 85)

Moreover, an organization plan in the future may be based on holistic consideration among the government policy, people need and potential of natural resources as figure 14.

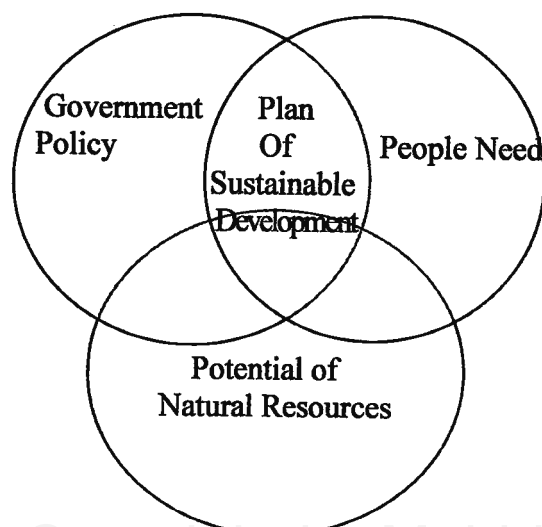


Figure 14 A Concept for Sustainable Development Plan Making

2.10.6 Manee Chaitheranuwatsiri et al. (1998) studied the Participatory Action Research and Evaluation on Students, Families, Schools and Community through Environmental Education Process (Phase 2). The research findings were the participants getting more knowledge, understanding and participation on environmental management in the community.

2.10.7 Nanthiya Hutauwat and Narong Hutauwat (1999) did the action research on "Strategic formation through SWOT Technique Analysis : A case study among three community Business organization in the North – East of Thailand" The finding presented that there was a learning-floor for the project members. They got concepts and conclusions of future activities together with all members shared their authentic idea to the projects.

2.10.8 Parichat Walaisatian et Al. (2000) studied on " A Process and Technique to Work for Developers" emphasizing the appropriate knowledge, attitude and skill for the community development as an interactive process caring an interactive equity of all participants.

2.10.9 An Energy Supporting Fund (1999) studied the Fundamental Concept and Formation of Rung Arun Project: A New Educational Strategy for Energy and Environment Conservation. The recommended approaches for environmental restoration were law approach, economic approach and political approach, However; the best was the educational approach, which could reform the people's thought, knowledge and attitude to the world environment.

2.10.10 Orapin Sopchokchai (1994) produced "A Text Book of Conference Management for Brain Storming in Village Development" focusing to rural development in village level through the villager's participation process.

2.10.11 Phanithip Romasut (1997) said the Participatory Action Research being a new approach for developing and learning which emphasize villagers orientation and power through participatory action research, thus; the educated person and society were the objectives of the research.

2.10.12 Wirat Wiratwipawan (1992) studied on Natural Resources Management and Administration: Roles of Local Organization. It presented that this opportunity to the local organizations getting more participation on rural development, especially; natural resources management.

2.10.13 Chaianant Samutwanich and Kusuma Sanitwong Na Ayutthaya (1992) studied on Environment and Security : National Security and civil Insecurity. The researcher pointed that the security definition insight had to be changed for some development levels. Some securities might reflex each other; military security might not be the same point of environmental security etc.

2.10.14 The Committee Office of National Economic and Social Development and the Defense Ministry (2000) had evaluated the self - defense border village

project. They found that the border village development was less interested because there were no any problems related national security in the border villages. This condition reduced a strong policy of both military power and people's participation in a development process.

2.10.15 Phichit Phitakthepsombat and Apichat Chamratrithrong (1991) studied on National Security: A Dimension of Population Economy and Environment. The study concluded that an environmental security affected the cooperation and international security more than military security because of the positive concept and coverage for all.

2.10.16 Unta Nopakun (1985) studied on A Concept of Non-education and Community Development: Self- thinking. The objective was to seek the principle of human development to be self-thinker through oneself, society, environment and knowledge. Thus, the thinker might integrate one self and environment to be oneness.

2.10.17 Thawcechai Boontem (1997) made his doctoral thesis on Strategic Management Development for Khon Kacn University. He found 4 stages as context analysis, direction forming, strategic forming and confirmation of direction and strategy.

2.10.18 Malinee Utasen (1997) studied The Future Perspective Views on Population Quality Development in Sisaket Province in the next decade, a dissertation of educational science, the graduate study of Mahidol University. The research objective was to study and collect the experts' views of population quality development through EDFR (Ethnographic Delphi Future Research) and CIA (Cross Impact Analysis).

2.10.19 Wirot Naktæ (1998) studied on Formation and Trial of Environmental Education Curriculum : Forest and Wildlife Resources for Forest Protection Officers. The findings were presented that the trainees got more knowledge, attitude to forest and wildlife resources together with high level ability to distribution of their knowledge.

The conclusion of reviewed literatures mentioned was made to form a strategic model for sustainable community development emphasizing local organization, local indigenous knowledge, family and religious institute. Thus, they bare to be able to share their thinking, analyzing performing to solve problems and being self-reliance through environmental education process covering 4 aspects as the following;

1.) Environmental Education Process; this approach was made to improve people's behaviors concerning environmental conservation and development.

2) Participation Process; the villagers did mostly participation on all steps as data collection, data analysis, planing, performance, monitoring, evaluating and developing the community.

3) Holistic development was the key to civil society.

4) Cared on self-sufficient economy to sustainable community development

CHAPTER III

METHODOLOGY

This participatory action research was made through a process of exchanging, leaning and participating on search planing and data collecting for both urgent problem solution and preparation of long-term change. (Manee Chaitheranuwatsiri, 1996:6) This approach is a strategy for group forming to be people organization which can be effectively working and being strong both its structure and function through information system. (Thanaphan Thanee, 1997:56)

Self-Defense Border Villages are considered to be major strategy for national security. After reducing of military threat, there are some other non-military problems such as natural resources depletion, pollution among the villages. Due to the self-defense border villages are the last areas of natural sources for economic, social and political development together with ecological balance of the nation. This is the reason why self-defense border villages should be managed to conserve natural balance to be *“the first wall for external threat and the last one for sustainable management of natural resources”*

The process of natural resources conservation is firstly educated people participating themselves on community strategy formation to be a master plan of the community. This concept made the researcher studying environmental education strategy for sustainable community development in self-defense border villages with the sequences as follow;

- 3.1 Selection of Target Village
- 3.2 Population and Samples
- 3.3 Research Instruments
- 3.4 Data Collection
- 3.5 Data Analysis
- 3.6 Research Process
 - 3.6.1 Community Studying
 - 3.6.2 Community Analysis
 - 3.6.3 Vision Formation
 - 3.6.4 Community Strategy Formation
 - 3.6.5 Active Performance
 - 3.6.6 Strategy Efficiency Evaluation

3.1 Selection of Target Village

The criteria for target villages selection was recommended to be the community with low opportunity. (Phanthip Ramasuth, 1997:43) However, the researcher has specified the target village as its qualification bellows;

- 3.1.1 Located in the border area, long distance and living among the security threat
- 3.1.2 Being green area with low security environment
- 3.1.3 Getting not so much external influences

Thus the target village selected for this research was Ban Thung Maseryor, Bongty Sub-district, Saiyok, Kanchanaburi province where has been located in Thai-Myanmar border area.

3.2 Population and Sample

The population was the people living in Ban Thung Maseryor, Kanchanaburi Province with groups of sample as the following;

3.2.1 Heads of Household; there were 70 heads of household, 10 persons for each group and from 7 group as Ban Klang Group, Na Wat Group, Soisuphan Group, Muser Group, Lamsamor Group, Huay Khaolam Group and Soi Phuchuyayboon Group. Each group was made through focus - group discussion to study the present condition of natural resources and environment, problems and causes, present and future impacts in the community.

3.2.2 The community leaders have participated for 2 functions as firstly doing the community SWOT technique analysis and secondary evaluating the strategy efficiency.

3.2.3 The villagers who live in the community

3.3 Research instruments

3.3.1 The research instruments for community study were;

1) Documentary of secondary data was made to collect general information of the community. The sources were community (gor.gor.chor.2 kor) and fundamental necessary information etc.

2) Questionnaire was made to collect general information problems and causes, present and future impact in self-defense border villages.

3) An observation form was available to collect the information on any activities in the community.

4) The other equipments were tape recorders, camera, noted book and some stationery.

3.3.2 The research instruments for SWOT technique analysis were available to collect the internal and external information of the community. They were 4 kinds of questionnaire as the following;

1) The red questionnaire was for the community strength factor.

2) The sky-blue questionnaire was for the community weakness factor.

3) The green questionnaire was for the community opportunity factor.

4) The yellow questionnaire was for the community threat factor.

3.3.3 The research instruments of community vision formation were available through a focus group discussion which was made 3 times as firstly; analyzing the

community, secondly; specifying the future perspective view of the community and finally; integrating the oneness of the community vision.

3.3.4 The research instrument of community strategy efficiency evaluation was Likert Scale questionnaire through local experts in the community.

3.4 Data Collection

The data collection was made by various approaches

3.4.1 Documentary approach covered the information of family and community.

3.4.2 Interviewing approach covered all levels of target groups as the villagers, the community leaders and the local experts. Thus; two-way communication or dialogue is considered to be the best way of community study. (Amara Phongsapich, 1993:19)

3.4.3 Doing a focus group discussion to study their opinions and perspective views of the future condition for the community development

3.4.4 Doing on observation

3.5 Data Analysis

The data analysis was made through interpretation, conclusion and actual phenomena from observation conversation and meeting. However, triangulation method was also taken to confirm the validity and reliability.

3.6 Methodology

The researcher made the research design as a participatory action research through environmental education for holistic and self-development of the community. This is the reason why the community strategy model was constructed to be the community master plan for solving both natural resources and man-made problem in the community. However, the strategic model was made in various steps as the following;

Step 1 the community study

Step 2 the SWOT technique analysis

Step 3 the community vision

Step 4 the community strategy.

Step 5 the community performance

Step 6 the efficiency evaluation of the community strategy

Step 1 The Community Study

The community was studied to know the condition of natural resources and villager's needs through various approaches as the following;

1) Documentary approach

2) Doing the community survey

3) Doing participatory observation

4) Forming a local researcher

5) Classifying the sample to be 7 groups according to their location of residence. Each group contained about 10 persons to do a focus group discussion. However, the objectives of this action were to study the potential of natural resources and the villagers needs in the community.

Step 2 SWOT Technique Analysis

The researcher did the SWOT technique analysis through the community leaders, committee and villagers to study the internal factors (strength and weakness) and the external factors (opportunity and throat) of the community. However, there were 5 questionnaires for data collecting as the following;

- 1) The red questionnaire was for the strength of the community.
- 2) The sky-blue questionnaire was for the weakness of the community.
- 3) The green questionnaire was for the opportunity of the communication.
- 4) The yellow questionnaire was for the threat of the community.

Step 3 The Community Vision

The community vision was a step after doing a SWOT technique analysis. The vision is the future goal which can be formed now through a set of activities performance. As the following;

- 1) The target group covered all stakeholders of the community.
- 2) The participants had got all fundamental information of the community in advance before doing a participatory formation of the community vision.
- 3) A process of the community vision formation
 - (1).Presenting a fundamental information and the internal and external factors of the community to the participants
 - (2) Creating an individual dream before sharing to be oneness of the villagers vision in Ban Thung Maseryor

Step 4 The Community Strategy

The community strategy is considered as a set of activities to achieve the vision goal. The community strategy of BanThungmaseryor was consisted of some different set of activity as the following;

- 1) Self-reliance plan which was a set of activity performed themselves
- 2)A cooperative plan was a set of activity which could be performed themselves and some parts might be supported by outsider.
- 3) A support plan was a set of activity which must be supported only by outsider.

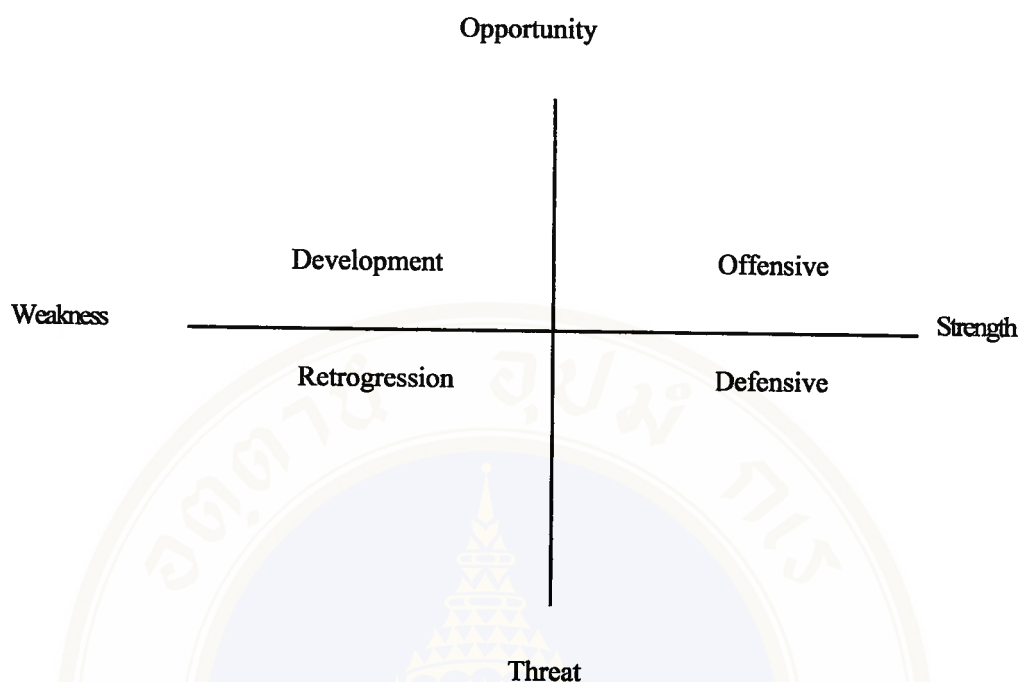


Figure 15 The Community Strategy Classified to Relationship of Internal and External Factors

Step 5 The Community Performance

Some activities of the community strategy such as environmental education and occupational training were performed to check their effective performance in the community.

Step 6 The Strategy Efficiency Evaluation

The strategy efficiency was evaluated to confirm that this community strategy model was effective enough for sustainable development of self-defense border villages. This was made through the local experts with Likert Scale of their opinions as the following;

List of Strategic Item	Significant level					Reason
	Low			High		
	1	2	3	4	5	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

CHAPTER IV

RESULTS

The research findings were presented 6 parts as the following;

- 4.1 Community Studying
- 4.2 Community Analysis
- 4.3 Community Vision Formation
- 4.4 Strategy Determination
- 4.5 Community Performance
- 4.6 Efficiency Evaluation of Community Strategy

4.1 Community Studying

4.1.1 Documentary Information; the objectives were for presenting the community history, FBN 2, CBN 2 map of the community and the research findings as follow;

1) General Information of the Community

(1)**History;** Ban Thung Maseryor was firstly a plain area in tropical forest. The villagers had to pass this area for hunting in the forest. However, there was a Kind of plant being similar to garlic and its smell which was the same of garlic one always stickled to those walking down the plain. This was the history of the community named "*Paseryor*" (the plain of standing on garlic). Presently, the village is a part of Ban Bongty Noi, Moo 2 Bungty Sub-district, Saiyok Distriat, Kanchanaburi Province, Moreover, the forest here used to get a concession in 1975. Mr.Boon Lhuae Sombatwong from Surin Province was the first one taking his family to live here. Later some people from other provinces; Buriram, Suphanburi and Kanchanaburi etc. moving in the village, then; in 1996, the community was promoted to be self-defense border village.

