

Title: The Environmental and Health Impacts Assessment on Area Strategy of Southern Development Plan Based on Sustainable Development

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Abstract

The vision of country development and the 10th National Economic, and Social Development Plan (NESP), as well as Southern Development Plan are area strategic development planning. This is the background of many state and private projects in the South These projects and plans cause impacts of environmental pollution, natural resources damage, land conflict and social problems. These problems come from no longer land and natural resources use planning including economic development decentralization to the poor in accordance with the structure of rural society.

The problems are the Government approving projects based on area strategic plan, while the environmental impacts assessment (EIA) report of each project is separately impacts assessment without covering the state policies, regional plans, area strategic plans that are really initial projects. The EIA report is studied focusing physical structure, economic and environmental impacts occurring in the present time that is not assessment impacts occurring in the past, the present, and the future of sustainable development plan.

The strategic environmental assessment (SEA) is so important with strategic decision making process in the policy level, planning and program so that the EIA report is linking with the dimension of sustainable development. The decision making process will be transparency, cautious and participation of every sector.

The framework of SEA based on sustainable development must balancing health, environment, society, economy, technology, and decision making process of stakeholders in accordance with the principle of Constitution 2007 in the third section (rights and liberties of people) and the fifth section (the state policies).

The environmental and health impacts assessment on area strategy of southern development plan will be the example case leading

1. Introduction

The author focuses her work on a dynamic of Thailand's development changes. The southern region, as a part of these changes, has been shaped by the bureaucratic system's decision-makers and politicians. An enormous amount of the taxpayers' money has been spent on development projects and wasted by a ring of corruption, tax evasion and the maneuvering of such discourses on "public participation", "sustainable development", "sufficiency economy", and "strong community". All these rhetorical discourses are incorporated in the Tenth National Economic and Social Development Plan. But the content of the southern development plan is simply opposite to such discourses.

The government requested technical assistance, in June 2007, from the Asian Development Bank in preparing a framework for a sustainable southern development plan.

Such area strategy planning process was supposed to include public participation and obtain their recognition of the resultant southern development plan. The plan would have vision for the next 20-50 years of development, as reflected in the cabinet resolution approved on 27 February 2007:

“The cabinet agreed to the National Economic and Social Development Board’s feasibility study on potential area for industry, whose details proposed by the Board are as follows:

- 1) Detailed studies into new areas to be developed for future petrochemical and energy industries, compatible with local capacity and socio-geography;*
- 2) Building a process of public and community participation to promote public understanding and recognition before introducing industrial development in the new areas; and focusing on public well-being; and*
- 3) In case the Eastern Seaboard area cannot support further industrial expansion, the electricity production plan may be modified as needed.”*

Such cabinet resolution reflected the government’s centralized and top-down development approach to the planning process of the Eastern Sea Board Programme (ESB), developed 20 years ago. The ESB development plan has irresponsibly affected the livelihood of the people of Rayong province. Continuously, the local people’s health has been damaged, the air and sea polluted and the toxic substances prevalent. Failing to learn from this lesson, the government still goes on replicating the ESB development approach to the southern region because the eastern coast can no longer support further industrialization.

Therefore, every tax-paying Thai has a right to question if their tax money is used for national development in a sustainable manner in accordance with the will of Chapter 3 on the rights and liberties of the Thai people and Chapter 5 on state policies of the 2007 Constitution. The author believes that every Thai must take part in deciding the vision and area strategy for the southern development plan now to collectively determine the southern people’s future.

2. Importance of Strategic Environmental Assessment (SEA)

The Strategic Environmental Assessment, first introduced and implemented in foreign countries between the 1970s and 1989, focuses on the communication of planners and different participating groups in society, who work together to come up with a collective plan resulting from social and political negotiations (The National Economic and Social Development Board, 2007: 2-3).

In Thailand, the National Economic and Social Development Board (NESDB) has played a leading role in developing an area strategy for development planning since the First National Economic and Social Development Plan (implementing during 1961-1963-1966). A result of the top-down planning, Thailand’s first development plan highlighted the

acceleration of economic development and infrastructure construction. In the Third Development Plan (1972-1976), area strategies were introduced for urban areas development of Bangkok and regional cities in response to rapid economic development, promoted by the Growth Pole Theory.

The development impact resulted in a rapid migration of rural people to Bangkok and other big cities; slum communities followed, along with traffic congestions, social and environmental problems in urban areas. Subsequent development plans still maintain similar objectives, focusing on regional urbanization to spread out production and housing facilities from Bangkok.

The Seventh Development Plan (1992-1996) aimed at creating a balance between the economic growth, income distribution and environmental protection. The Eighth Development Plan (1997-2001) intended to forge a link between Thailand's economic centres and other countries in Indo-china, ASEAN and the Sub-region. In the wake of the 1997-economic crisis, the Ninth Development Plan (2002-2006) thus turned to emphasize on sufficiency economy. The plan's area strategy devised to promote livable cities and build rural-urban linkage to promote sustainable development.

Against a backdrop of globalization, economic groups have been formed whereas financial markets, technologies and society have changed. Natural resources and the environment, as well as human migration are freely moved. Based on the Eighth and Ninth Development Plans, the Tenth Development Plan (2007-2011) sets its development aim at achieving a "Green and Happy Society", driven by a "people-centred" and integrated development approach. This plan's major strategy centres on promoting good governance in national administration, encouraging the participation of concerned development parties in making action plans at different levels, and determining the direction of important investment based on regional growth distribution. So, an area strategy for development is important to regional development planning.

As a result, the southern and all regional development plans were studied while area strategy planning was devised by the NESDB, the Department of Public Works and Town & Country Planning and the Office of the Natural Resources and Environmental Policy and Planning (ONEP). Nevertheless, those studies were structured around the framework of the Tenth Development Plan. The plan was still dominated by Thailand's centralized development direction, determined by the government's officials and technocrats. The participation of the locals simply came in the form of meetings of local government agencies, local administration organizations and a group of people. No tools were put in place to turn the policy concepts into action plans, projects and clear evaluation guidelines (NESDB, 2007: 3-14). In sum, local people have not been practically included in the decision-making of an area strategy for the national, regional, provincial, sectoral, and project development plans.

Although the Enhancement and Conservation of National Environmental Quality Act, B.E. 2535 is already in place in Thailand, which requires that the Environmental Impact Assessment (EIA) study is to be conducted, still the preparation of an EIA study is still under debate in Thai society. Public decision on and participation in individual projects was undertaken separately from area strategy planning. Thus, people did not know about the projects' backgrounds, the needs for the projects in relation to spatial development plans, whose direction had been jointly determined by the local people. Neither did they know if the development projects were suitable with their eco-systems and local environment.