(2)**Location;** the village is located in Thai – Myanmar border line, with 12,000 rai and in National Preservative Forest of Wang Yai – Mae Nam Kwae Noi, area code MR 970664

Neighbouring Boundaries

North : with Ban Phu Wa, Moo 7, Wang Krachae Sub-district

South : with Ban Bongty Lang, Moo 2, Bongty Sub-district

East : with Ban Khao Pang, Wangkrachae Sub-district

West : with Myanmar

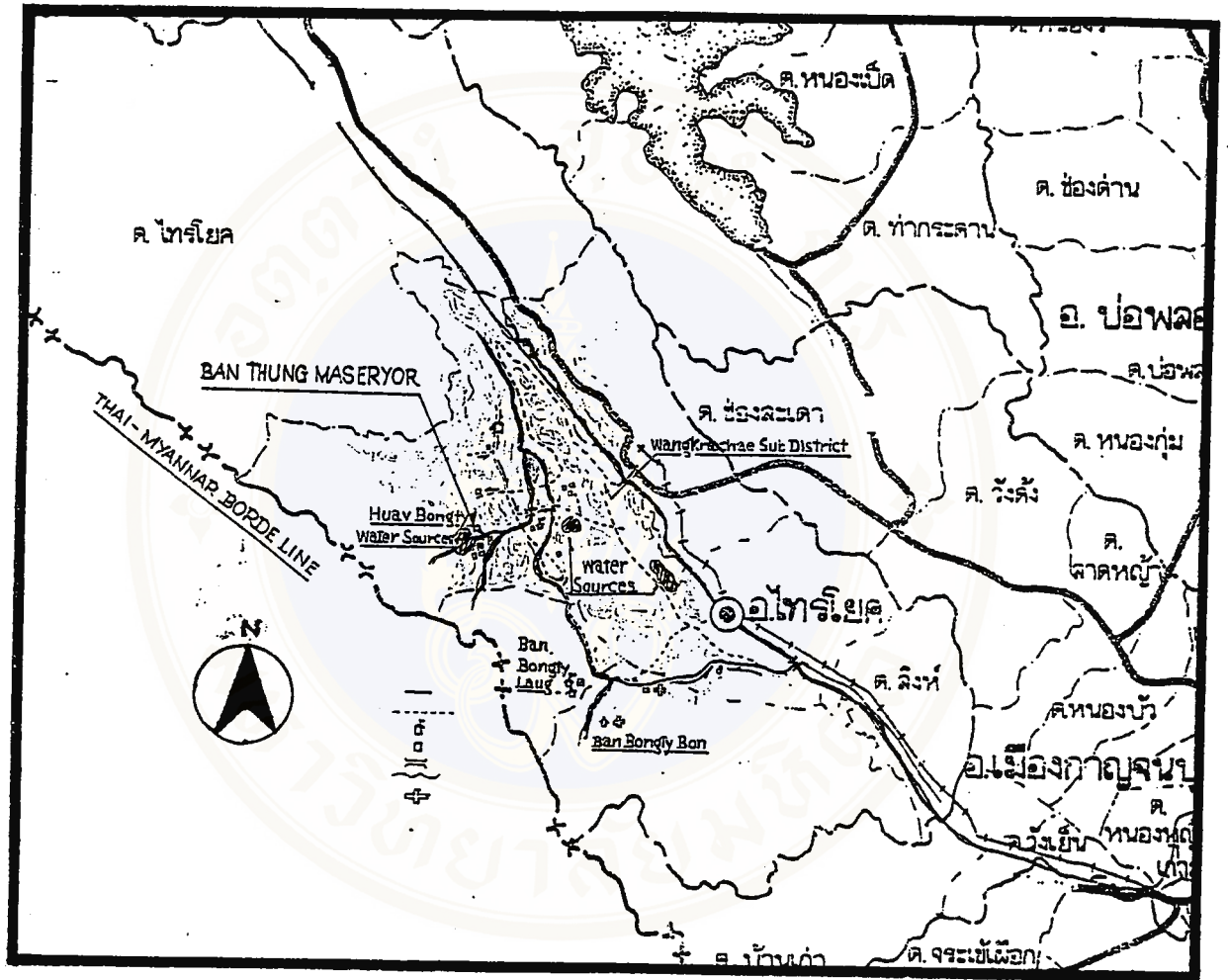


Figure 16 A Map of Ban Thungmaseryor, the Target Area

(3) Natural Resources and Environment; there are various natural resources as follow;

Forest Resources; padauk , xylia azedarach and bamboo

Mineral Resources; tin, fluorite, and vulflam surrounding with mountainous condition in natural beauty.

Climate; there are 3 seasons; Summer (February - May), Rainy Season (May-November) and winter (November – February). Thus the hottest is always in April, the heaviest rain is in September and the dry – cold weather covers the village in Winter.

Soil Resources can be available to various plants.

Water Resources; there are 2 natural water ways; a small water basin where are now developed to be a community rest area together with a way to Andaman Sea.

(4) Society and Quality of Life (Governing, Population, Education and Health)

Governing; the structure of village administration is consisted of both promoted and elected committee. Thus, the promoted committees are Mrs. Prayong Namool (head of village), Mr. Suchat In – nu (assistant) and Mr. Ampai Pan – in (assistant). The elected committees are Mr. Manop Prasertkul (governing sector), Mr. Sompan Phadee (developing sector), Mr. Prasert Sithong (preventing sector). Mr. Montri Malalam (social welfare sector), Mr. Malai Sukcharocn (public health sector), Mrs. Nam – ngerm Klandee (social welfare sector) Mr. Udom Kanklang (finaneial sector) Mrs. Nam – ngerm Klandee (social welfare sector), Mr. Prochob Ruacngchual muaen (expert), Mr. Pee Sengsun (assistant of security sector), Mr. Samruan Ratchasikaew and Mr. Achirawit Jaidee (members of tambol adininztration organization) and Mr. Surasak Thongproa (head of sub – district or tambol)

Population; there are 222 households classified to 3 groups as Thai race, high land people with sky –blue card, and high land people with green – red card. Thus, Thai – race people being the major group are 194 households (275 men/208 women/185boys/124 girls = 765 people), 8 households of high land people with sky – blue card (9 men/7 women/8 boys/10 girls = 34 people) and 34 households of high land people with green – red card. (20 households living in the forest of The War Veterans Organization of Thailand and 14 households living in the mined area of Taodam). The conclusions are 87% Thai – races, 9.10 % highland people with green – red card and 3.60% highland people with sky – blue card.

Housing; the previous folk live or culture before living in the village was effected to their housing groups as Soi Suphan group being from Suphanburi Province.

Immigration; There were some Myanmar people moving in to work in the Village and some adolescence moving out the community to work in the industrial factories in the city.

Education; there has been primary school in the village.

Religion; there has been 1 temple with 5 monks and 2 novices together with Phra Natee Arsalo being the abbot.

Health Service; there has been a Primary Health Unit in the community when the people getting sick as malaria, they had to make long distance to the hospital in the city.

(5) Economy and Infrastructure

Occupation; the major occupation was farmer; cotton, corn, pineapple, pepper, rice and animal raising (300 cattle, 5 buffaloes, 20 pigs and 2500 native chickens) fish raising (15 households) and minor occupation was basket weaving and employee.

Income; they got 13,367 baht/year for the average income. The total agricultural areas were 5,936 rai and 50 tarangwa with uncertain price for their products.

2) Fundamental Information of Households in 2000**Number of Population Classified to Age**

Age Interval	Number of Population		
	Male	Female	Total
< 1 year	6	2	8
1 – 2 years	10	15	25
3 – 5 years	16	14	30
6 – 11 years	42	23	65
12 – 14 years	28	9	37
15 – 18 years	25	13	38
18 – 49 years	143	141	284
50 – 59 years	23	16	39
> 60 years	14	19	33
Total	307	252	559

Part 1 Health

The pregnancy had appropriate and enough food affecting the new – born weight being not lower 2500 gram. (100%)

The new born got maternal milk during the first 4 months . (100%)

The children aged lower 1 year got all vaccination. (100%)

The new born – 5 years old had appropriate and enough food .(100%)

The children aged 6 – 15 years old had complete nutrition. (100%)

The children aged 6 – 12 years old got all vaccination. (100%)

The household didn't eat rare meat. (100%)

The household consumed Iodine. (100%)

The household had controlled food stamped FM. (100%)

The household had knowledge for affective application of medicine. (100%)

Part 2 Housing

The house could be permanent enough not lower 5 years. (100%)

The household had toilet. (100%)

The household had clean water 5 liters per day during a year. (100%)

The household had sanitary characteristics. (100%)

The household had no pollution of noise, shudder, dust, bad smell, air, water, solid waste and chemical substances. (100%)

Part 3 Education

The children aged 2 – 5 years old got the right care. (100%)

The children got the fundamental education (96%)

The student continued their education to junior secondary level after their fundamental education. (4%)

The student finishing their fundamental education got some occupational training. (100%)

The household member could read and write Thai language. (98%)

The household got public information not lower 3 times a week (100%)

The household understood about AIDS. (100%)

Part 4 Family

The husband having 15 – 44 year – wife got the birth control. (53%)

They had warm families. (100%)

The family was safe from any disasters and prevention. (100%)

The family lived with safety life and property. (100%)

Part 5 Income

The household got the average income not lower 20,000 bath/year. (26%)

Part 6 participation on Community Development

The household was a member of local group in a community. (51%)

The household member voted for election of democracy. (90%)

The Household participated on infrastructure maintenance. (90%)

Part 7 Virtue (People developing their minds to be better)

The household performed religious activities one a week. (99%)

No member of household was alcoholic dependence. (94%)

No member of household was cigarette dependence. (29%)

The household participated local culture activities. (90%)

The aging and disability persons got good care. (97%)

Part 8 Environmental Management (People getting environmental awareness. and conservation)

The household participated the activities of natural resources conservation. (90%)

The household participated on the activities of environmental prevention and control. (90%)

General Information of Community in 1998

Ban Thung Maseryar Moo 4 Bongty Sub – district, Saiyok District, Kanchanaburi Province was ranged to be the second level of developing villages.

There were 158 households with 692 people (368 males and 324 females) and 6,770 bath per year for the average income.

Water Sources

There were 15 personal ponds/1 public pond being available.

There was no any underground water pond in the village.

P Yes ≤ No tapped water (72 households)

P Yes ≤ No quality of surface water sources

The household had enough clean drinking – water during a year. (20 households or 13%)

The household had enough consumed water during a year. (158 households or 100%)

Water for agriculture ≤ enough P not enough

Infrastructure in the village

P Yes ≤ No Child Development Center/Kindergarten School

P Yes ≤ No Primary School

≤ YesP No Public Telephone

≤ YesP No grounds for sport

Public Service in the sub – district

≤ YesP No Hospital

≤ YesP No Secondary School

The household had no electricity. (158 households)

Transportation and communication

P Yes ≤ No Roads to the nearest district. (22 Kms. For asphalt concrete, 9 Kms for laterite road and no pressed soil road)

Vehicle (21 small trucks, 90 motorcycles, 58 bicycles, 8 farming trucks (E-tan) and few for other)

Shop

P Yes ≤ No Grocery (4 groceries)

≤ YesP No Shops distributing some resources

≤ YesP No Places collecting some agricultural products

Most fuel being available in the households

≤ gas/electricity P charcoal/wood

Agricultural Performance

There were 70 households getting loan from the agricultural and cooperative bank, 40 households working for the government and 100 households of merchants.

There were 158 households doing plantation

There was 1 household doing integrated farm.

Occupation

The household had more than 1 occupation (9 households)

The household had only 1 occupation. (149 households)

The employment rate was 80 baht a day.

There were no any households working for rice fields.

Agronomy

The area for cropping agronomy was 7,155 rai.

There were 135 households doing a crop.

Corn for animal raising was the major crop in the village.

The area for perennial agronomy was 3,923 rai.

The households for perennial crop were 115 households.

Cotton was the major perennial crop in the village.

Most distributed their agricultural products as commodity.

Science fertilizer was available.

Fruit Plantation

The areas for fruit plantation were 100 rai.

There was only 1 household doing fruit plantation.

Mango was the major fruit in the village.

Vegetable Plantation

The areas for vegetable plantation were 50 rai.

There were 9 household doing vegetable plantation.

Pepper was the major vegetable in the village.

Ornamental Plantation

The areas for ornamental plantation were 6 rai.

These were 6 households doing an ornamental plantation.

A marigold was the major ornamental plant.

Pararubber Plantation

There were no any areas for pararubber plantation.

There were no any households doing pararubber plantation.

Perennial tree Plantation

The perennial tree plantation was mostly teak.

There were 35 rai for perennial tree plantation.

There was only 1 household planting the perennial tree.

Other Agricultural Activities

There were 3 households doing other agricultural activities.

The other agricultural activities were bamboo shoot (phi tong).

The areas for other agricultural activities were 30 rai.

Farming in Dry Season

The farming area in dry season was 50 rai.

There were 10 households doing a farm in dry season.

The arrearage in come was 9,000 baht a year.

Animal Husbandry

There were 5 households doing animal husbandry.

The major domestic animal raising were ducts and chickens.

Fishery

There was no marine fishery in the village.

There was 1 household doing fresh fishery.

Aquatic life raising

There were no any marine aquatic life raising in the village.

There were no any fresh aquatic life raising in the village.

Home Industries and Handicrafts

There were 20 households doing home industries or handicrafts.

The major product of home industries and handicrafts was silk and cotton weaving.

Local Industries

There were no any priveted industrial factories.

No villagers working in the factory mentioned

No major industrial products

There were no community industrial factories.

No households generated the community industrial factory.

No major industrial products

Animals and Equipments for Agriculture
 There were 10 households employing a small tractor to work in the field.
 There were 5 households employing a large tractor to work in the field.
 The average price for tractor employment was 4,320bath/household /year.

Rights of Land

The total village areas were 28,000 rai.
 Most rights of land were available live only.
 The agricultural areas were 12,000 rai.
 There were 31 households having on land and renting more.
 There were 6 households having no land but renting only.
 There were no any problems about land.

Education

All children aged 6 – 14 years old got the fundamental educational language.
 All people aged 14 – 50 years old could read and write the Thai

Supportive Activities

There were no villagers getting occupational training.
 There were no villagers getting educational training.
 There were no villagers getting national security training.
 There were no villagers getting health training.
 The village's Activities
 The religious and cultural activity was made twice a year.
 The sport competition was 3 times.
 There was no child aged lower 1-year was dead.
 There were no drug stores selling...
 There were no villagers passing away with diseases.
 The ways to treat when they got sick
 ≤ Buying a pill P Admitting at a public health unit/clinic.
 ≤ Treated by a health volunteer
 P Yes ≤ No Solid waste in the village
 There were 38 patients from work and 11 patients from pesticide.
 P Yes ≤ No taking some fundamental necessary information for planing to solve a community problem.
 There were 495 villagers had a social welfare on health.

Children Management

No orphan children
 No itinerant children
 No children effected by Aids
 There were no aging villagers (over 60 years of) living in temporary house, no care giver and no income.

Disability Persons

There were 5 disability villagers.
 There were no disability villagers living without their care given and income

Safety in life

No murder

No villagers injured by other

Labors

There were 30 households working out the sub-district area.

There were 35 villagers working out the sub-district area.

No unemployed villagers

There were 65 foreign workers in the village.

There were 35 villagers being narcotic depending; 20 villagers from hemp, 10 villagers from amphetamine and 5 villagers from evaporated substance.

The village was ranged to be the second level of developing villages. Thus, The village had 10 items of low score, 4 items of moderate 14 items of high score.

The opinions of Tambol Administration Organization Board was compared to the other villages in the sub-district.

≤ Better than the others P Seemlier the others ≤ worse than the others

The opinions of District Development Board were compared to the other villages in the district

≤ More development than the others ≤ Seemlier to the others P Wore than the others

4.1.2 Community Survey; the researcher began to survey the community in October 2000. It was found that the road connecting between the community to the city was laterit road. It was always a problem to travelers in rainy season. Along with the road was a forest which was a part of an agricultural area. Chemical pesticides were still significant to the farmers here. Their houses were permanent and located in-group. There also had some public places as a Buddhist temple, a school, public pavilion and some natural resources as a forest, water way and water basin etc.



Figure 17 Visiting their houses and field works

In addition, there has been a military troop; A Development Performance Unit 146 (Cpt.. Montri Sirasakorn) operating to the villagers for community development.

4.1.3 Community Preparation; this was made to prepare the community supporting and participating the research process as follows;

- Visiting the community leader. The researcher visited a head of village and some elite persons in the community to study the general information of the community.

- Participating the monthly meeting of the community. The researcher introduced himself and the research project to the meeting participants, together with fundamental knowledge of environment and natural resource conservation.

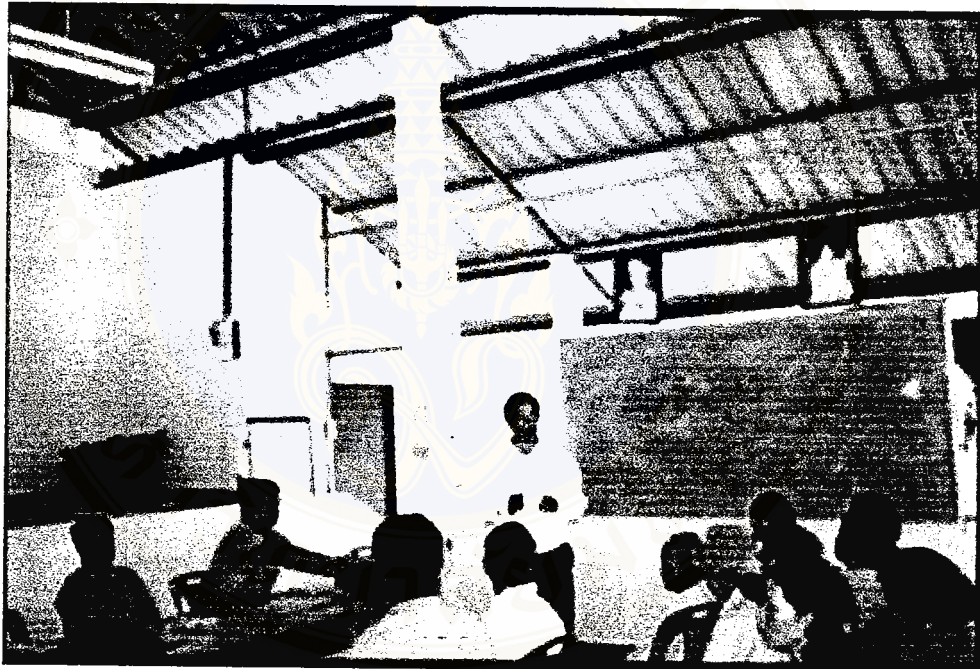


Figure 18 Participating the monthly meeting of the community

Talking to some occupational group, the researcher talked to the fishery group and animal-raising group. It was found that both individual and group level need training of effective management.

Visiting their houses and field works, visiting the villagers' houses and field works was found that most of them in got similar problems as their personal debt , deforestation and lack of agricultural water etc.

4.1.4 The Local Researches

There were 2 local researches; Mr. Achirarsit Jaidee and Mr. Chamrat Maliphum. Thus, the researcher had trained the local researches before doing participatory actions as research designing, population grouping questions making data collecting together with learning the community development through the research process Community's Needs and problems



Figure 19 Local Researches

4.1.5 Group Forming; the research has classified the population to be 7 groups as the following;

- Lam samor Group
- Heay Khaolam Group
- Phuchuay Boon Group
- Muser Group
- Soi Suphan Group
- Taladnat Group
- Na wat Group

Sub – group Discussion, the researcher invited 10 heads of households for each group to make discussion somewhere convenient in the village.

1) Lam samor Group; this group was made a discussion in October 13, 2001 at the temple parvillion of Ban Thungmasryor Bouny Suh – district, soi Yark District, Kanchanaburi Province.



Figure 20 Lam samor Group

- The participants were both external and internal researchers together with some heads of households in the village. They were Col. Prachoom Mathuramon, Lieutenant. Narong chaichitatorn Mr. Achirawit Jardee, Mo. Chamrat Maliphum, Phra Manoon Nakawaro (the abbot) Mr. Ampai Ban – in, Mr. Thongkam Nanthathirat, Mrs. Suwan Pannak, Mr. Suparb Pan – in, Mr. Somchit Risin, Mr. Sawing Phongthong, Mr. Ruam Jaidee, Mr. Anuthep Chaiwichian, Mr. Thuriaa Jaidee, Mrs. Sunee Phongthong, Mr. Yupin Pan – in, Mr. Juang Sichaona, Mr. Suang Phongthong, Mr. Udom Phansomboon, Mr. Hiang Chanhom, Mr. Rithce Nanthathirat and Mr. Nontree Paropat.

- The discussed contents covered various aspects as the history of their group residing the community environment, occupation, the religious activity and some problems in the village.

Conclusion

- The community history; most members of Lam Samor Group were from Suphan buri Province in 1984. They were invited by Kam Nan Mun (a head of sub – district) to earn for living here. The community area firstly was a tropical forest then deforesting for agricultural plantation and community forest.

- There were about 30 households around Wat Lamsamor being as a village center. Most of them were farmers (corn, cotton, pineapple and bean), fruit orchard and merchant. They saved through saving group (Satcha Om Sap Group), some wild products were picked as bamboo shoot, mushroom, local vegetables and herbs for medicine and pest control. There were some participants presenting there needs to cut some wood for building a house but someone disagreed. They mostly said that even some local investicators could be available the wood this action was not only illegal but also produced environmental impacts. At the end, they asked themselves why we try to think only what we can get from a forest why don't we make

the other way as what we give a forest, some benefit such as planting which the abbot has been a leader for long time. So they should continue his concept at all However, the problems were as follow.

National Resources and Environmental Problems

- Degeneration of forest and wildlife, reduction of forest area, forest invading, hunting, wild product picking, wild fire and some conflicts of forest advantage
- Land and Land use as low quality of soil, degenerated soil, soil erosion and right of land ownership.
- Lack of agricultural water and water transportation
- No processing of environmental education

Economic Problems

- The personal debt was caused by the commodity system. Thus, the farmers took some production resources firstly as loan with 3% of interest from the local investors, then paying back after the harvested seasons. The agricultural yields were sometimes not enough to cover their loans. These was the reason why some farmers lost their own farming lands to the local investors.
- The agricultural products were sold in very low price because of the depressed prices of the local investors.

Social Problems

- Lack of labors in farming; especially, the harvest season which a numerous of labors were needed. The farmers had to employ some labors for harvesting on time.
- Lack of educational opportunity and equity
- Need registered document of Land rights
- No health center

Infrastructure Problems

- Lack of comfortable roads, electricity and water sources.

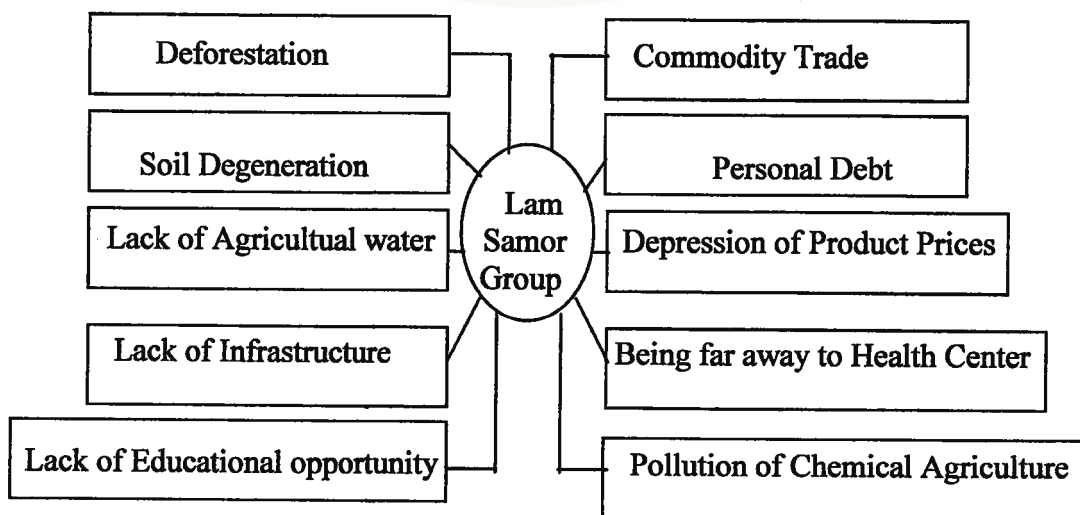


Figure 21 Problems and Needs of Lam Samor Group

The recommended solutions were presented as the following;

Natural Resource and Environment

-Doing a forestation as the abbot performing before

People's Debt

1)Saving what in doily life such as home vegetable planing etc.

2)Reducing the production resources

- An agricultural tractor should be managed through a farmer group which was formed by the villagers.

- The seed for reproduction should be bought somewhere cheaper.

- Fertilizer and pesticides should be solved by forming a fertilizer bank and producing biofertilizer together with herbal pesticide.

3)Additional Value of Products should be performed as reducing in avoid chemical agriculture, decomposive planting and fish raising of the village fishery project etc.

4) Saving through the villager saving group

5) Finding some loans with low interest

- Labor problem should be solved by sharing the villagers for agricultural yield harvesting.

- The villagers who did not get their land survey could contact the officials to do it this year.

The major aspects were discussed that most villagers agreed the significance of participatory process because it could make them sharing their opinions for the community development. They expected that the meeting might be circulated to any groups of people to see directly the problem in the village.

2) **Huay Khao Lam Group**; this group was made a discussion in October 14,2001 at Mr.Sumet HomKlun's house Ban Thung Maseryor, Bounty Sub – district, Sai Yok District, Kanchanaburi Province.



Figure 22 Huay Khao Lam Group

- The participants were; Colonel Prachoom Mathuramon, Licutenat.. Narong Chai Chitatorn, Mr. Achirawit Jaidee, Mr. Chamrat Maliphum, Mrs.Namngern Kandee, MrsBoonsom Homklun, Mrs.Saipin Klarit, Mrs.Yim Buaphut, Mr.Lek Khamyat, Mr.Khachom Saengnil and Mr.Sumet Homklum.

- The discussed contents were a history of Huay Khao Lam Group, the community environment, occupation and some problems in the community

Conclusion

- The members of Huay Khaolam Group were previously from the provinces of Prachinburi Buriram, Surin and Bangkok in 1974. They were invited to live here by some soldiers working in a military map department, hill tribals welfare center and some politicians in that time. However, the community had been fulfilled with big trees and bamboo before conccessing without any forestation then the people occupying to care for living.

- There were about 35 –38 households for this group and their problems could be presented as the following;

Environmental Problems

- Deforestation and reduction of a forest area
- Illegal fishing by using electricity
- Pollution of chemical agriculture
- Lack of water resources

Social Problems

- People’s debt which was formed by taking advance of production resources
- About 10 youths getting narcotic dependency
- Health problem

Economic Problems

- Getting low prices of agricultural products
- Having no technology for agricultural products storage
- Producing without planing for its market

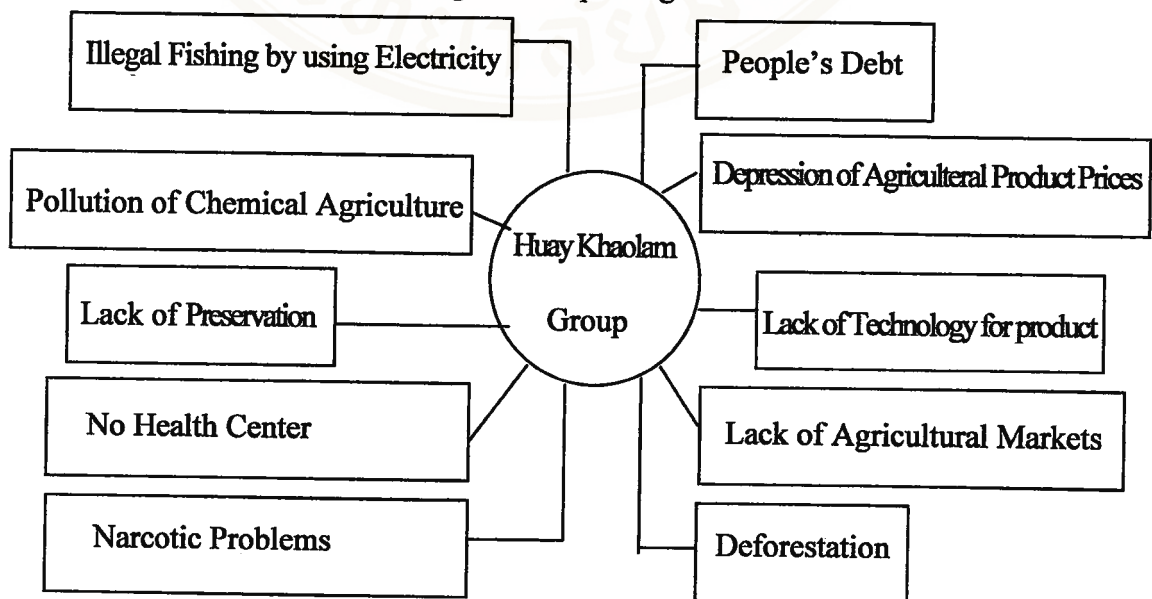


Figure 23 Problems and Needs of Huay Khaolam Group

The community solutions were recommended to various approaches as the following;

Environmental Problems

- The forest resources should be managed to various approaches as environmental education, Volunteer for forest prevention. The youth for forest prevention, zoning, forestation activity on major in religious days and rights for community forest management etc.

- Lack of water resource should be solved by restoring the water ways, doing a small dam for irrigation and farm ponds etc.

- The people's debt could be solved by reducing production resources and applying the local indigenous Knowledge.

- The narcotic dependency should be solved by treating and restoring together with the participation of family and community to take care their members.

- Health problems could be solved by self – care and provider's care, some health workers visited the villagers twice a week

The major aspect was those participants getting awareness to the discussion like this because it could make them to get the participative learning. They could find the community problem analyze and specify the solution etc.

3)Phuchuay Boon Group; this group was made the discussion in October 27, 2001 at the shop of Mrs. Rabiab Jujaihan, Ban Thung Maseryor, Boungty sub – district, Saiyok District, Kanchanaburi Province.



Figure 24 Phuchuay Boon Group

- The participants were Colonel. Prachoom Mathuramon, Lieutenant. Narong Chaichitatorn, Mr.Achirawit Jaidee, Mr.Wichian Sinet, Mr.Phan Phothiprasart, Mr.Hung Pralaoh, Mr.Yan Jaichven, Mr.Suthi Chepnurat, Mr.La Chanchit, Mrs,Somnuk Donphrai, Mrs.Ladawan Muenlamai, Mr.Boopha Phothimane and Mrs.Rabiab Jujaihan.

- The discussion was concluded that there were 10 households for this group. Most of them were from the provinces of Suphanburi, Chaiyaphum, and Kanchanaburi, Their occupations were farmers, workers, merchants and wild product collecting; however, they got some problems as the following;

Environmental Problems

- Lack of farming land
- Lack of agricultural water
- A problem of wild product picking

Economic Problems

- Plant diseases
- People's debt

Social Problems

- Narcotics
- Unemployment in dry seasons

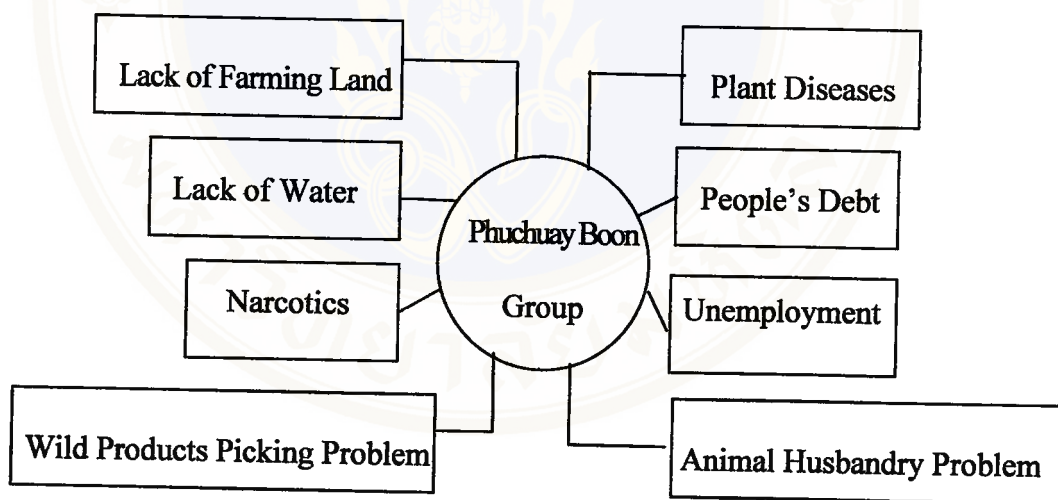


Figure 25 Problems and Needs of Phuchuyay Boon Group

The solutions of the community problems were recommended to various approaches as the following;

- The farming land problem should be solved by preparing some parts of community to be the public area for farming as the tambol administration organization (TAO) has prepared 1200 rai for animal husbandry in the community.

- Doing a small dam for irrigation should solve Lack of agricultural water. Moreover the meeting presented that the community got some governmental budget for small dam construction (15 rai.)

- Plant diseases; especially, the chili's disease, should be solved by producing some herbal pesticides and contacting the agricultural academies. The herbal pesticides were consisted of lemon grass, ginger, rotten chili citrus garlic and the horseradish tree in they sometimes mixed sweet milk, ovaltine and water for pesticide mixture spraying to chilli plants for prevention the diseases.

- The problem of personal debt should be solved by reducing their daily expense and production resources as a project of sustainable agriculture (fertilizer production), and a project of community rice etc.

- The unemployment problem, which always appears in dry seasons, should be solved by forming a villager group for sustainable agricultural product etc.

-Wild product collecting problem should be solved by specifying the community regulation. Due to there has been only 3 months for wild products season, they need 2 months for this activity in the forest.

4)**Muser Group**; this group was made the discussion in October 27,2001 at Mr.Klom's house, Ban Thung Maseryor, Bounгы Sub – district, Sai Yok District, Kanchanaburi Province.



Figure 26 Muser Group

- The participants were Colonel, Prachoom Mathuramon, Lieutenant. Narong Chaichitaorn, Mr.Achirawit Jaidee, Mr.Klom Sithong, Mrs,Lamphrai Laochit, Mrs.Boontham Votphrasert, Mrs.Nitaya Sengsun, Mr.Piasert Sithong, Miss.Jiraporn Chansom, Mrs.Sawai Saejew, Mrs.Pranee Sithong, Mrs.Kliaw Sithong, and Mr.Kittipong Sensng,

- The Discussed contents covered the community’s history, environment, occupation and any problems.