The EIA study was conducted to answer only if a development project was appropriately feasible and provide safeguards against and remedies for potential problems. But no answers were given to the local people's questions about strategic development plans. Consequently, many development projects in Thailand have continued to bring the project owners into conflict with the locals, who also regarded every step of the participatory process with distrust.

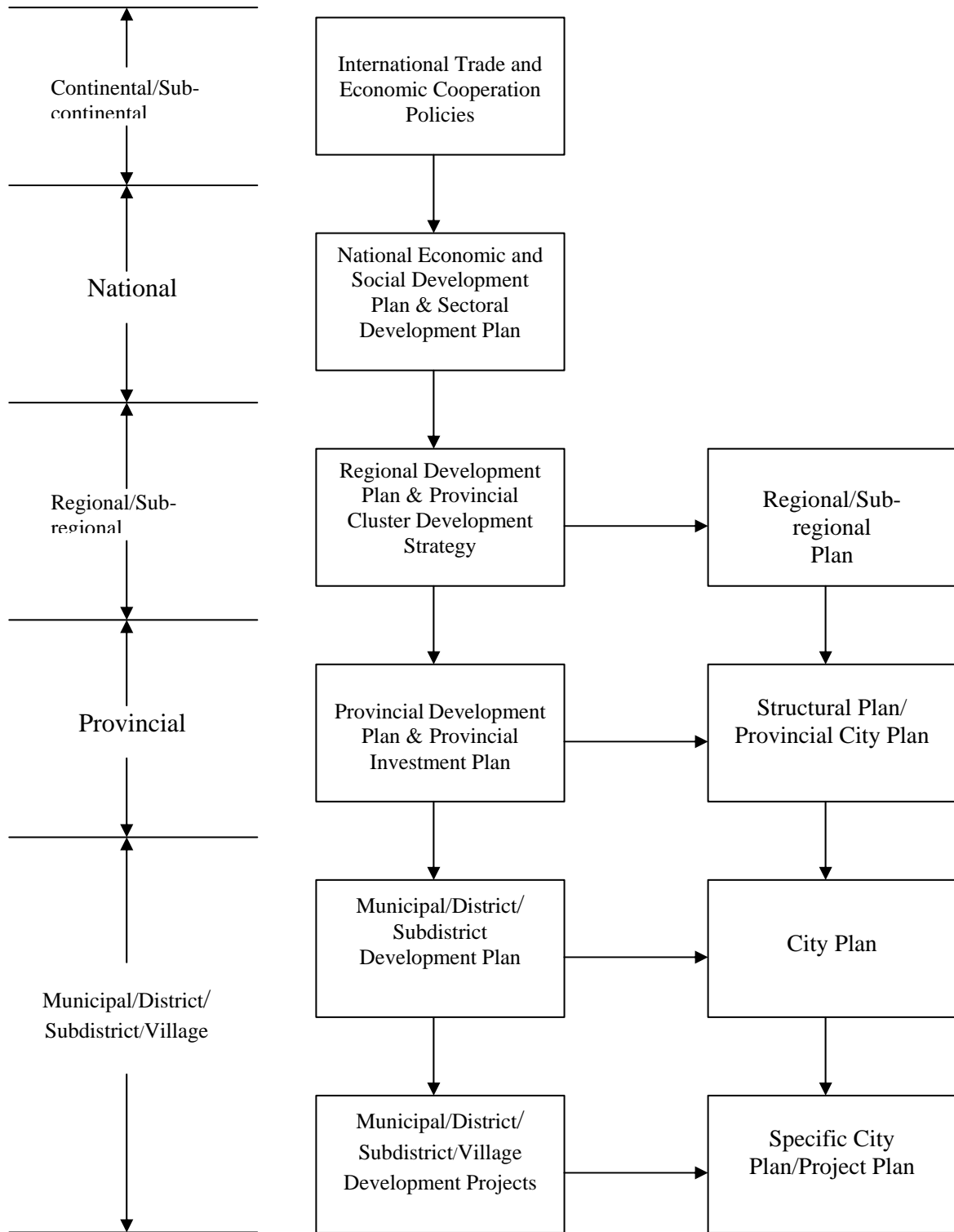
Thailand's planning system ranged from a macro level to international, national, provincial and village levels (**Chart 1**). Notably, the planning process at sub-district and village levels, which was mainly and jointly administered by local administration organizations (LAOs) and communities, was often opposed to the centralized planning that had been decided by the central organizations in cooperation with regional agencies in the provinces. The communities and LAOs did not have any important role to play in community planning, based on the area strategy for development that derived from analyses in relation to community and international problems, as anticipated in the Tenth Development Plan. The current national development plan calls for all concerned parties to take part in the planning in an integral manner. But community planning was based only on community-oriented activities and analyses while the centralized strategic development plans would definitely affect the changes in land use and resource base, as well as community settings.

The principle of strategic environmental assessment (SEA) is a process for evaluating the area strategy planning at policy, plan, programme and project levels (**Chart 2**). As a decision-making tool for society, SEA is underpinned by a precautionary principle and sustainable development. It aims at studying and making plans containing alternative proposals for decision making; reducing potential impacts of development activities; monitoring project operations and safeguard measures or reducing potential operation impacts; and determining if the project activities are appropriately relevant to the strategic development plan. SEA's study procedures and preparation must build a participatory process that incorporates all concerned parties and the supervision of the potential impacts.

Chart 1:

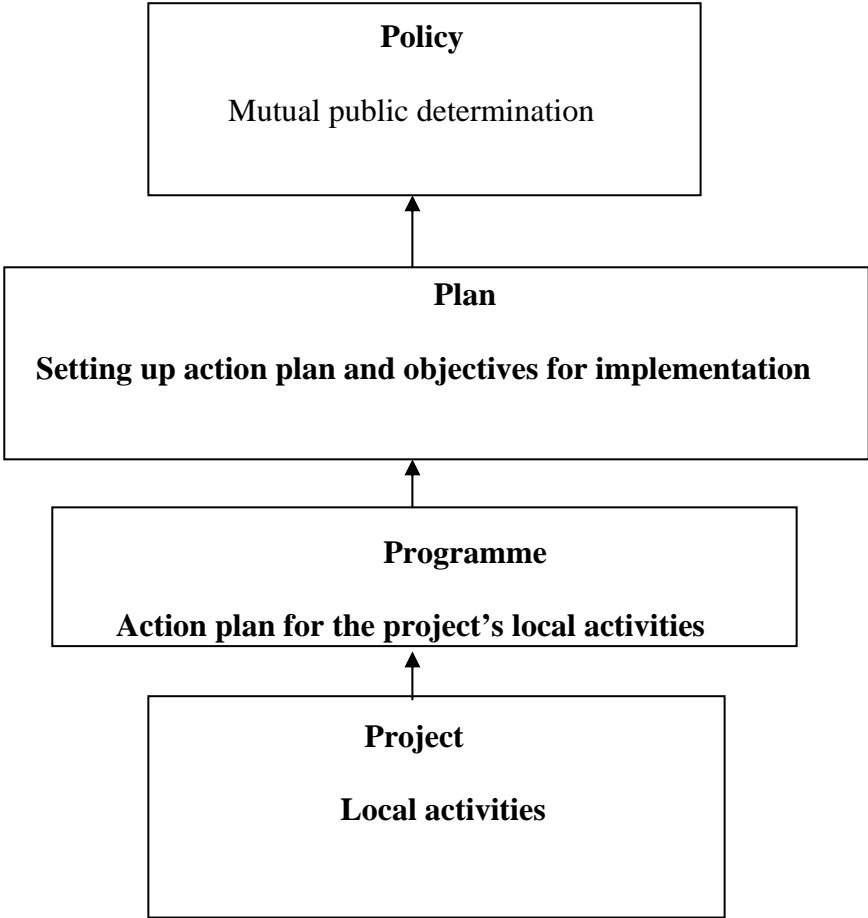
Economic and Social Development Plan

Spatial Development Plan/Land Use



(Source: Capacity-building Project for Spatial Planning Analysis and Coordination of Spatial Management at All Levels, final report, Office of the National Economic and Social Development Board)

Chart 2: Spatial Development Planning at All Levels



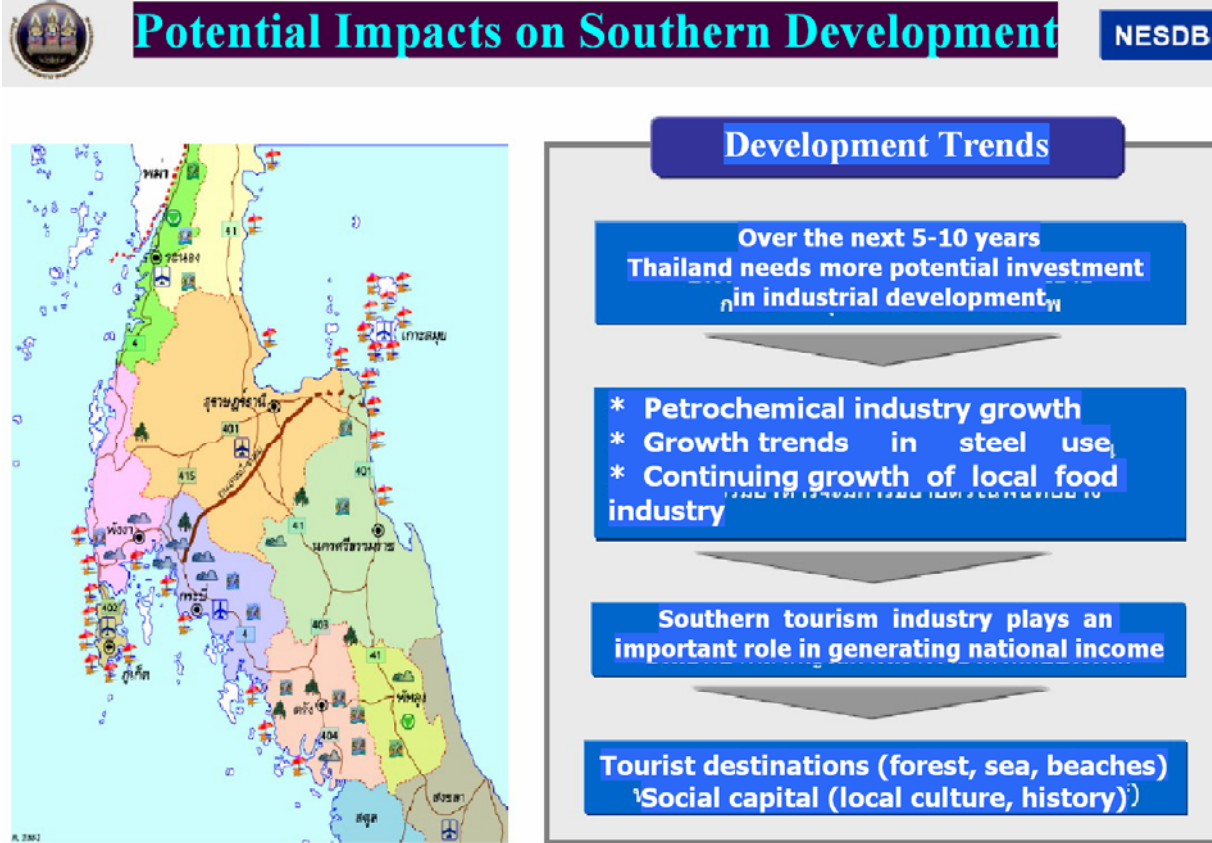
If the local people had participated in all levels of the strategic environmental assessment of the country's national development planning, as shown in Chart 1, and also taken part in the spatial development planning from the sub-district to national levels, it would have become bottom-up planning. Such planning would fulfill the purpose of the Tenth Development Plan and prevent disputes from arising in Thai society. However, the preparation process of a SEA study by community must begin from appreciating the value of local wisdom and tropical forest base in Thailand. With such appreciation will Thailand's distinguished and different characteristics from those of other countries be identified and used as guidelines for sustainable economic, social and environmental development direction.

3. Why Community Participation in Environmental and Health Impact Assessment of the Southern Development Plan Is Needed

The idea behind the southern development concept has been based on the top-down and economic growth-oriented approach. Since 1965, the planning studies for southern development have been undertaken by NESDB, technical advisors and the Asian Development Bank. These planning studies have been oriented around the use of southern

resources that led to an economic “land bridge” development strategy for an inter-modal transportation system to link the Andaman Coast with the Gulf of Thailand. In 1989, the cabinet of Gen Chatchai Choonhavan’s administration approved the master planning of southern development, covering five provinces of Phuket, Phang-gna, Krabi, Sura Thani and Nakhon Si Thammarat.