- The conclusion was most of them being from the provinces of Ratchaburi, Suphanburi and Kanchanaburi. The group interaction was not united with narcotics and gambling but most of them getting an environmental awareness. They discussed to various benefits of forest and soil. They believed that soil. In the village was dead because of the chemical agriculture ets. However, this group bad various problems as the following;

1. Environmental problems
2. Economic problems
 - an agricultural markets
 - plant diseases and rice
3. Infrastructure
4. Social problems
 - Health
 - Education
 - Narcotics

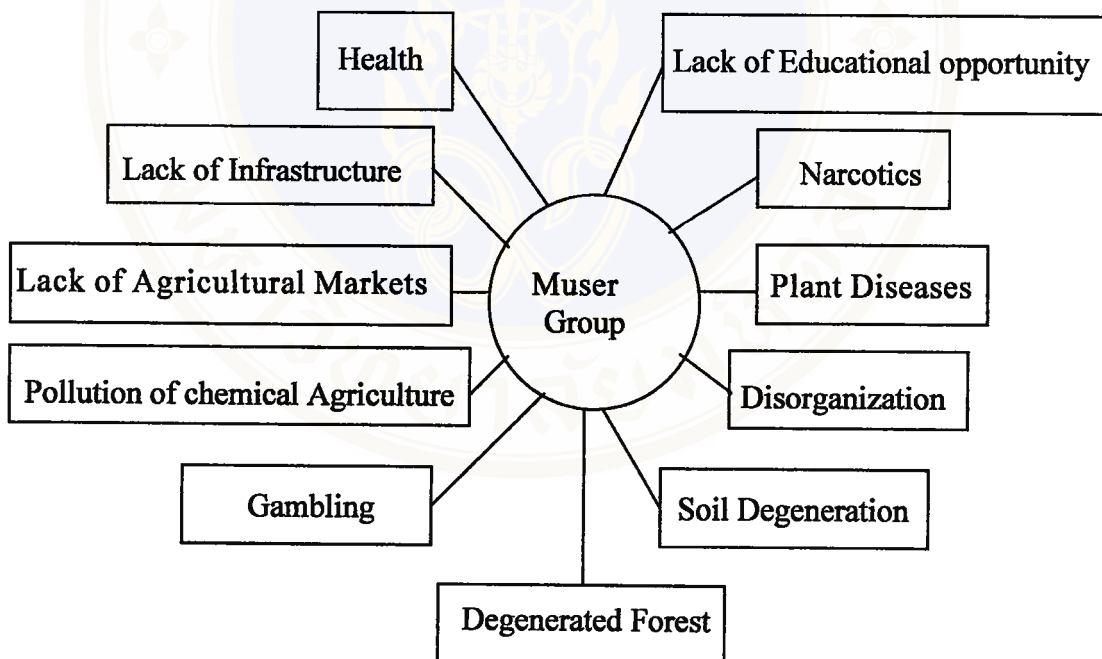


Figure 27 The Problems and Needs of Muser Group

The solutions of community problems were recommended to various approaches as the following;

- Constructing the villagers environmental awareness and forestation should solve the environmental problems.

- Forming a farmer group to do holistic management should solve the agricultural problems

- Contacting the government sectors to improve a road, electricity, public telephone etc., in the village should solve the infrastructure problems.

- Contacting the agricultural academy department should solve Plant diseased.

- Health problem may be solved by contracting a healthy center, even the community located in the national preservation forest area

- Improving an effective teacher and supporting the students to continue their higher education should solve an educational problem.

- Narcotics was generally Known that was taken from the community outsider so the community participation should be the best way to prevent or solve it.

5) Soi Suphan Group; this group was made the discussion in October 28,2001 at Mr.somchit's house, Ban Thung Maseryor Bounjty Sub – district, Saiyok District, Kanchanaburi Province.

- The participants were Colonel. Prachoom Mathuramon, Lieutenant. Narong Chaichitatorn, Mr.Suthep Kerdpoka, Mr.Prayad Ratchasikacw, Mr.Jan Phitsamai, Mrs. Chue Aramsri, Mrs. Nipa Aramsri, Mrs.Bang – ern Toolchalong, Mrs.Champee Chue – ngam, Mr.Ung Runrueang and Mr.Sommai Phikulthong.

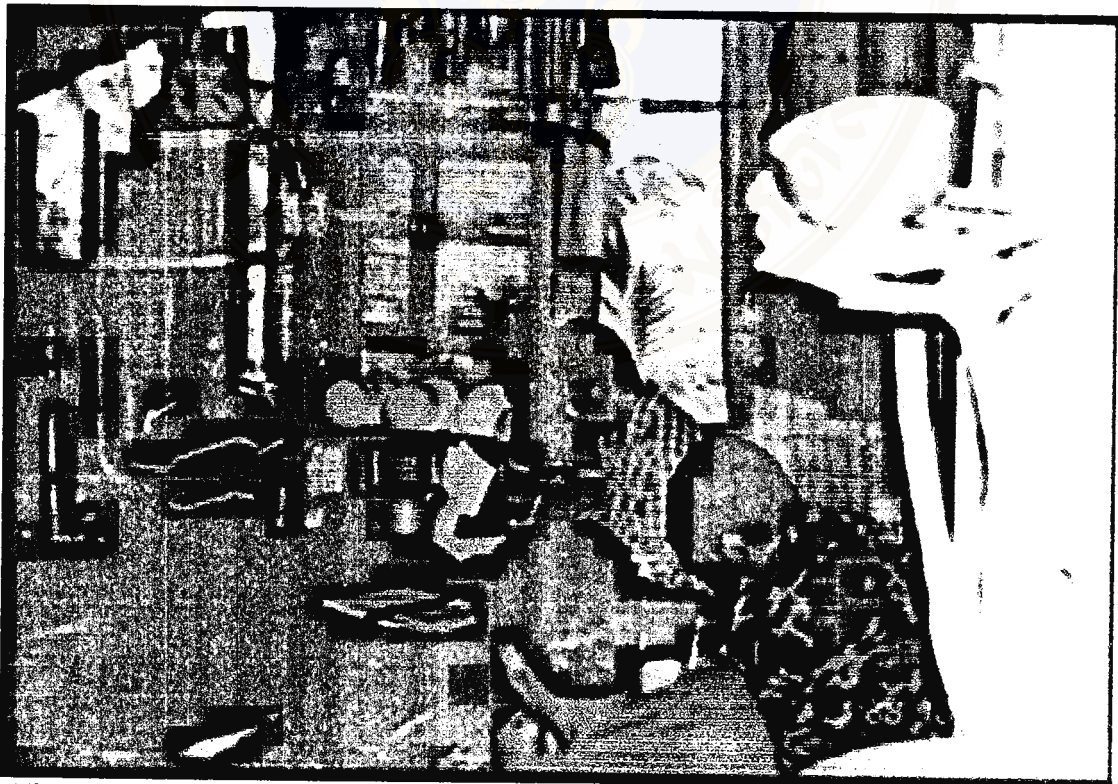


Figure 28 Soi Suphan Group

- The discussed contents covered the community's history, environment, occupation and any other problems.

- The conclusion was presented that most of them previously came from the provinces of Suphanburi and Kan Chanaburi There were 20 – 25 households. The first group of villagers living here used to work for a forest concession company. Presently, they work for farmers planting chilli, cotton, papaya, corn and rice with some problems as the following;

Environmental Problems

- Deforestation
- Lack of agricultural water

Economic Problems

- Agricultural pest control
- Animal diseases

Social Problems

- Health construction
- Narcotic
- People's debt

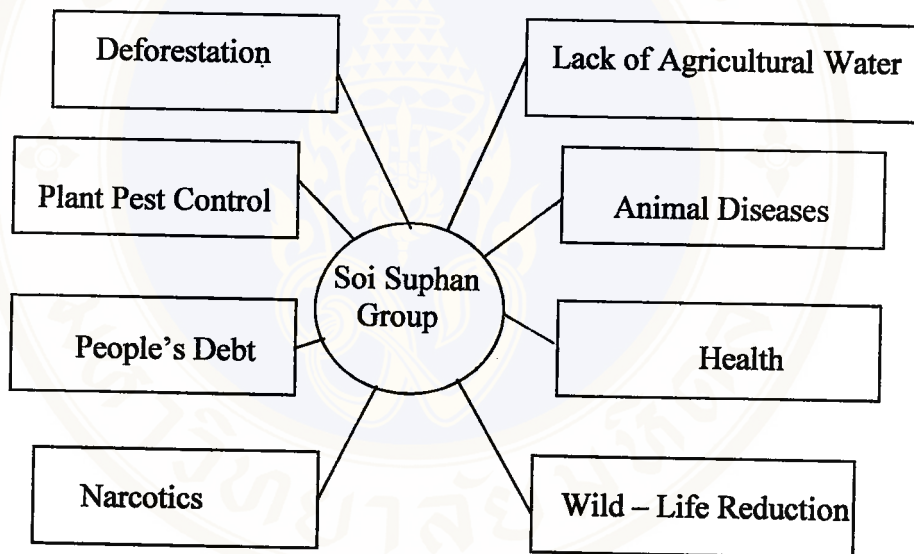


Figure 29 The Problems and Needs of Soi Suphan Group

The solutions of community problems were recommended to various approaches as the following.

- Reducing production resources as farming equipment, seed, fertilizer and insecticide etc should solve a personal debt.
- Contacting the agricultural academy department should solve Plant pest.
- Establishing a health center in the community should solve a problem on health.
- Animal diseases should be solved by educating the farmers to understand a management process consisting of committee, regulation foundation and activity together with training on animal husbandry knowledge.
- A problem on narcotics should be solved by the community participation and doing strong inspection of military power in the community

6) Taladnat Group; this group was made the discussion in October 28, 2001 at Mr. Chuang's house, Ban Thung Maseryor, Bounty Subdistrict, Saiyok District, Kanchanaburi Province,

- The participants were Colonel. Prachoom Mathuramon, Lieutenant. Narong Chai Chitatorn, Mr. Achirawit Jaidee, Mr. Chuang Pan Khiaw, Mr. Pan Panrood, Mr. Sai Chanjaidee, Mr. Samruay Imsomboon, Mrs. Komkamol Chanjaidee, Mrs. Phrominat Namsuwan, Mr. Sa - ad Pankhiaw, Mr. Panupong Chumsena, Mrs. Sirinya Chumsena and Mr. Boonlve Sanohsan.

- The discussed contents covered the community's history, environment, occupation and any other problems.

- The conclusion was presented that there were 8 households being previously from the provinces of Suphanburi, Pathum thani, Nakornphathom, Buriram, and Chantaburi, Most of them did farming as chili, corn, passion fruit, animal raising and rice growing with some problems as the following;

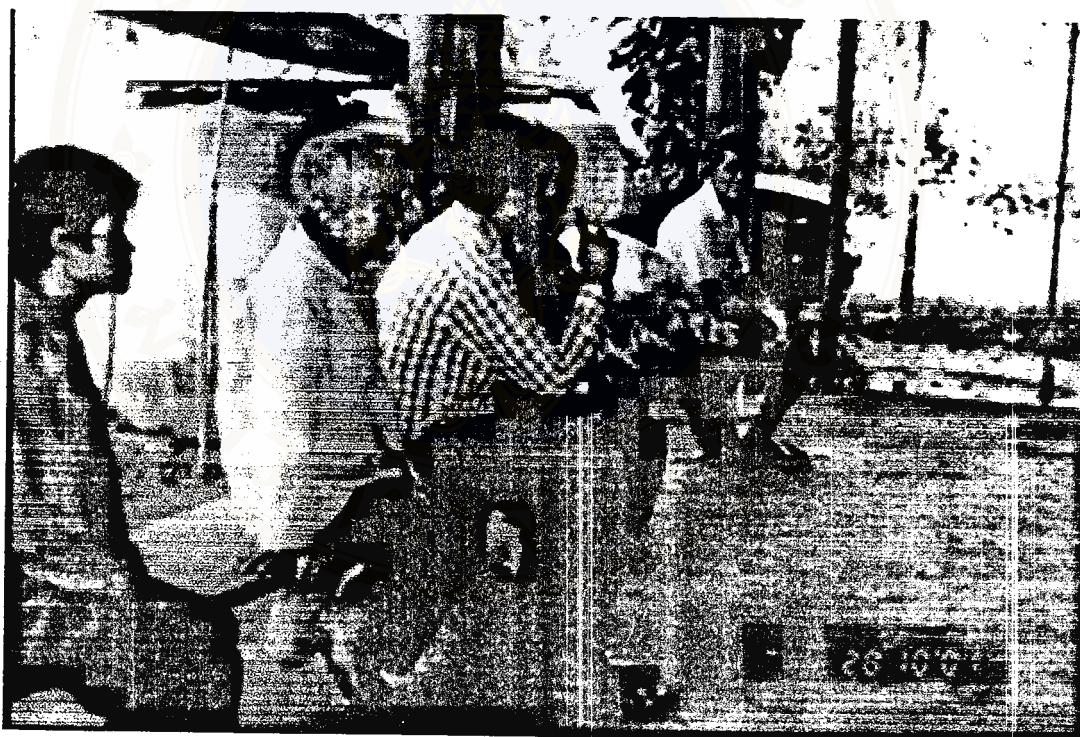


Figure 30 Taladnat Group

Environmental Problems

- Lack of Land for farming
- Deforestation

Economic Problems

- Animal husbandry
- Plant diseases
- Agricultural markets
- Lack of infrastructure

Social Problems

- A problem related public health

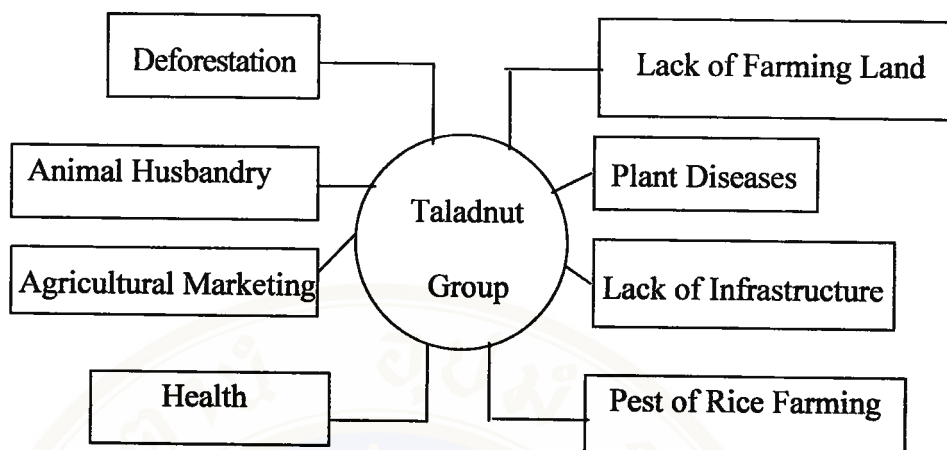


Figure 31 The Problems and Needs of Taladnut Group

The solutions of community problems were recommended to various approaches as the following;

- Lack of farming land should be solved by land reformation.
- Preparing some fundamental resources as basic knowledge, area, breeding and reproduction etc should solve a problem of animal husbandry.
- Improving the road, which is important to agricultural product transportation, should solve Lack of infrastructure.
- Contacting an agricultural academy department about plant disease analysis and its prevention etc should solve Plant diseases.
- A problem of agricultural markets should be solved by forming a farmer group to do all processes of farming in the community.

7) Na wat Group; this group was made the discussion in November 3,2001 at the village pavilion, Ban Thung Maseryor, Bounty Sub – district, Saiyok District, Kanchanaburi Province.

- The participants were Colonel. Prachoom Mathuramon, Lieutenant Narong Chaichitatorn, Mr.Achirawit Jaidee, Mr.Prachuab Rueangchuemuean, Mr.Thongmoh Sarasalin, Mr.Kim Saeton, Mr.Udom Ratchasikaew and Mrs.Chub noinid.

- The discussed aspects were the community history. Environment occupation and any problems in the community.

- The discussion was concluded that this group had 8 households, doing mostly a merchant, planting and animal raising. Most of them previously lived in some provinces as Ratchaburi, Nakorn pathom and Kanchanaburi with some problems as the following;

Environmental Problems

The environmental problems covered soil erosion and degeneration, lack of water and deforestation appearing after the finishing of forest concession in 1989. There were no foresting instead of ones destruction so long time.

Social Problems

- The narcotic problem should be solved by taking lane the villages members through their families and community participation.

- Unemployment should be solved by providing some minor occupations for the villagers.

- The ground market form the outsiders should be solved by producing themselves what products they could do in the village.

Economic Problems

- Some villagers did animal husbandry and they needed to expanse there business but no Knowledge and capital.

- Most villagers here got some loans from the rich in the village and no ability to payback now.

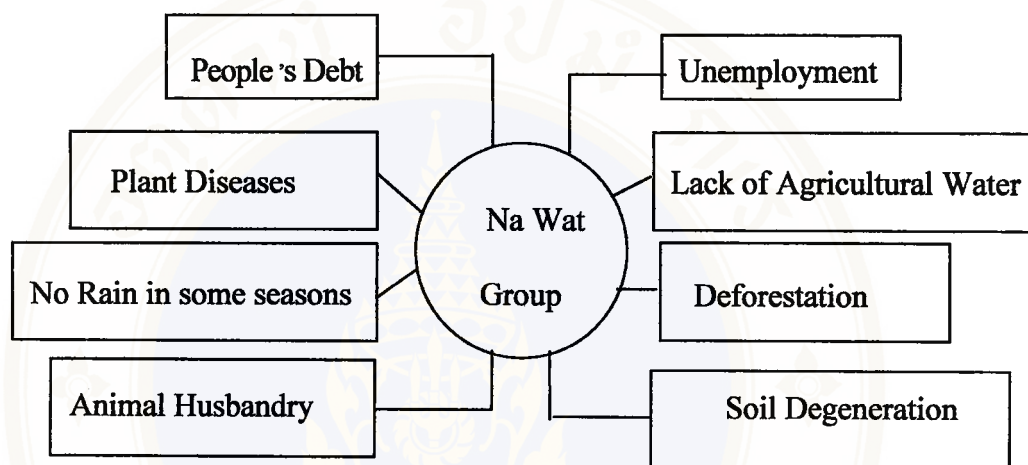


Figure 32 The Problems and Needs of Na Wat Group

The solutions of community problems were recommended to various approaches as the following;

The environmental degeneration could be solved by forestation (as a community forest), planting perennial crops or fruit trees and soil covering crop etc. Moreover, the villagers needed to conserve bamboo tree for then handicraft at all.

Lack of water should be solved by contacting the government sector to do some small dams for irrigation or any other approaches because of being over the villagers ability.

Unemployment in dry seasons should be solved by forming an group of house wife; thus this group was previously performed with 80 members for weaving but there were some problems as its materials, transportation and capital with high interest. The future project should be changed to be souvenir or basket weaving that can be collected it material in the community.

Animal husbandry problems should be solved by educating the villagers to get knowledge related animal raising.

Training them to live with economical minds, industrious behaviors and forming a group for any social activities should solve the personal debt problems.

The conclusion of people's problems and needs in Ban Thung Maseryor was presented as the following;

- 1) Environmental Problems
 - Deforestation
 - Soil erosion and degeneration
 - Lack of agricultural water
 - Pollution of chemical agriculture, wildfire and firing after harvest
- 2) Economic Problem
 - People's debt
 - Lack of agricultural markets
 - Community trade
 - Animal husbandry
 - Plant diseases and pest control
 - High prices of production resources
 - Lack of an effective group
 - No promotion of minor and supplementary occupation
 - Lack of technology for agricultural product preservation
- 3) Social Problems
 - Lack of educational opportunity
 - No health center
 - Narcotics
 - Gambling
 - Lack of infrastructures
 - Local influences
 - Ineffective management

4.2 Community Analysis

A community development needed to do the community analysis. The analyzed result were available to make a development plan. Thus, the community analysis had to do both internal and external factors as the following;

The internal factors of community were consisted of the community leaders, villagers, quality of life, social and economic condition infrastructure, resources and their management etc.

The external factors of community were consisted of political, economic, social and technological condition being around the community. However, the external factors may make both positive and negative effects to the community development.



Figure 33 Community Analyzed

The analyzed results of Ban Thung Maseryor through a participatory process were presented as the following;

Internal Factors	Reason/Indicator
<p>Strength</p> <p>1. Natural resources and environment</p> <ul style="list-style-type: none"> - Being balanced natural resources; forest, soil water and air - There were some attractions as water Source for recreation - The area being suitable for agriculture with 2 waterways; Huay wayor and Huay Bongty - Being local forest for community food - The community leaders having an environmental awareness 	<ul style="list-style-type: none"> - The villagers believed that if man can lire, why the forest can't do -Some Thai tourists went fishing at the water source the provincial fishery office has raised some fish to the pond since the beginning of the year. -The villagers could find some vegetables as bamboo shoot and mushroom from the forest. - The previous activities of the abbot, and some other leaders

Internal Factors	Reason/Indicator
<p>2. Society - Seniority system being available in the village, even someone used to be prisoners, in the past.</p> <p>3. Economy - Self – sufficient economy being awarded in the village</p> <p>- Being a source of food production - The agricultural products getting good management</p> <p>- Having an effective group of saving - Some villagers reducing their expenses with home vegetable and self – growing of rice etc. - Some villagers being able to share their resources, and self. Produced fertilizer etc.</p> <p>4. Technology - Integrating the modern and local technology</p> <p>5. Infrastructure -Having a public water source</p> <p>6 Languages and local culture -Having local languages and local culture in each group - All of them has been security mind and public mind</p>	<p>They called their aging persons as grand father/mother etc. and most of them always made their merit by offering some food to the monks in the morning</p> <p>- The villagers and the agricultural academists have analyzed some appropriated plants for the community</p> <p>- Most villagers have been farmers in various production as chill, pineapple, corn, cotton, bean, animals, fishery and house wife etc. - The effective group in the village - The alternatives after doing a group discussion</p> <p>- The farmers who were not under a commodity system got freedom for their occupations</p>
<p>Weakness</p> <p>1. Natural Resources and Environment - Deforesting</p> <p>- Ineffective management of water and irrigation - Reducing of wildlife</p> <p>- The villagers having no information about their natural resources - No training of natural resources application - Chemical pesticides being strongly available in the fields - Wild – fire and burning after cropping</p>	<p>- The deforestation still having in the community - Some wild lives being lost after deforestation</p> <p>- Lack of water always being in any dry seasons - Some villagers still hunting wildlife</p> <p>- There in still haring soil erosion and degeneration</p> <p>- Appearing some air pollution</p>

Internal Factors	Reason/Indicator
<p>2. Society</p> <ul style="list-style-type: none"> - Being consumptionism - Being Individualism - Someone getting narcotic dependency - Adolescence moving out to work in a city and some senile. Taken to senile Welfare center in a city - Most having no opportunity for higher education - Having not enough public health service - Strongly locate influences and gambling <p>3. Economy</p> <ul style="list-style-type: none"> - Uncertain prices of agricultural products - Commodity trading - Without any plans of production, marketing and transportation - Having debt from agricultural production - Unemployment in dry seasons - High capital but low income for - Agricultural production - Not stable quantity and standard for agricultural products - Plant diseased - Low income - Without knowledge of marketing - No minor in supportive occupation <p>4. Technology</p> <ul style="list-style-type: none"> - Self – reliant technology being neglected - No modern technology <p>5. Infrastructure</p> <ul style="list-style-type: none"> - Being not comfortable road and television - Without telephone and electricity <p>6. Management</p> <ul style="list-style-type: none"> - Having no potential of management and marketing etc. - Being not ambitious - Applying top – down management - Being not enough for social support 	<ul style="list-style-type: none"> - Expending some luxury things for life - Immigrating from various provinces - Getting high in come - Having only primary education in the community school - No health center - The community located in the national preservative forest area - Local influences and some government official - No responsible officers taking care because of the rain agriculture - No local indigenous knowledge available

External Factors	Reason/Indicator
<p>Opportunity</p> <p>1. Politics</p> <ul style="list-style-type: none"> - The constitution of Thailand has determined the participation of local care for natural resources and environment. Especially the item 46, 56 specifying that individuals, state and communities have their own rights to take care, and to get benefit from the natural resources, biodiversity Together with environmental quality maintenance, promotion and prevention. Moreover, the local organizations have their rights of ownership to prevent, take care the local environment and its impacts in present and in the future. - Decentralization supporting the concept of bottom – up management and self – reliance in the community <p>2. Economy</p> <ul style="list-style-type: none"> - New theory and self – sufficient economy affecting the civil society forming - There were various resources for non – agricultural production - Agricultural product preservation and tourism could be stimulated for the village. - An agricultural sector always being a soft basement for unemployment in the condition of economic depression. - A state policy of a million baht for a village - A project of one product for one tambol (sub – district) - A state policy of debt resting for small farmers - Farming a civil bank <p>3. Society</p> <ul style="list-style-type: none"> - Forming a group of villagers to produce social development local potential - Having a participation system in the village 	<ul style="list-style-type: none"> - The world bank reported in November 19,2001 that poverty in Thailand has been back to be a serious problem and the community foundation may be the best and effective policy to beat it in the rural area.

External Factors	Reason/Indicator
<ul style="list-style-type: none"> - A state policy of 30 bath for all - Treatments - Constructing an addict rehabilitation center together with prevention and uprising - - An appropriated technology being available - Developing biofertilizer or other substances in stead of agricultural chemicals - Improving some agricultural equipment <p>5. Natural resources and environment</p> <ul style="list-style-type: none"> - The area surrounded the community has been fulfilled of rain forest - Ecological tourism could be supported around here. <p>Threat</p> <p>1. Politics</p> <ul style="list-style-type: none"> - Political knowledge was not continuously distributed to the villagers - Appearing votes buying in the village - Influencing from national politicians and local leaders <p>2. Economy</p> <ul style="list-style-type: none"> - Being low prices of agricultural products - Uncertain productivity of agricultural product because of natural production - Being not effective group of occupation - Without factory for product preservation - Plant diseases - No markets for agricultural products - Going up of some resource prices <p>3. Society</p> <ul style="list-style-type: none"> - Without promotion and stimulation for people participation process - Having social gap between the rich and the poor - Getting no public services such as electricity etc. - Most villagers getting low education - Dependency of gamble 	<ul style="list-style-type: none"> - Most politicians always visiting the community during election only - The villagers' confirmation - The local influents always saying to the politicians when they had to do something wrong in the village. <ul style="list-style-type: none"> - The local investigators specifying the prices themselves. - The community located very long distance to the academic center. <ul style="list-style-type: none"> - No facilitators to support and protect the villagers - Top – down development - Long distance from an electricity to the village. - The border police being a teacher - No seriously caring from the government officials

External Factors	Reason/Indicator
<ul style="list-style-type: none"> - Narcotics distribution - Applying chemical pesticide - Having some communicable diseases from foreign labors 4. Technology <ul style="list-style-type: none"> - Local indigenous being not accepted 5. Natural Resources and Environment <ul style="list-style-type: none"> - Most villagers not understanding about environment - Some villagers still doing the deforestation and hunting 	<ul style="list-style-type: none"> - Exchange of narcotics and agricultural products - Having no knowledge and uncorrected belief on chemical substance - Malaria epidemics - Caring modern technology only - Some villagers needed to cut wood to make a house. - They still having motor – saws and hunting – guns.

4.3 Community Vision Formation



Figure 34 Community Vision Formation

The community vision is considered to be the aspirated status of the community in the future. Thus, it should be based on the present real facts of the community and analyzed through participation process of the community members. However, the researcher has invited Dr. wee Rawang to be the instructor and moderator for making the community vision among the villagers participation in December 5, 2001. The community vision formation was processed as the following.

4.3.1 There were 84 people being both the community leaders and members coming to join the participatory meeting.

4.3.2 All members were devised into 4 groups, each group consisted of chairman, recorder, presentator and time controller.

4.3.3 Each group analyzed the community covering its strength, weakness, opportunity and threat.

4.3.4 Each group presented their future view of the community as the following;

Group 1. Their needs for the future community should be fertility of natural resources, no narcotics and gambling, comfortable infrastructure such as communicative system, public health unit, roads, electricity, and water together with quality soil and without plant diseases.

Group 2. Their future community should be comfortable transportation and communication, electricity agricultural markets, education for children, nursing, some works in dry seasons and agricultural water sources.

Group 3. Their future community in 5 – 10 years should be all comforts among water sources, roads, electricity occupation, nursing, education self – governing , having land rights and no narcotics in the village.

Group 4. The future community should be good roads, electricity, tapped water, agricultural water sources high income, ability to work, agricultural markets and effective communicative system

4.3.5 The community vision; the future needs of each group were integrated to be the community vision as the following;

“ Ban Thung Maseryor having fertility of natural resources supporting economy, being food producer with united living and strong virtue through buddha’s teachings with life long education, some health care units with comfortable roads, network, worm family through participation process of civil society and sustainable development.”

4.4 Strategic Determining

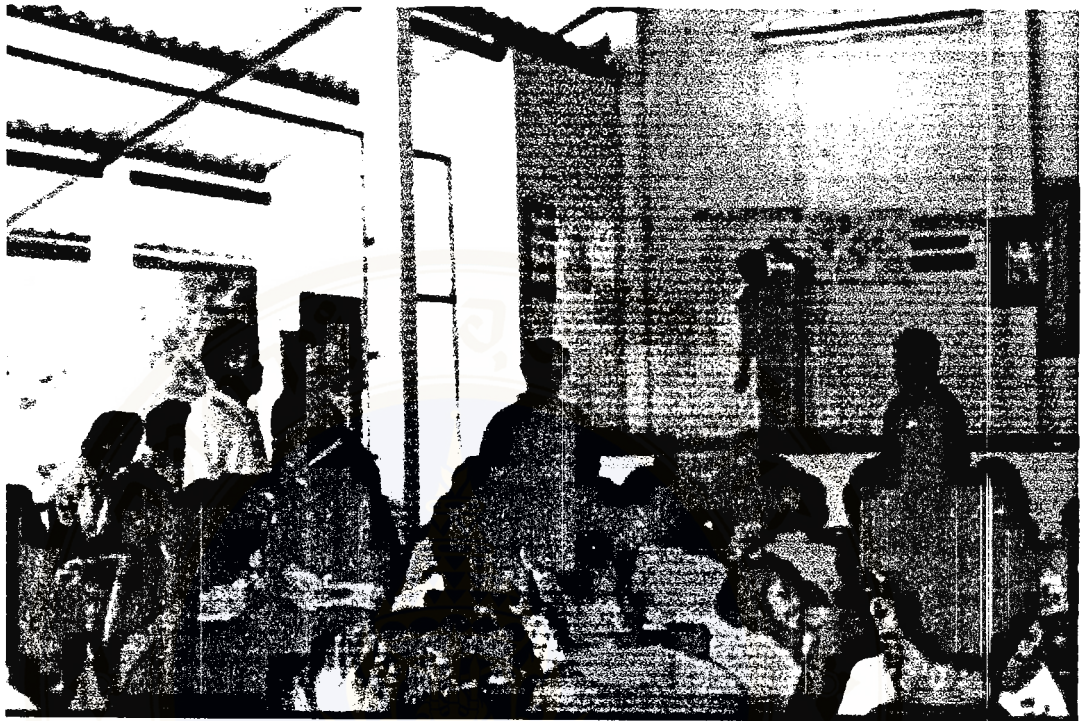


Figure 35 Strategic Determining

The environmental education strategy had been determined community analysis through SWOT Matrix as the following:

<p>Internal Factors</p> <p>External Factors</p>	<p>Strengths The environment as' forest, soil, water and air in the community is still appearing to natural condition. The area is appropriated to be a source of agricultural food production The community's leaders have got environmental awareness. They are all Buddhism. There is an effective saving group.</p>	<p>Weaknesses Most of the villagers are not active, having a debt, lack of educational opportunity, bad health and no health center A long distance village makes them getting not complete to infrastructure and irrigation system. The chemical agriculture makes degenerated soil chemical substance in soil, and plant disease. Lack of effective management, local influences, commodity trading system, deforestation, gambling and narcotics.</p>

<p>Opportunities Local participation on environmental management and benefit has been specified in the constitution. The governmental policy decentralization have been supported local organizations, civil bank, health insurance coverage and debt payment resting for small farmers etc. The military unit, border police and non-government organization have been integrated to support the border villages. The global world makes people getting modern information.</p>	<p>Offensive Strategy Forming a civil group as volunteer for forest prevention and the youth forest conservation etc. Developing seriously and effective occupational group Managing the religion institute to be a center of environmental education. The saving group can be transformed for extra purposes of environmental conservation. Forming an environmental network. Forming a Labor bank Avoid taking wood for house construction</p>	<p>Development Strategy Doing an environmental education process Farming on the new theory and self – sufficient economy Educating them to get security mind and public mind Training the villagers and local organizations about an effective management Integrating the state mechanism and private sectors to produce self – reliance and check balance of local influences in the community. Supporting the community, villagers, temples and schools to develop them selve in natural appearance</p>
<p>Threats The democratic Knowledge has not continuously promoted in the community. Agricultural products had no market and low price. There have been some local influences, middle sale person and commodity trading system. Deforestation, gambling and narcotics are still appearing in the surrounded areas. Some foreign threats as diseases, crime and fighting of minor – groups in Myanmar.</p>	<p>Defensive Strategy Constructing preventive line of wildfire and farming burn Producing bio – fertilizer and henhal pesticides Promoting the local indigenous knowledge Restoring the community forest Training the community preventive system Supporting the volunteer for public health and the village volunteer etc.</p>	<p>Retrogression Strategy Balancing the natural resources in the community Improving an infrastructure in the community Doing a Social order through the law approached Doing the community security through the military, border police and private sectors from external threats.</p>

Figure 36 SWOT Matrix

There were 4 major strategies for self – defense border village of Maseryor as the following;

4.4.1 Offensive Strategy; this strategy was based on the strength which was the external factor and the opportunity which was the external factor. However, the activities for this strategy were as;

- Forming an civil organization in the village; volunteer for forest protection and the youth for forest conservation etc.
- Supporting the religious institute to be a center for community development and environmental conservattain.
- Forming the nevironmental network
- Distributing the products supporting environmental conservation
- Forming a labor bank to solve a lack of labors
- Wood should be conserved and avoid using it for construction.

4.4.2 Development strategy; the concept of this strategy focused to an opportunity which was the external factor, and the weakness of internal factor. Those activities may be as;

- Training villagers getting environmental awareness through an environmental education process
- Doing their occupational development on the concepts of new theory and self – sufficient economy
- Building up the villagers' security minds on the nation, the religion and the King together with public development
- Increasing their effective management through the community plan
- Developing and improving the community infrastructure mostly caring to natural balance
- Balancing the local influences with the government mechanism as the village facilitation

4.4.3 Defensive strategy; the concept of this strategy focused to the strength which was the internal factor and the threat being as the external factor. However the activities should be served to this strategy being as;

- Making a wild – fire protection line and firing prevention
- Promoting the local indigenous knowledge such as biofertilizer production, herbal pesticides, local rice milling and handicrafts etc.
- Doing the environmental restoration as forest plantation etc.
- Promoting the agricultural concept of new theory

4.4.4 Retrogression Strategy; this strategy concept was based on the weakness which was the internal factor and the threat being as the external factor. However, the activities should be served for this strategy being as;

- Balancing the community resources through participatory process among the state policy people's need and community potential to be oneness of the community awareness.
- Constructing the community security through military unit and border police together with educating people to be self – reliance checking balance of local influences and preventing from external threat.
- Applying a law approach to any illegal uprising as deforestation, narcotics and gambling through the community participation.
- Improving some elements of infrastructure.