Such development direction had to make several project plans in relation to southern development, such as tourism development, steel and petrochemical industry, food-processing, water supply, and environmental management. This Strategic Energy Landbridge scheme aimed at adding an option to the existing oil transport route of the Strait of Malacca, developing the region’s oil markets and related petrochemical industries, and stimulating national and southern economy.



Source: Office of the National Economic and Social Development Board, 4 June 2008.

The NESDB’s analysis of the weaknesses and strengths of the southern region’s capacity focused on the economic development feasibility based on the south’s substantial resource base and physical strength that could be instrumental in opening up the Andaman Coast and Gulf of Thailand areas, totaling 44.2 million rai (about 7.07 million hectares). It had been analyzed that the southern economy volume was rather small and narrow-based. Given that the region’s gross domestic product accounted for only 9% of the country’s GDP,

agriculture--its main activity--accounted for as high as 35% of its economic structure while industrial, service and trade sectors numbered to 14, 13 and 12% of the region's GDP, respectively. Between 2003 and 2006, the south's economic growth rate was at 4.4% a year (NESDB, 2008: 5).

In terms of social analysis, the south's population growth rate tended to decrease, but was higher than the nationwide rate. People in the south were highly educated than the general population, except those in the three southernmost provinces. Non-agricultural labour force increased. Disturbances in the three southernmost provinces have endangered national security. Regarding natural resources and the environment, it was true that land forest and mangrove forest areas increased, but at a rate that was lower than that of the nationwide rate. Aquatic resources also decreased. Long coasts of the Andaman and the Gulf of Thailand were eroded. The problems of garbage disposal and wastewater treatment in big cities deteriorated. NESDB's data analysis showed that social and environmental problems also resulted from past development. But this analysis inclined to point out that economic development would solve social insecurity and poverty, provide safeguards and measures to mitigate the social and environmental problems caused by development, and contribute to the people's well-being. Such analysis was based only on macro-level data, which was not linked with micro-level and community-based data. Because these communities played a leading social role and were instrumental in creating social and environmental immune system, they significantly contributed to the increasing areas of forest and mangrove forest.

Moreover, NESDB also analyzed the potential development impacts on the southern development, taking into consideration the region's abundant natural resources, coastal geography, accessibility to transport of exports to the Southern and Southeast Asia along with an analysis of sectoral industries with the national income-generating trend. For example, over the next 5-10 years, Thailand needs to expand potential investment in such industrial development, as food industry, food processing, petrochemical industry, tourism and steel industry. Below are examples of some industries to be expanded in the south:

- **Petrochemical industry**

Now, 92% of the country's petrochemical industry production came from Map Tapud and nearby areas. The demand for these products as raw material for the manufacturing of other products has rapidly increased in its boom period since 2002. The south is seen as a potential alternative location to support the petrochemical industry growth because of its advantageous location next to the coasts. Its vastness can be developed into business networks and the natural gas from the Gulf of Thailand can be used as industrial raw material.

- **Steel industry**

Most of the investment in the steel industry is in the eastern and western coasts, especially in Prachuab Kiri Khan's Bang Sapan district, whose area and water supply are now limited. Thailand's annual demand for steel is about 12.5 million tons, 4.5 million tons of the

quality steel has to be imported every year. There are domestic and foreign companies interested in investing in primary steelmaking to be located in such southern provinces of Prachuab Kiri Khan, Chumphon, Surat Thani and Pattani. Nevertheless, primary steelmaking development needs vast areas that can maintain deep sea-port construction and provide enormous water supply. It is important that an environmental assessment and local people's recognition are essentially needed.

- **Tourism industry**

It is anticipated that an increased number of tourists will visit the southern region; particularly the southern coasts will attract several times more of the tourists to the region if it is appropriately developed.

- **Increasing economic role of the local natural gas reserves**

At present, there are many natural gas reserves in the Gulf of Thailand, where their pipeline systems have been connected for continual utilities. A natural gas separation plant is being developed in Nakhon Si Thammarat, which serves as a cheap energy source to lower the cost production of local economic activities and support potential industrial expansion. Moreover, there are local gas separation plant and the Thai-Malaysian gas pipeline in the region to strengthen the national energy security of Thailand in the future (NESDB, 2008: 11-13).

On 27 February 2007, the cabinet agreed to the NESDB's feasibility of detailed studies of spatial development for future petrochemical and energy industries in relation to local capacities and social geography. Also a public and community participatory process is supposed to be established from the beginning to provide knowledge, understanding and people's recognition before industrial development is introduced to new areas; and to focus on protecting the people's well-being.

But such cabinet's approval clearly reflected difficulty in including local people's participation in determining area strategy for development because it had been decided by the NESDB and government. And participation meant obtaining development projects' recognition and preventing disputes while solving problems meant providing remedies and recovering the well-being of those affected by development. Meanwhile the government's SEA preparation involved just employing technical consultants to the operation of a project to prevent and mitigate problems within the legal framework and such development plan. The issues of community participation in and decision of development direction and vision were not included in the SEA preparation.

Such was the case, seen in the ONEP's commissioning of Kasetsart University's Energy and Environmental Engineering Centre to conduct a strategic environmental assessment of the area capacities of the five coastal provinces of Surat Thani, Nakhon Si Thammarat, Krabi, Phang-nga and Phuket (April 2008). It was maintained that the SEA framework would be employed to oversee the use of natural resources and environment

suitable to the local capacities to diminish the project development's conflict. The SEA concept appeared in the Tenth Development Plan and the Environmental Quality Management Plan (2007-2011).

The study approach centred on the analysis of strategic environmental capacity within the southern development framework. Consideration of upstream, midstream and downstream areas suitable for implementation of southern development plan and types of activities appropriate to ecological constraints and potential was made. Recommending strategic options to spatial development, the study team gave priority over economic, environmental, technological and social dimensions, respectively. The studies organized consultation workshops for stakeholders once in each of the five provinces, attended by 500 participants from regional government officials and provincial sectors such as provincial offices, local organizations and non-governmental organizations.

The study team evaluated the constraints of this study approach and found that representatives of offices participating in the consultation had different ideas and understanding of the SEA concept. These representatives often focused on promoting the issues and indicators relevant to their agencies and did not have any clear and concrete framework for principles, direction, and implementation stages (ONEP, 2008: 74).

In brief, the preparation of SEA is still new to the Thai society that wants to observe the spatial strategy for development in an integral manner. It is inadequate to use only government offices' information and data, which must also seek local information and include the participation of local stakeholders, who are to be directly affected by development. It is important that the development of assessment indicators and spatial development planning must actively involve local people too.