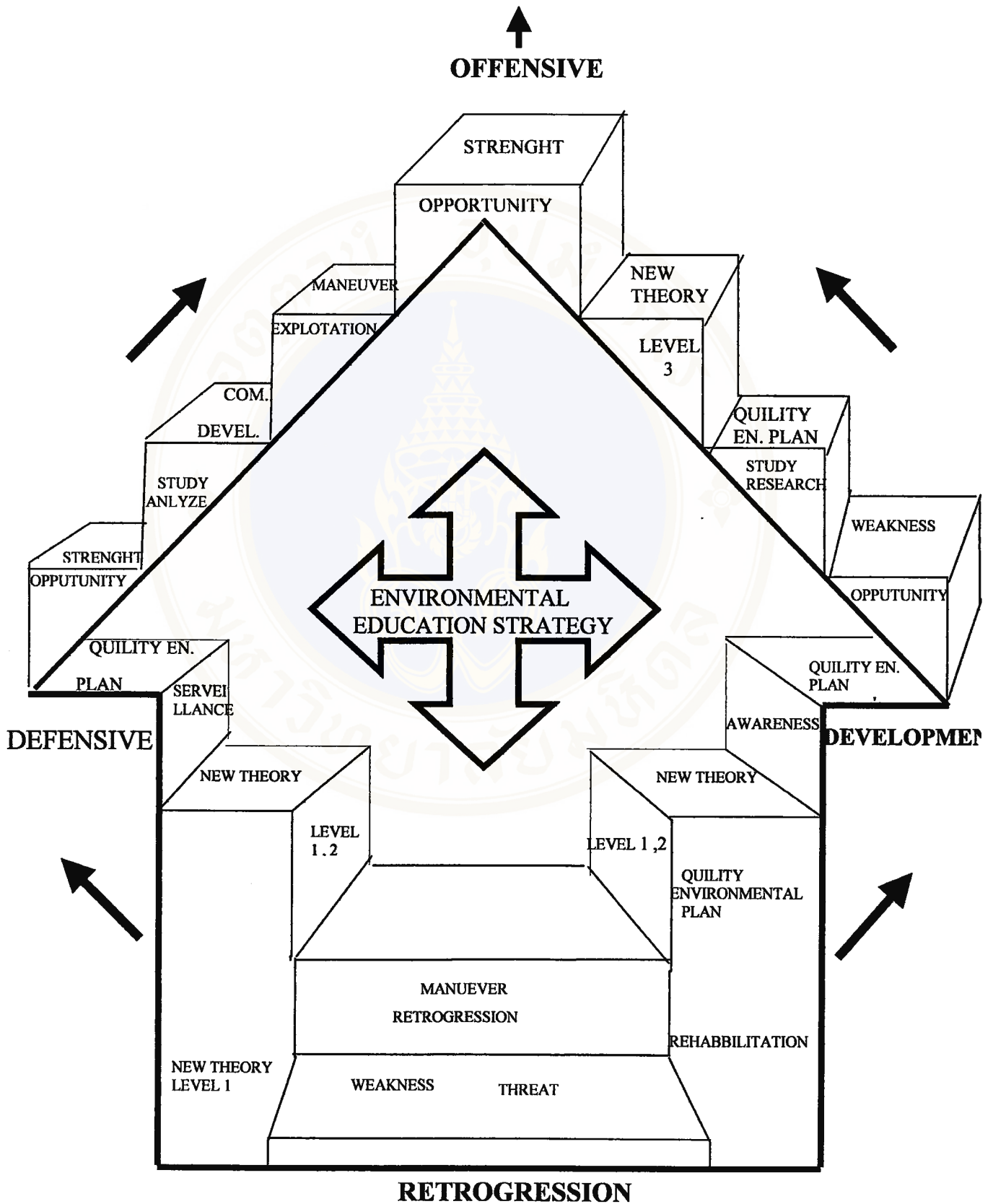


Figure 37 Model of Environmental Education Strategy

The model construction of environmental education strategy based on the goal of Environmental Education, principle of Community Development, Quality Environmental Management Planning, Maneuver of Military and New Theory. The symbol of arrows meant directional development which could be compared with community development priority levels as the following:

Retgression Strategy is used for the firstly priority level community.(remote community)

Development Strategy and Defensive Strategy are used for secondly priority level community(medium development)

Offensive Strategy is used for thirdly priority level community.(advance development)

4.5 Community Performance



Figure 38 Community Performance

The researcher has taken some activities, of the community strategy to actual performance as the self – reliant and cooperative activities while the rest will be presented to integrate to the upper organization or chain of command. How ever there are 10 activities for the community strategy as the following;

1. Forest plantation
2. Bio-fertilizer production
3. Herbal pesticides
4. Shared working on agricultural harvest
5. Occupational Group

6. Community agricultural equipments
7. Home vegetable plantation
8. Plant diseases Solution
9. Environmental education
10. Animal public Field

4.6 An Efficiency Evaluation of community Strategy

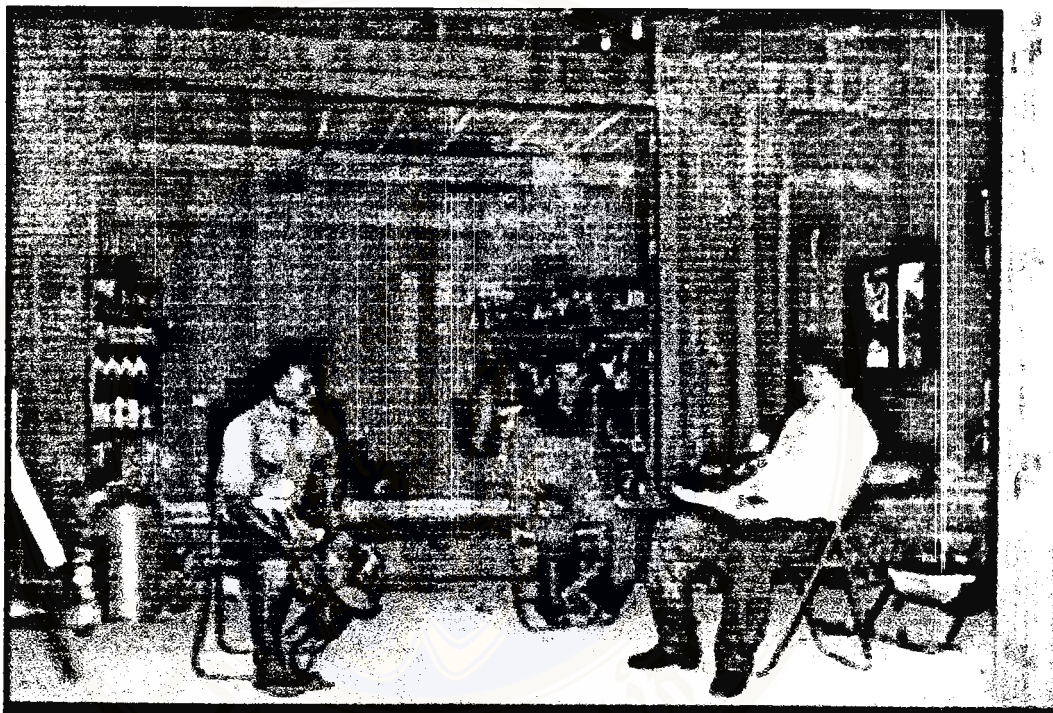


Figure 39 An Efficiency Evaluation of Community Strategy

The community strategy efficiency was evaluated through the local experts with Likert Scale of structured interview Form as the research findings below;

List of Item	Satisfaction Levels					Reason
	Low		High			
	1	2	3	4	5	
Development Strategy Training the villagers getting environmental awareness through an environmental education process		1			5	To improve their behaviors of environmental conservation
Improving the village's infrastructure with caring its natural balance			2	2	2	To Take their actual performance

List of Item	Satisfaction Levels					Reason
	Low			High		
	1	2	3	4	5	
Developing their occupations related the new theory and self – sufficient economy		1	2	1	2	To get sustainable development
Building up then security minds on the nation, religion the King and public development			1	3	2	To love the local village and country.
Increasing their effective managment through the community plan		1		1	4	To develop their potential of the community development
Balancing the local with the government’s mechanism as the village facilitation			4	1	1	To check balance of the local influences
Offensive Strategy Forming the local cevil organization for environmental management				1	5	Th produce the community leader Having environmental awareness
Producing an effective group of occupation		1	2		3	To make the villages sharing there
Promoting the religious places centering for environmental development	2	2	1	1	1	To stimulate the villegers sharing with religions institutes
Applying their saving group for environmental conservation		1	1	2	2	To transform the effectiveness
Forming the environmental network			3	1	2	To have various concepts for community development

List of Item	Satisfaction Levels					Reason
	Low			High		
	1	2	3	4	5	
<u>Retrogression Strategy</u> Forming a civil society project in the village				2	4	To build up the balance of natural and social environment
Developing the village infrastructure supporting their basic needs	1				5	To support their basic living
Making social orders in the village		1		1	4	To make the village security
Doing the community security by a military troop and border police			4	1	1	To prevent any serious problems
<u>Defensive Strategy</u> Doing the project of environmental restoration forest plantation and wild – fire protection line				1	5	To restore the community forest
Supporting the project of home vegetables and new theory etc.			1		5	To reduce their expenses.
Supporting the local indigineous Knowledge such as self – milling of rice and handicrafts			2	4		To reduce their expenses
Providing agricultural market	1		1	2	2	Being now the major problem
Total	6	11	26	25	59	

List of Item	Satisfaction Levels					Reason
	Low		High			
	1	2	3	4	5	
<u>Evaluation of Perspective Views</u>						
Their opinion on process and processing			2	1	3	To be able to know
Their opinions on the details and contents		1	2		3	To get well understand
Their opinions on technigue and participatory action			2	3	1	To make people getting more participation
Their expectation for actual application and community plan		1	1	1	3	To be able available
The problems for action			1	4	1	To be adversative benefit benefit between the villagers and the community leaders
The research Delimitation			1	5		Local influences Compulsive Condition (debtor/creditor)
Total		2	9	14	11	

Figure 40 Strategy Evaluation

CHAPTER V

DISCUSSION

The participatory action research on an environmental education strategy to develop in self-defense border village Ban Thung Maseryor has been based on a concept of sustainable development. Thus, there are some aspects to be discussed as the following;

5.1 The Community Study; the holistic information was national capital and social capital which it has made the researcher understanding the present positioning of the community covering the villagers need, natural resources, infrastructure, economy, social condition, quality of life and the community management.

5.1.1 Documentary

1) General Information of the Community; Ban Thung Maseryor is significant to national preservation area of Wang Yai-Mae Nam Khwae Noi where stands in the Thai- Myanmar border line. The community is in the plain surrounded with forests mountains and 2 water ways of Huay Wayer and Huay Bongty together with a built water source. There are 3 seasons; summer (February- May) and rain (May-November) and winter(November - February). Moreover, the community condition is non fulfilled with nature and malaria in the rainy season.

2) Personal Information; there are totally 827 villagers in the community. The major group is Thai people (87.30%) and the minor is highland people(12.70%).

3) Household Information; there are totally 222 households; 194 households of Thai people and 28 households of highland people. The majority group with the age ranged from 18-47 years old (50.81%) which is considered to be the working age . The population is trend to be increased because of their low birth control (53.00%). Even though the fundamental necessary factors presented 100%, so many people still having malaria with no primary health care unit in the community. All of the children get a fundamental education but they have not so much educational opportunity. The average income is under the standard criteria.(13,367 baht) with high

debt to the community leaders. However, there are 9 items being under the standard criteria of fundamental necessary factors as an educational opportunity, literacy rate, fundamental education, birth control, average income, group member, public activity participation, right of election and narcotics.

4) Community Information; this may be called a marginal community, Their housing location are considered to geographic condition and previous source before living here. This makes them getting no united living and no equity of public services. Moreover, there are only 1.30% getting clean drinking water, lack of agricultural water source together with no electricity, public telephone, hospital, sport playground and secondary school because of the community located in the national preservation area. Most of them are farmers planting corn, cotton and chili with chemical support. This makes some villagers always getting illness and also producing more solid water problem. The employed rate is 50 baht a day and 30 households working but the village together with 65 foreign workers in the village. All indicators pointed the village being the second level of a developing villagers (10 items getting score, 4 items getting 2 score and 14 items getting 3 score).

5.1.2 The Community Survey was aimed to study the community condition both natural and human-made environment, their permanent and semi-permanent housings, a religious place, school, the village pavilion, shops and some economic organization.

5.1.3 The Community Preparation was performed to educate the villagers participating in the research.

5.1.4 The Local Researcher Formation was organized to get some research assistants coordination any activities in the community.

5.1.5 The group formation was aimed to do a group discussion. As the old saying "no group no community development" made the researcher organized the samples into 7 groups. However, the conclusion of doing focused group discussion could present some problems and their recommended solutions as follows;

1) Deforestation; the causes of deforestation in the community were the forest concession without foresting. The solutions were recommended to be 3 levels as firstly doing law approach for ones who cut wood for trade, this illegal group always being a local influence and shared some benefit to an official. Secondly doing

an environmental education approach for the villagers who cut wood for their own house construction and finally doing an agreement approach for the villages who earned their living by wild product collection. However, there were various approaches to prevent deforestation as follow;

- Doing an environmental education; especially the knowledge of forest and wild life resources.
- Preventing the deforestation and invading the forest area for any purposes.
- Doing a forest management system through civil group
- Motivating the villagers to take back their motor-saws and hinting gun to the government official.
- Supporting the government policy of forestation

2) Soil erosion and degeneration were appeared because of the deforestation, mountainous and slope area and chemical agriculture. The solution should be performed as covering soil surface with plantation and applying the natural fertilizer.

3) Lack of water was always appeared in dry seasons; especially the agricultural water. The solution was recommended to make the water ways deeper, small dam for irrigation and ponds.

4) Pollution

- Chemical agriculture has made bad health for the villagers together with some chemical substance staying in soil and farming products.
- Wildfire and farming burn were not dangerous to the villager' s inspirational system but also forest and wild life.

Solutions

- Educating the villagers to understand and change their occupational behaviors or chemical agriculture.
- Doing public relation on wildfire prevention and farming burn after harvest.

5) Education: The villagers had no education opportunity for their higher study because of no secondary school in the community.

Solutions: The education ministry should be the major responsible organization for educational management in the border villages. The teachers should be from the education ministry, not border police who is temporary representatives only.

6) Health: Malaria and some diseases from the illegal workers made so much problems to the villagers.

Solution; there are various approaches to solve this problem as forming a health center training the public health volunteer and doing a sport medicine.

7) Illegal workers: There have been many illegal workers in the community because of the economic problems in Myanmar.

Solution; the government official should make a check point to prevent illegal immigration to the community.

8) Narcotics; some community leaders are mentioned to be a distributor of any kinds of narcotics. Thus, most villagers believe that these narcotics can make them getting more work.

Recommendation; all of the community member must take care themselves and their families.

9) Gambling; this may be a traditional activity in the village, especially in dry season. The gambling always affects other problems as debting and stealing etc.

Recommendation; the police must do seriously their functions.

10) Income and Debt; this is the major problem in the village. Their debts are 1,000-100,000 baht from mostly commodity trading and high prices of production resources. The farmers have got firstly this production resources and paying installment later. The farmers have to pay 3 % a month and their land may be lost for installment paying.

Recommendation;

- Doing home vegetable plantation to reduce an expense
- Doing new theory of self-sufficient economy
- Labor participation
- Saving with a saving group

- Doing the community agricultural equipments
- Producing bio-fertilizer instead of chemical substance
- Preserving some foods with technology
- Doing an effective group of occupation

11) Political Problem; the politicians haven't directly visited the village, non- continuous promotion of democracy to people, vote buying

Recommendation; The villagers should elect as ethical politician supporting democracy system together with a strong inspection system and local politics.

12) Uncertain Price of Agricultural Products; the farmers are still planting a monocrop being rather risk because of their low knowledge, high capital and so many products in the same time etc.

Recommendation; their should be back to do agriculture bases new theory and self-sufficient economy together with forming a group of formers doing the whole cycle of agricultural production.

13) Agricultural Market; all farmers always get low prices from the middle one in the village.

Recommendation; forming firstly the farmer group, then going to be a cooperative in the long future.

14) Infrastructure; there is not comfortable transportation, public telephone, electricity and tapped water etc.

Recommendation; there are 2 different ideas as the first group viewing that good infrastructure may make more poverty, while the second viewing that the comfortable road from the village to the city is enough to solve other problems.

15) Community Management; the village committee hasn't do any effective management to the responded projects in the area.

Recommendation; training the community members and leaders to understand how to make an effective project management.