Such rationale should form the basis of community-based spatial development planning and environmental and health impact assessment. These communities know what their local resource base is all about; they know how the local capacity should be appropriately developed; and how past, present and future local wisdom should be preserved and transformed in relation to society. They are also well aware of local people's health problems—physical, psychological, social and intellectual. Most importantly, they understand what local people's development vision for sustainable happiness indicators should consist of so that appropriately relevant development process can materialize.

Community studies by non-governmental organizations and academic institutions indicated that communities and resource base in Thai society were capable of achieving sustainable economic, social and environmental development. It was necessary that an analytical process must be created to make the communities realize their associated role with the LAOs in participating in every step of development planning, from international to village levels. They needed to see a dynamic of community changes resulting from national and

international development directions that affected the communities. When roads were built through the villages, it meant that community economic, political, social and environmental settings would be completely changed by contact with the outside world. In the context of such changes, the communities needed to take part in determining their future development direction. This purpose was to engage the communities in deciding spatial strategy for development from the beginning.

4. Environmental and Health Impact Assessment of the Southern Development Plan by Community

Public participation is principally instrumental in the environmental and health impact assessment of area strategy for development. If this impact assessment process does not succeed, the impact assessment by community or by the government will more likely involve just partial public participation. Mostly, development planners organized public participation by attaching great importance to formal meetings and seminars and selecting participants who tended to be in favour of the projects or development plans. Such manner of public participation organization would not contribute to the intellectual development of the participants' community analysis, linking between internal situations and outside circumstance, and how the communities should determine their development direction.

Thailand's planning system has been operated by formal committees of community representatives, who were selected from formal leaders by government officials. The communities have had no chance to know and be updated with all relevant information. Huge gaps existed in communication and the power relations between community leaders working with the government and community members. Because of the people's partial perception and fragmented understanding, power relations and conflict of interest, economic elitist class relationship, family relations, and dependence and patron-client system, their expression was shown in a humble, restrained and inoffensive fashion.

The above comment meant to point out that public and community participation initially aimed at empowering the communities so that they could determine their future, not at achieving recognition of the government-directed development approach and projects. If the purpose is clear, then the participatory process should begin from the communities' mutual use and potential maintenance of the natural resource and environment base and not from the administrative jurisdiction of the villages and subdistricts. Formulating an area strategy for development must be based on "sustainable development" principle, which is to be connected with the making of policies, plans, programmes and projects, according to the following procedures:

1) **Analysis of crucial factors in formulating a comprehensive area strategy for development in the globalization, human rights, political ecology, cultural and economic dimensions**, with details of each dimension as follows:

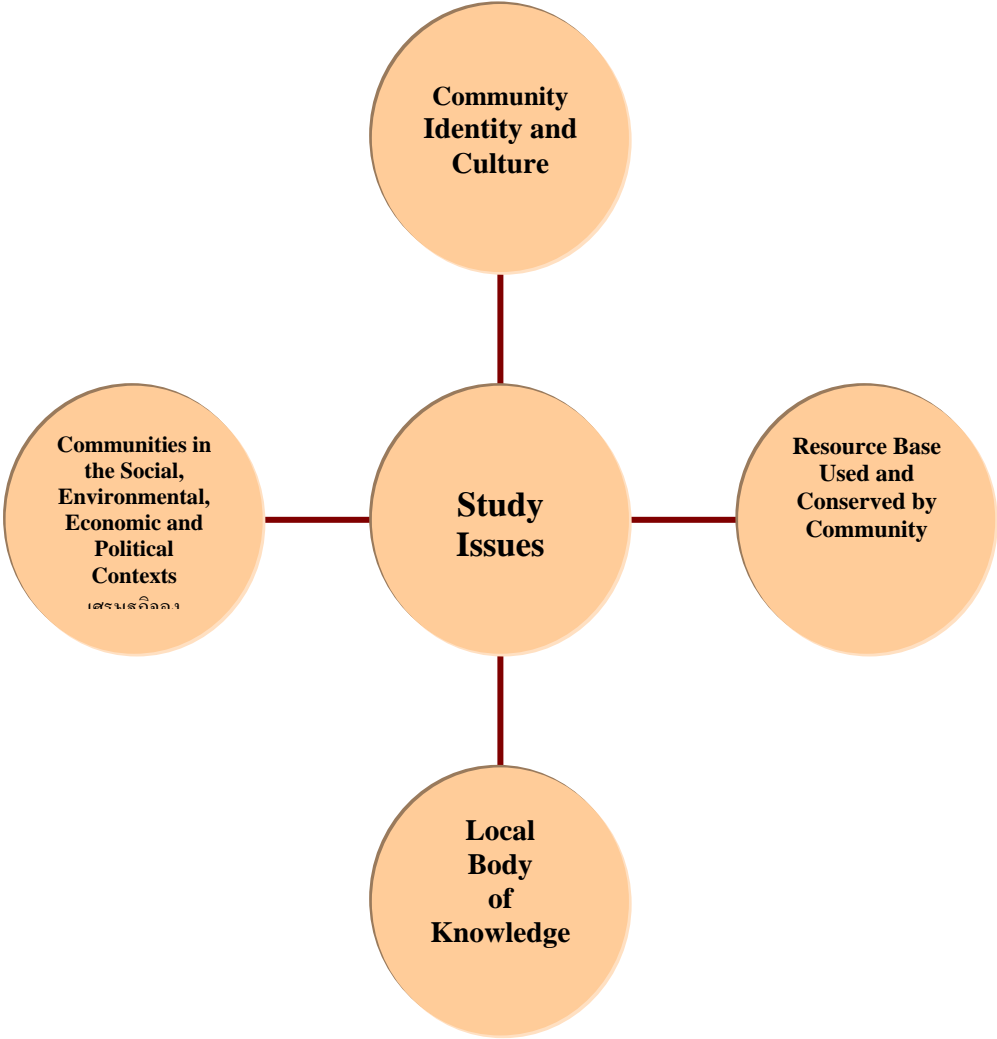
Chart 3: Analysis of crucial factors in formulating a comprehensive area strategy for development