5.2 Community Analysis

The researcher has analyzed the community through SWOT technique analysis which can be a tool for community development. (plugge, 1993; Bell and Evert, 1997) More over, this method can make an effective teamwork (Welss,1990) and help the community leaders understanding the present positioning of a community. However, Ban Thung Maseryor has its own qualifications as the following;

5.2.1 Strength

- 1) Being completeness of natural resources
- 2) The area being suitable for agricultural production
- 3)The community leaders having an environmental awareness
- 4) All of them believe in Buddha teachings
- 5) No problem of literacy rate
- 6) Having an effective group of saving
- 7) Having local language and culture in each group

5.2.2 Weakness

- 1) There are still doing deforestation and wild-life hunting
- 2) Soil erosion and degeneration
- 3) Lack of water source
- 4) Agricultural pollution of chemical pesticides and firing
- 5) Votes buying in the village
- 6) Highly local influences
- 7) No effective management of a village committee
- 8) Poverty and debt of the villagers
- 9) Lack of educational opportunity
- 10) No primary care unit in the village
- 11) No infrastructure as good roads, tapped water, electricity and public telephone
- 12) Agricultural problems
- 13) Agricultural markets
- 14) Gambling
- 15) Narcotics



5.2.3 Opportunity

1) The constitution 1997 needs local management of natural resources(item 46) together with an individual, state and community have their rights of ownership to natural resources.

2) The government policies such as decentralization, one million one village, one product one tambol, rest of debt installment for 3 years, and a civil bank.

3) There are large area good quality of forest, soil and water which are considered to be a natural capital for the community development.

4) The opportunity for effective application of natural resources.

5) An ecological tourism can be provide in the community.

6) Self-sufficient economy based civil society.

7) Bio-fertilizer is one of the approaches to sustainable development.

8) Supporting of military, border police and private organization.

5.2.4 Threat

1) No visiting of a politician and non-continuous promotion of democracy to the villagers.

2) Their living as the west cultures and lost local wisdom

3) The normal mechanism of the state has never reached to support the villager ways of life.

4) High prices of production resources

5) No public telephone

6) Lock of agricultural markets

7) Some problems from foreign labors

5.3 Community Vision

The community vision of Ban Thung Maseryor can be presented that *“the village will have had fertility of natural resources supporting economy, being food producer with united living and strong virtue through Buddha teachings with life long education some health care units with comfortable roads, network, warm family through participation process of civil society and sustainable development.”*

5.4 Community Strategy

Environmental Education Strategy is consisted of offensive strategy, developing strategy, defensive strategy and retrogression strategy. The model construction of environmental education strategy based on the goal of Environmental Education, principle of Community Development, Quality Environmental Management Planning, Maneuver of Military and New Theory.

The Model of Environmental Education Strategy, symbol of arrows meant directional development which throw to the goal of the community. It is compared with the priority development community levels of Community Development Department 1-3 levels as the following:

Retrogression Strategy is used for the first priority level community. (remote community)

Development Strategy and Defensive Strategy are used for the second priority level community (medium development).

Offensive Strategy is used for the third priority level community. (advance development)

The major approach for Ban Thung Maseryor is now considered to be developing approach. The reason is what being the weakness in the community and strength positive around the community. The weakness is as narcotics, deforestation, foreign labors, local influences, poverty and dept, lack of educational opportunity, no primary health care unit, no infrastructure as tapped water, electricity and public telephone, lack of water source, agricultural pollution, and gambling etc. While its opportunity is as the constitution, the government policy, decentralization, supporting of military, border police and private organization etc.

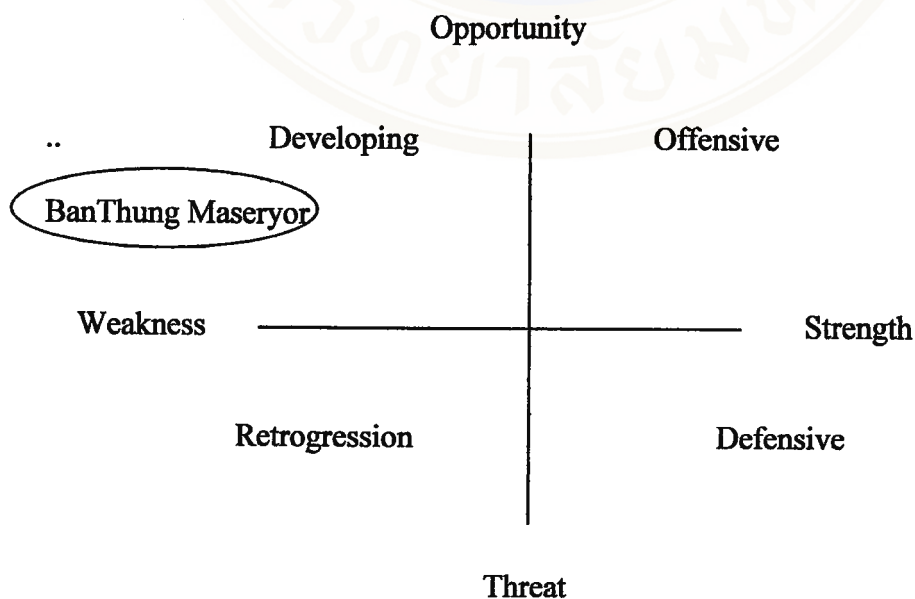


Figure 41 The Major Strategy for Community Development of Ban Thung Maseryor

The developing approach is defined as constructing the internal factor ,especially ; the weakness part to be strong enough to walk toward to the goal of the community strategy . However ,this approach needs various activities as the following

5.4.1 Educating the villagers to get environmental awareness, knowledge attitude, ability, participation and evaluation to any social activities may effect to natural balance in the community.

5.4.2 Improving the infrastructure and supporting the participation among house –temple – school – community for healthy people and healthy environment in the community.

5.4.3 Doing an effective group of occupation following the concept of new theory and sufficient economic.

5.4.4 Constructing their security and public minds.

5.4.5 Increasing an effective management of the community members and leaders.

5.4.6 The government mechanism must be taken to be facilitator and also checked balance of local influences.

5.5 Community Performance

5.5.1 Educating the villagers to understand the community environment

5.5.2 Producing the bio-fertilize

5.5.3 Solving some plant decease problem

5.5.4 Forming an effective group of occupation

5.5.5 Providing the agricultural equipment

5.5.6 Forest planting

5.5.7 Home vegetable planting

5.5.8 Animal husbandry

5.6 Efficiency Evaluation of Community Strategy

The researcher has made Efficiency evaluation of community strategy through the community leader and it results appeared as the following;

5.6.1 Most of them (60%) agreed that the environmental education strategy formation process is in high level of their understanding.

5.6.2 Most of them (65.21%) agreed that the contents of the environmental education strategy accordance with the people's needs are in high level.

5.6.3 Most of them (52.17%) agreed that got high level of participation process for the community strategy formation.

5.6.4 Most of them (62.58%) agreed that the environmental education strategy may be expected to be the community plan in the future.

5.6.5 Most of them (76.19%) agreed that the community strategy may not be actually performed because of the local influences.

5.6.6 Most of them (75.71%) agreed that the research delimitation was local influences and compulsive conditions (debtor/creditor).

5.6.7 The significant level of the community strategy

1) Educating the villagers to get environmental awareness, knowledge, attitude, ability, participation and evaluation to any social activities may effect to natural balance in the community

2) Constructing their security and public minds

3) Improving the infrastructure and supporting the participation among house – temple – school – community for healthy people and healthy environment in the community

4) Doing an effective group of occupation following the concept of new theory and sufficient economic

5) Increasing an effective management of the community members and leaders

6) The government mechanism must be taken to be facilitator and also checked balance of local influences.

CHAPTER VI

CONCLUSION AND RECOMMENDATION

The strategic formation of environmental education for community development in self-defense border village Ban Thung Maseryor was studied on the concept of a village being the smallest governing unit and mostly nearest to villagers. This is the reason why the developed villages make the developed country. Moreover, 400 people only can form a village. This number may be enough to find some being village committee. However, people participation in village administration is considered to be the best approach for, not only self-reliant standing, but also supporting the national security in the future.

The rural villages; especially around the border area effect to not only to the national security but also to environment which provides basic needs; food, clothing, medical care, housing, energy, safety and any other comforts to human. Thus, the general condition of self-defense border villages is fulfilled to natural resources as the word saying that it is the last area for environment in the country.

The approaches of natural conservation must be based on a principle of proactive strategy rather than reactive strategy. Thus, the strategy should be emphasized to people's awareness, knowledge, attitude, ability, participation and evaluation of environmental activities in the community. However, the largest group should be covered both individual and local organizations together with supporting the community right of ownership for natural resources management in the future

Ban Thung Maseryor where is one of self-defense border villages in Thai-Myanmar border area, is located in Bongty sub-district, Saiyok district, Kanchanaburi province. There are numerous and complex problems related both security of

environment and ways of people life in the community. The Strategy is considered to be as a plan of community development

The environmental education strategy is consisted of offensive strategy, development strategy, defensive strategy and retrogression strategy. The construction of environmental education strategy based on the goal of Environmental Education, Principle of Community Development, Quality of Environmental Management Planning, Maneuver of Military and New Theory, details are as follow;

Firstly, environmental education; to educate people getting environmental awareness and taking the resources for community development with appropriate and sustainable caring to natural balance. It is a lifelong process and should not remain confined within the formal system but it should permeate every part of formal and non-formal programs. Every strategy is based on environmental education.

Secondly, Community Development; to study and to analysis the community which has made the research understand the present positioning of the community and the people concerning their rights to prevent any impacts to ways of life. So they should share their idea, opinion and action to the local environment and community management. So it must be studying and analyzing before determining the strategy.

Thirdly, Quality Environmental Management Planning; to manage the environmental community such as awareness , surveillance, study and research , rehabilitation .

Fourthly, Maneuver of Military; to maneuver for offensive strategy, development strategy, defensive strategy and retrogression strategy. Each strategy should be compared with the priority development community levels of Community Development Department as the following:

Retrogression Strategy is used for the first priority level community. (remote community)

Development Strategy and Defensive Strategy are used for the second priority level community. (medium development)

Offensive Strategy is used for the third priority level community. (advance development)

Finally, new theory and self-sufficient economy based any approaches for sustain community development. The concept of the “New Theory” consists of the following three phases.

Phase 1 : To live at a self-sufficient level which allows farmers to become self-reliant and maintain their living on a frugal basis. Retrogression strategy is applicable to phase 1.

Phase 2 : To cooperate as a group in order to handle the production, marketing, management and educational welfare, as well as social development. development strategy and defensive strategy are applicable to phase 1 and 2.

Phase 3 : To build up connections within various occupation groups and to expand businesses through cooperation with the private sector, NGOs and the government, in order to assist the farmers in the areas of investment, marketing, production, management and information management. Offensive strategy is applicable to phase 3

The research finding presented that the process of Environmental Education Strategy could be applicable to all self-defense border villages in Thailand.

The researcher has concluded the environmental education strategic for community development in self-defense border village Ban Thung Maseryor as the sequences belong;

6.1 A Formation of Environmental Education Strategy

The strategy of Environmental Education covers various stages on community study, community analysis, community vision, community strategy, community performance and community strategy efficient evaluation are as follows;

6.1.1 Community Study

1) Documentary approach reveals that Ban Thung Maseryor is significant to national security and environmental conservation. There are 6 border pathways contacting to Myanmar. The community is located in the plain with 12,000 rai of its size surrounded with mountainous and forested condition in the national preservative forest area of Wang yai-Maenam Khwae Noi. The soil is suitable for agriculturing with 2 water ways; Huay Wayor and Huay Bongty together with 1 public water basin. The weather is hot and dry in summer, heavy rain in rainy season and so cold in winter.

There are 222 households with the total of 827 people (194 households for Thai people and 28 households or 87% Thai-race and the remaining 13% for high land people). There are 30 items higher than the standard criteria of fundamental necessary factors but 9 items lower (educational opportunity, Thai literacy fundamental education, birth control, income, group member, public activity electing and narcotics).

The average age is 19-49 years old (284 people) with 53% getting birth control and 51% being group members. However, there are various needs as lack of agricultural water, public services, telephone, electricity, sport playground, health center, transportation and a secondary school. In addition, they mostly work in chemical farming with 80 baht a day for labor rate, 30 households working out the village, 65 illegal foreign workers in the village and having some amphetamine, hemp and evaporated substance in the village.

2) The community survey is made to study the community geography, history, physical appearance, etc. Their houses are located in geographical group. They are all immigrants and having a temple, a school, a village pavilion and 3 shops in the village.

3) The community preparation is necessary to make the community members understanding and supporting the research. So, friendly talking to the community's leaders, occupational leaders, and the villagers through monthly meeting of the community.

4) The local researcher formation is necessary to train the villagers who know well about their community to be the research assistants. However, this is the way to educated people in the community.

5) The participatory group discussion reveals 15 problems. They are, deforestation, soil erosion and degeneration, lack of water, pollution, education,

health, illegal workers, narcotics gambling, income and debt, politics, agriculture marketing, lack of infrastructure and community management.

6.1.2 Community Analysis is made to analyze the community through SWOT technique analysis; strength, weakness, opportunity and treat as the follow;

1) Internal Factors of the community

(1) The Community Strength; the community is still having fertile natural resources; forest soil and water which is suitable for agricultural farming. The community's leaders are mostly aware of environmental conservation interested in the Buddha teachings, good literacy and effective group of saving etc.

(2) The community Weakness; there are numerous problems in the community as deforestation, soil erosion and degeneration, lack of water, agricultural pesticides and forest-fire, vote buying, local influences, ineffective management of village committee, poverty and debt, lack of educational opportunity, no primary health care unit, no infrastructure, agricultural markets, gambling and narcotics.

2) External Factors

(1) The Community Opportunity; there are various factors as the purpose of the constitution 1997 needs local management of natural resources (item 46) and individual, state and organizations having rights of ownership to natural resources, decentralization and government policies as a village fund (one million for one village), one tambol one product, civil bank together with a support of military, border patrol police and private organization.

(2) The Community Threat; the problems are lack of visit from a politician, uncontinuous promotion of democracy, lack of normal state mechanism, some border patrol police absence of duty, a teacher of non-formal education having not enough time to meet his learner group, no agricultural markets and foreign labors etc.

6.1.3 The Community Vision

“In 2007, Ban Thung Maseryor will have fertility of natural resources supporting economy, being food producer with united living and strong virtue through Buddha’s teaching with life long education, some health care units with comfortable roads, network, warm family through participation process of civil society and sustainable development.”

6.1.4 Community Strategy

The community strategy is consisted of offensive strategy, developing strategy, defensive strategy and retrogression strategy. Thus, the major strategy for Ban Thung Maseryor is a development strategy covering various activities as the following;

- 1) Environmental educating is made to build up the villager’s environmental awareness and concern in the community.
- 2) Developing and improving the infrastructure with strongly caring to natural balance
- 3) New theory and self-sufficient economy based the villager’s group of effective occupation.
- 4) Constructing the security mind to villagers for both individual and social benefit
- 5) The effective management for both individuals and local organizations must be trained more.
- 6) Taking the government mechanism to check balance with local influences for sustainable community development at all.

6.1.4 Community Performances

There are various activities based the community participation such as environmental educating, biofertilizer, plant diseases, occupational group, agricultural equipments, forest plantation and animal husbandry etc.

6.1.6 Community Strategy Evaluation

The evaluation of community strategy is presented in various aspects as;

- 1) The process of environmental education strategy formation for sustainable development in self-defense border village is mostly got understanding by the villagers.
- 2) The contents of the strategy are mostly directed to the villagers' needs.
- 3) The villagers mostly agree the participatory technique.
- 4) The expectation of the strategic application is mostly agreed, even there would be a problem of local influences in the community.
- 5) The problem of actual performance is mostly pointed to some local leaders benefit.
- 6) The strategic significance is mostly considered to be high level because this process has made people getting so much learning and living together in the community.

6.2 Efficiency of Learning

The villager's learning after the participatory action research empirically appears in the efficiency evaluation of the villagers learning on its process, contents, technique, application and problems revealed that this strategy was considered to be in very high level (52.36% of learner specified very high satisfaction which was ranked into 5 level; very low, low moderate, high and very high) and various aspects as the following;

- 6.2.1 The villagers are awared and active to community development.
- 6.2.2 The participation process makes the villagers getting freedom of thoughts, democracy atmosphere, creative thinking/ speaking/ listening to others and willing to self-adaptation for community development.
- 6.2.3 The research process gives their opportunities to specify the village direction.
- 6.2.4 The participatory action research is considered to be the villager movement to solve or reduce some problems as narcotics, gambling, agricultural commodity, deforestation, foreign labors, chemical pesticides and local influences etc. Thus, at the end; they hope to be self-reliant standing at all.

6.2.5 The research delimitation is local influences and compulsive condition.

6.3 Recommendations

6.3.1 Recommendations for Policy Making: The villagers need to make the border policy and strategy, directing, monitoring and supporting the actual performances. However, the policy should be considered some aspects as;

1) A village; especially, the border villages should be considered to be the most significant unit caring the national environment and preventing the external threats to the country.

2) The community strategic plan should be made through participation process of all related in the village.

3) The potential of individual and local organization should be effectively emphasized to community development.

4) The government mechanism should be performed to be the villager facilitation and also checked balance of local influences.

5) The effective monitoring and evaluating should be made continuously to the local administrators.

6.3.2 Recommendations for Management: The concept of this recommendation may cover some aspects as;

1) The management of natural resources should be considered among the villagers' needs, the government policies and the potential of natural resources.

2) The villagers should be educated to concern and participate the local environment conservation and other problems in the community.