Crucial factors	Issues
Situations in Thai society and global communities	<ul style="list-style-type: none"> • Global situations and development direction, national economic and social development plan, provincial strategy and community plans, connecting and affecting each other
Thailand's and community social and political structure	<ul style="list-style-type: none"> • Power relationship of social classes and dependent patron- and-client system; • Conflict of interest and economic and political monopoly; • Cultural domination by discourse and symbol; and • Policy and legal authority determined by the State and capital group
Social characteristics and social members' culture	<ul style="list-style-type: none"> • Number of people and human intellectual, social, physical and mental capacities; • Ethnic identities and cultures in society; • Historical community settlement and livelihoods; and • Local wisdom of conservation and utility of the natural resource and environment base
Capacity of the local eco-systems and environment	<ul style="list-style-type: none"> • Vital eco-systems to be preserved; • Land use plans relevant to appropriate resource base and eco-systems, such as water, forest and genetic resources; and • Vital resource base, on which ethnic communities rely and use as a source of important economic development necessary to everyone's income distribution
Economic system	<ul style="list-style-type: none"> • National and community mechanisms and economic development system; • Economic monopoly associated with land use and resource base; and • Community, ethnic group and national economic value, to be fairly and equally distributed
Technological development	<ul style="list-style-type: none"> • Profile of technology and development projects; • Investment in technology and capital group with a monopoly in technology; and • Positive and negative impact of technology use

2) **Environmental and Health Impact Assessment and Spatial Development Plan by Community**, with the following nine implementation steps:

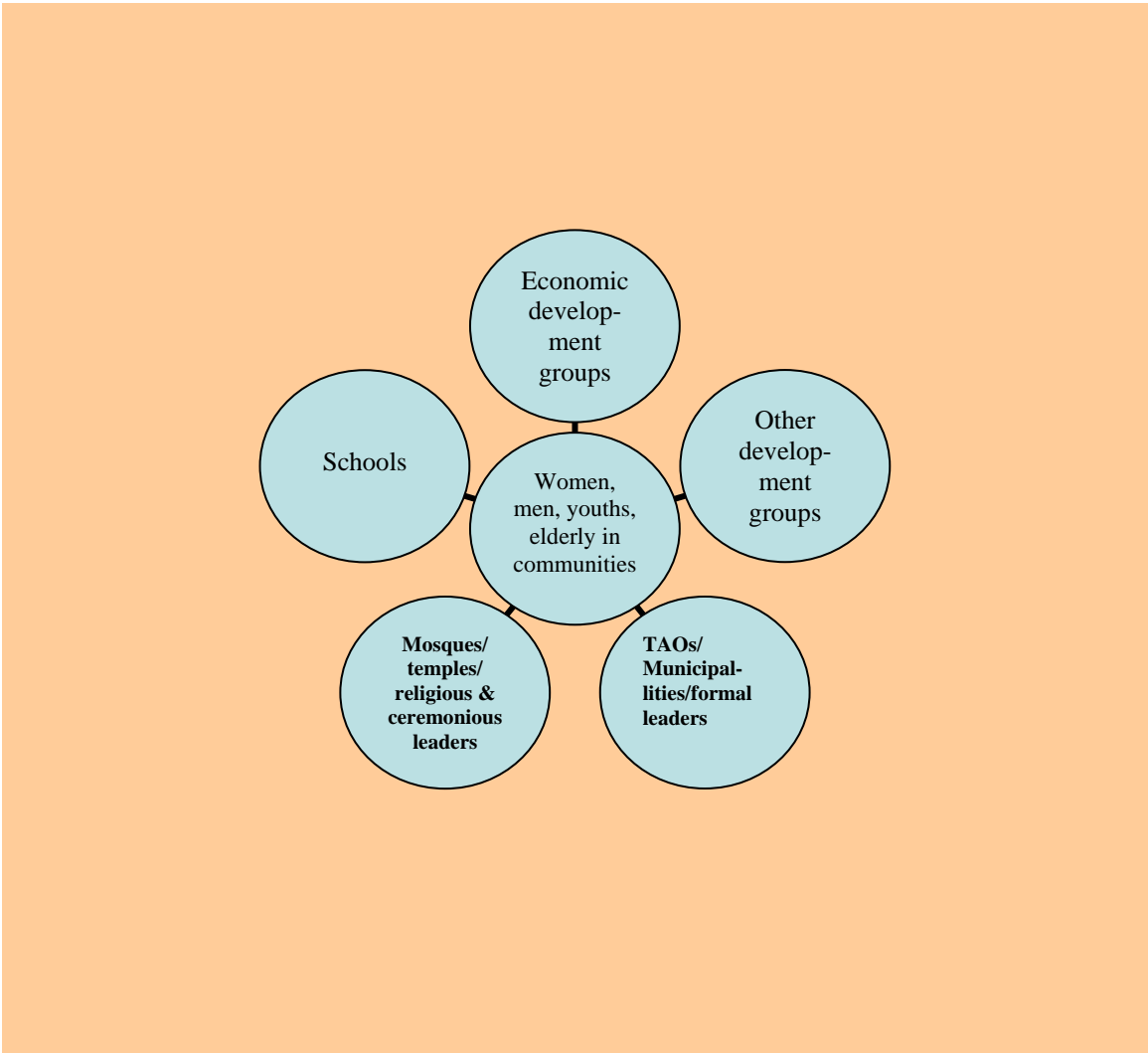
2.1 Community study and understanding

Chart 4: Thorough Community Study Principle



2.2 Organization of community-base groups and promoting community’s role in in-depth community study and participation in spatial development planning and strategic environmental assessment

Chart 5: Organization of community-based groups



2.3 Survey and collection of information on southern development plan for an analysis by community and linking the analysis with government policies and social situations according to strategic analytical framework (see **Chart 6**)

Chart 6: Thailand's planning

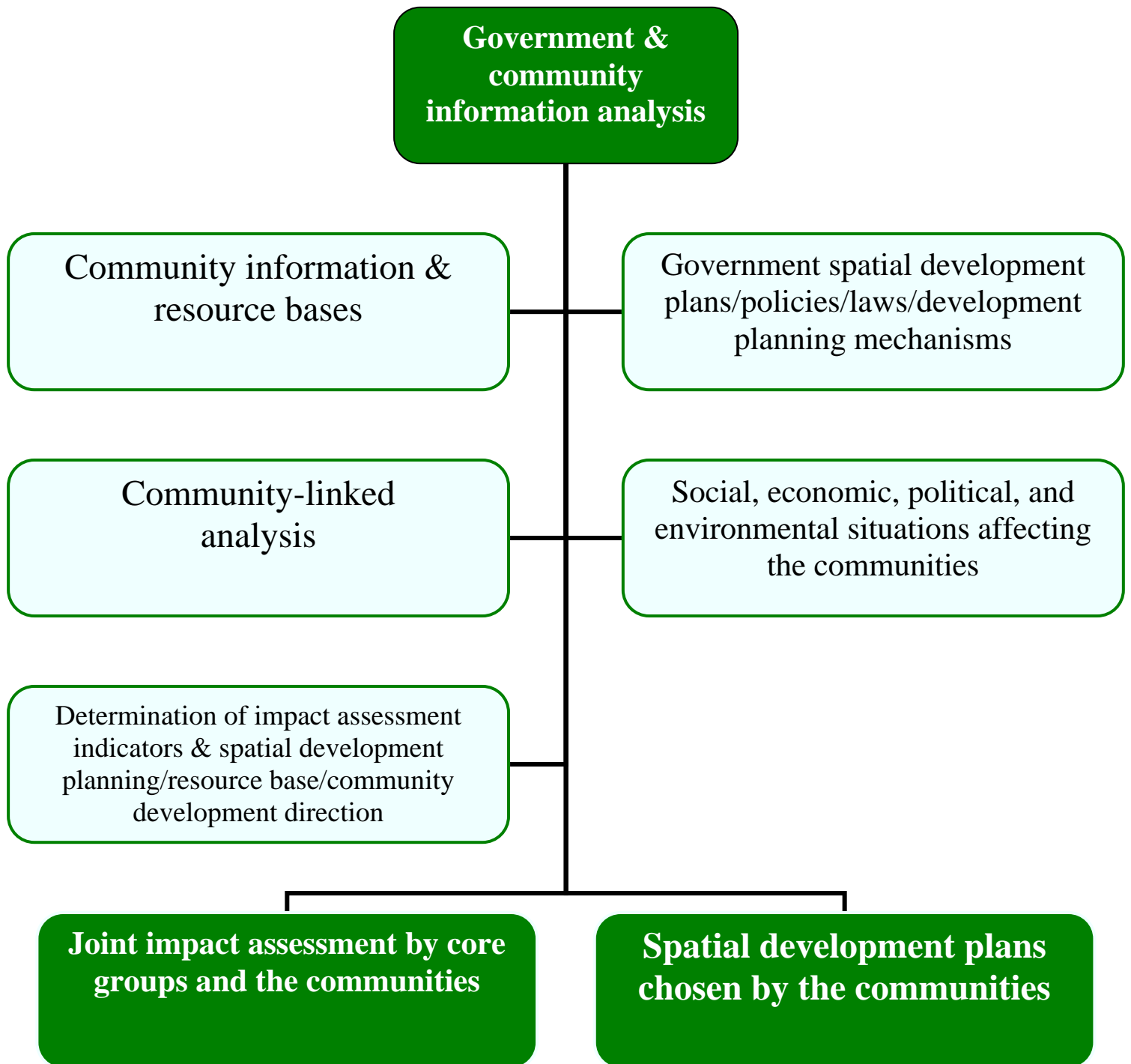
Planning level	Economic plan	Spatial development plan/Land use
International macro	<ol style="list-style-type: none"> 1. APEC 2. ASEAN – Trade policies standards 	
Asian region	<ol style="list-style-type: none"> 1. Economic cooperation between Thailand and Mekong sub-region (coordinated by ADB) 2. Growth Triangle [IMT-GT Indonesia Malaysia and Thailand] 	
National	<ol style="list-style-type: none"> 1. Five-year economic development plan—focusing on development policies; 2. Sectoral development plans, such as public health, agriculture, education and transport 	
Regional	<ol style="list-style-type: none"> 1. Provincial cluster development project proposed by the Interior Ministry; 2. Rural Development and Regional Growth Distribution Commission (RDRGDC) <ul style="list-style-type: none"> - Modifying core policies on regional development plans by implementing such plans 	Regional plan devised by the Department of Public Works and Town & Country Planning
Regional (high priority special economic zone)	<ol style="list-style-type: none"> 1. Special Economic Zone <ul style="list-style-type: none"> - Generally, a sub-region with fast-growing development potential, such as: <ul style="list-style-type: none"> • Eastern Seaboard Development Project; • Southern Seaboard Development Project; • Lower Northeastern Development; and • Growth Triangle Development 	<ol style="list-style-type: none"> 1. Special Development Zone, such as <ul style="list-style-type: none"> • Metropolitan development (NESDB) • Spatial development around Bangkok's second international airport (Nong Ngu Hao area)
Provincial	<ol style="list-style-type: none"> 1. Provincial Development Plan <ul style="list-style-type: none"> - Coordination of the RDRGDC - Focusing on investment with the private sector 2. Provincial Investment Plan <ul style="list-style-type: none"> - Prepared by the provinces; - Sectoral development; - Focusing on the public sector; and - Investment by sectors, plans and projects 	1. Provincial structural plan by the Department of Public Works and Town & Country Planning or provinces
Municipal		<ol style="list-style-type: none"> 1. Overall city plans by the Department of Public Works and Town & Country Planning or local administration organizations <ul style="list-style-type: none"> - Overall city plan regulations
District	<ol style="list-style-type: none"> 1. District Development Committee <ul style="list-style-type: none"> - Subdistrict development and development projects in the provinces 	1. Specific by the Department of Public Works and Town & Country Planning or local administration organizations
Subdistrict	<ol style="list-style-type: none"> 1. Subdistrict Development Advisory Committee 	

	<ul style="list-style-type: none"> - Problem studies - Development project proposals 	
Village	<ol style="list-style-type: none"> 1. Village Development Committee <ul style="list-style-type: none"> - Problem studies - Development project proposals 	

(Source: Project for Strengthening Spatial Analytical Planning and All Spatial Management Links, final report, Office of the National Economic and Social Development Board)

2.4 Spatial development study by community, encouraging communities to analyze outstanding community capacity, ecological and economic development capacities, in comparison with potential social, environmental, economic and health impacts to be caused by government development plans

Chart 7: Multi-dimensioned analysis of relevant information



2.5 Development of crucial indicators of impact assessment caused by government spatial development plans at all levels, by linking them with community information to assess the impact relevant to important issues that are likely to affect all dimensions of the communities

Thailand’s planning system, as shown in **Chart 6**, sets up the framework for determining impact assessment and spatial development planning indicators, linking a village level to an international macro level. The setting of the indicators must be multi-dimensioned, aiming at achieving sustainable development, which must be based on community information base combined with the government development plan’s information base. **Chart 8** is an example demonstrating how a preparation was made for the primary indicators’ terms of reference to be used as baseline indicators of different community areas.