6.3.3 Recommendations for Performance: The performance organization should be managed as the following;

1) The personal administration should be based on quality officials, well-trained and understand the people's ways of life together with to build up moral and aspiration for some officials working in the border area.

2) The budget should be allocated directly to the border villages and responded the direct need and problem in the community.

3) The strategy forming process should be performed to step by community study, the community analysis, vision, strategy, performance and the strategy efficiency evaluation through people's participation process for sustainable community development.

4) The upper administrative organizations should support some equipment, transportation and any other facilitations etc.

6.3.4 Further Research Recommendations

1) There should be studied some other self-defense border villages where are located in the other border part of Thailand as the border area of Thai-Laos, Thai-Cambodia and Thai-Malaysia etc.

2) There should be studied some the self-defense border villages in different point of time because of the globalization.

3) There should be studied by a team of local researchers participating to the villagers.

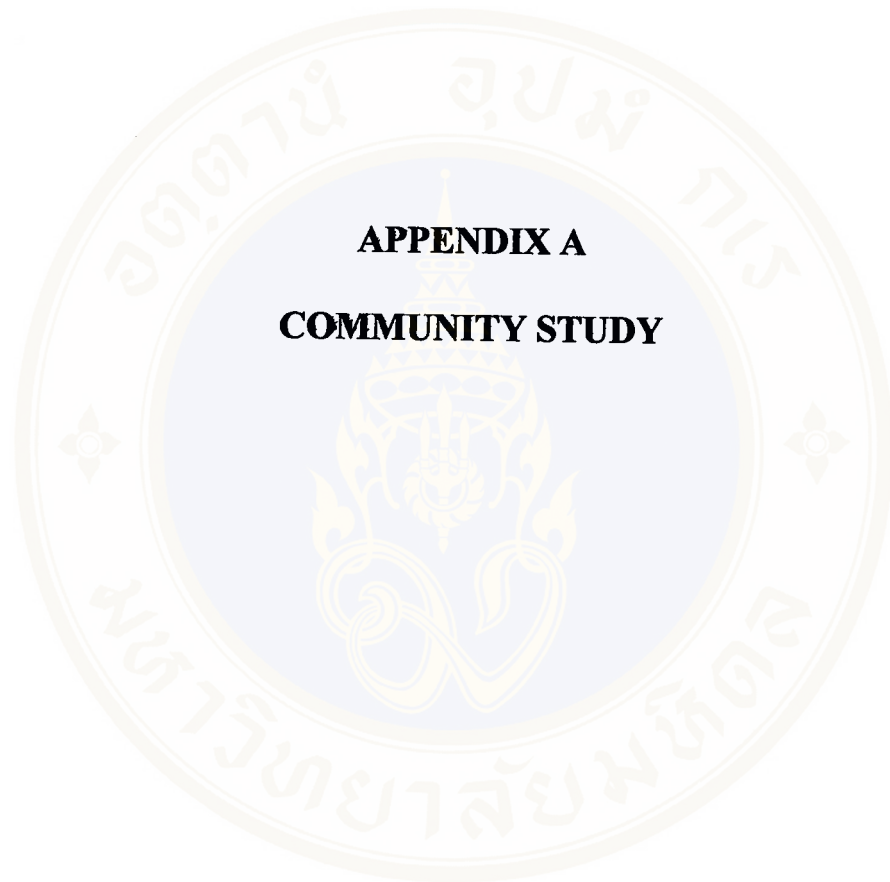
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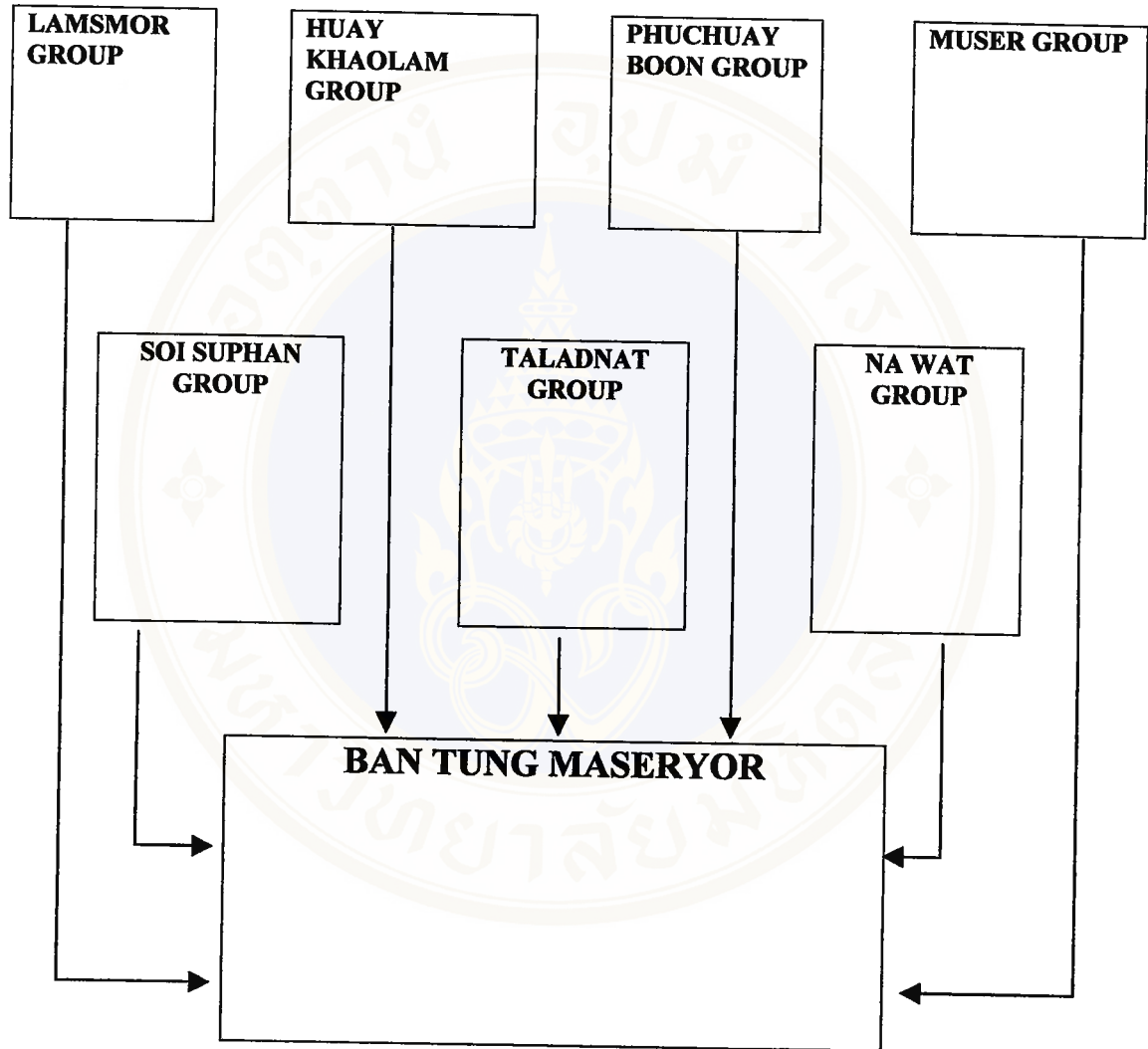
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DEVELOPMENT EDUCATION PLANING

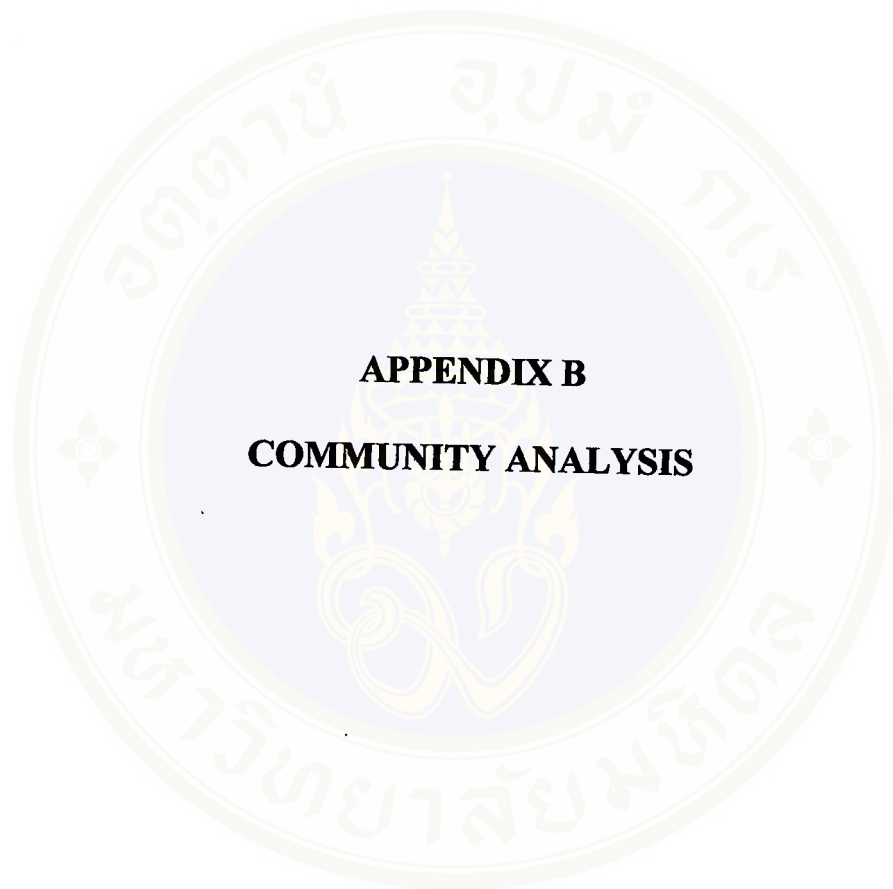


Group Discussion Format

No	Problem	Condition	Cause	Effect	Area
1	Forest Resources				
2	Water Resources				
3	Land Resources				
4	Mineral Resources				
5	Energy Resources				
6	Pollution				

Recommendations Format

Planing	Project	Method	Area	Support Unit
1 Awareness				
2 Surveillance				
3 Study and Research				
4 Rehabilitation				
5.....				
6.....				



COMMUNITY ANALYSIS FORMAT

Internal Factors	Reason/Indicator
Strength	
1. Natural resources and environment	
2. Society	
3. Economy	
4. Technology	
5. Infrastructure	
6 Languages and local culture	

COMMUNITY ANALYSIS FORMAT

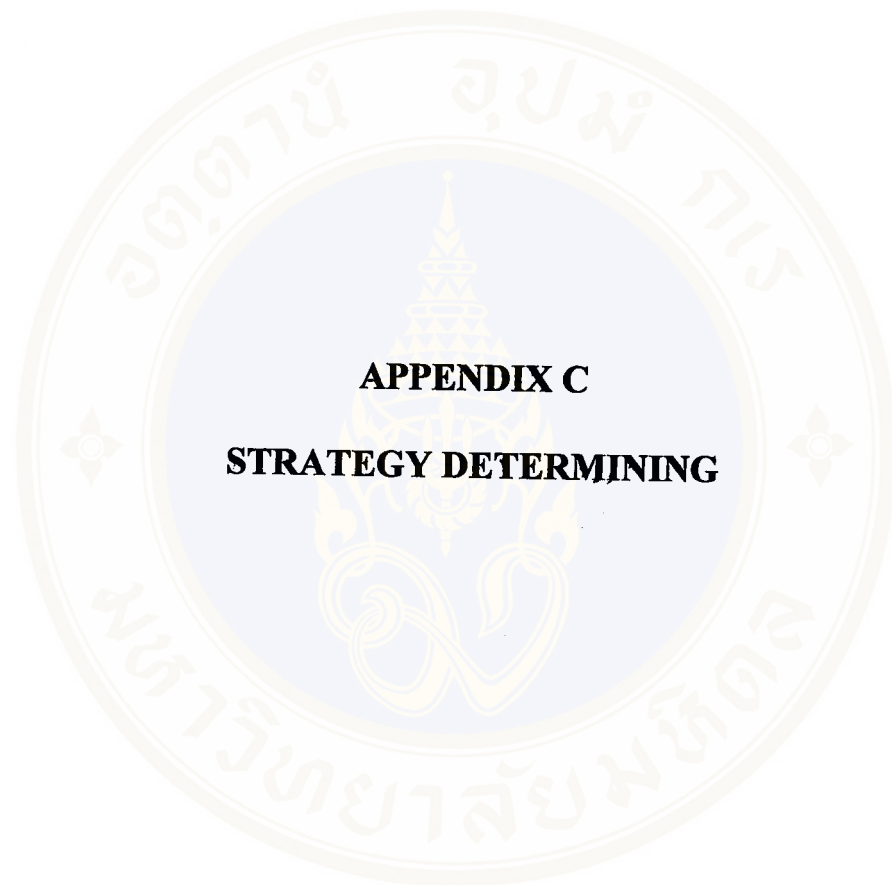
Internal Factors	Reason/Indicator
Weakness	
1. Natural Resources and Environment	
2. Society	
3. Economy	
4. Technology	
5. Infrastructure	
6. Management	

COMMUNITY ANALYSIS FORMAT

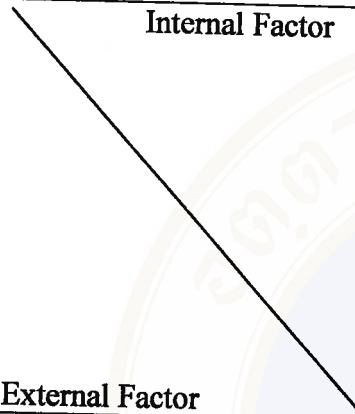
External Factors	Reason/Indicator
Opportunity	
1. politics	
2. Economy	
3. Society	
4. Technology	
5. Natural resources and environment	

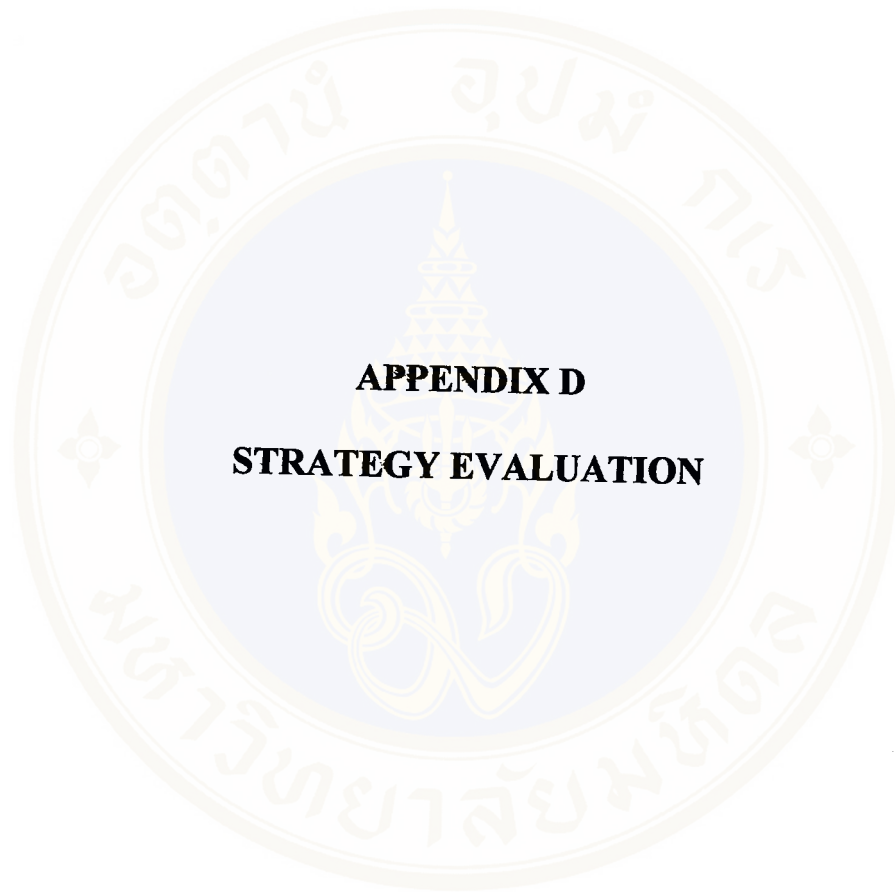
COMMUNITY ANALYSIS FORMAT

External Factors	Reason/Indicator
Threat	
1. Politics	
2. Economy	
3. Society	
4. Technology	
5. Natural Resources and Environment	



SWOT MATRIX IN DETERMINING STRATEGY

Internal Factor 	Strength 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____	Weakness 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____
	External Factor Opputunity 1. _____ 2. _____ 3. _____ 4. _____ 5. _____	Offensive Strategy
Threat 1. _____ 2. _____ 3. _____ 4. _____ 5. _____	Defensive Strategy	Retrogession Strategy



EVAUATION OF COMMUNITY STRATEGY

List of Item	Satisfaction Lercls					Reason
	Low			High		
	1	2	3	4	5	
1.Development Strategy						
2.Offensive Strategy						
3.Retrogression Strategy						
4.Defensive Strategy						

Evaluation of Perspective Views

List of Item	Satisfaction Levels					Reason
	Low		High			
	1	2	3	4	5	
Process						
Details						
Technique						
Application						
Problems						
Delimitation						

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