Chart 8: Indicators of the Southern Development Plan’s Terms of Reference

Dimension	Objective	Policy indicator	Local indicator
Social and health	<ul style="list-style-type: none"> - Capacitating community thinking and action; - Preserving self-esteeming community identity and culture; - Promoting reciprocal and strong community self-reliance; and - Achieving good well-being 	<ul style="list-style-type: none"> - People and communities are well aware of and participate in the planning of social rules; - Communities perpetuate and continue to hand down cultural identity from one generation to the next; - All social problems are not serious and can be handled by community; and - Social members have low rates of mortality and health problems 	<ul style="list-style-type: none"> - Communities can make spatial development plans and have mechanisms to control and manage community conflict; - Communities have activities and customs that facilitate mutual learning among people of all age and sex groups; - Organizing diverse, learning, and helpful networks at all levels; and - Communities can protect and maintain their well-being, based on resource base and social kindness
Natural resources and environment	Abundance and balance of the eco-systems and natural resources	<ul style="list-style-type: none"> - Proportion of the resource base that reflects ecological balance; - Environmental pollution posing no serious problems; - Decreasing conflict over resources; - Management of conflict over resources by government mechanisms and 	<ul style="list-style-type: none"> - There are plans and allocation of balanced use and conservation of resources, as well as community mechanisms to monitor evaluation; and - There are joint government-community regulations to oversee the use of resources

		community; and - There are laws regulating the use and conservation of resources, with community participation	
Economic	Economic strength contributing to fair income distribution to all social members	- Wider distribution of income; - Economic development that generates and distributes income to all occupational groups, without monopoly in investment and enterprise; and - Appropriate and balanced use of raw materials and investment resource according to the capacity of such raw materials and resource	- People of all occupational groups have adequate income and no poverty problems; - Communities can make production and operational plans; - Communities can have access to resources on their own, supported by the government; and - Communities can develop market mechanisms without monopolizing and decide the prices of their produce and goods

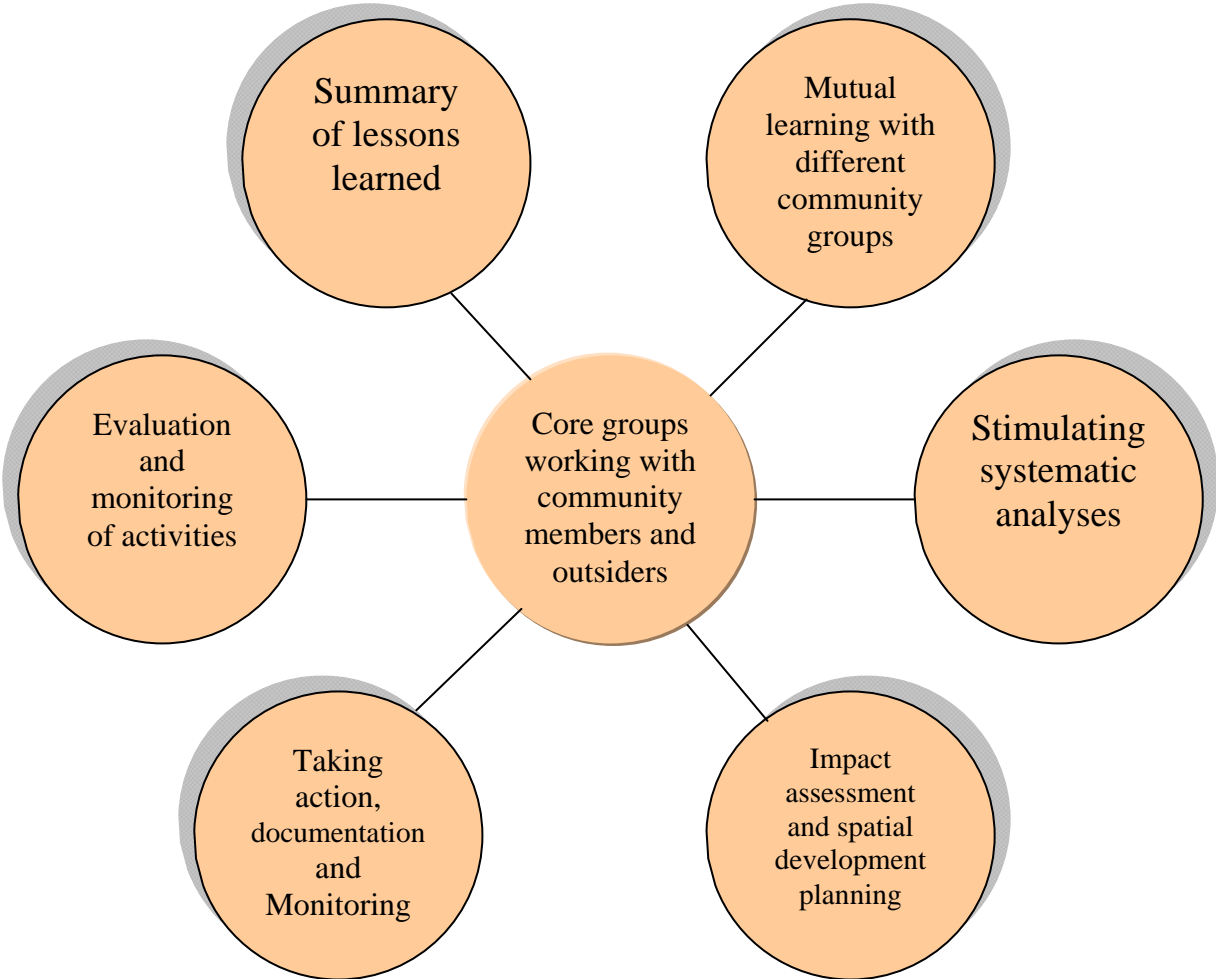
2.6 Core groups organizing impact assessment with the communities, using indicators and analysis relevant to alternative spatial development proposed by the communities

2.7 Core groups studying issues identified by the impact assessment of the development plan and projects, comparing with existing impact and experiences in other areas, such as the impact resulted from the petrochemical industry operated in Rayong's Mab Tapud Industrial Estate and studying the information on communities, likely to be affected

2.8 Summarizing the information, analyzing the impact indicators and determining community sustainable development alternatives, by organizing periodical and continual discussions with the communities

2.9 Writing an impact assessment report and proposing community sustainable development alternatives

Chart 9: Continual organization and promotion of community awareness



5. Conclusion and Future Action

This article meant to present a community-based environmental and health impact assessment and spatial development plan, based on the NESDB-devised southern development plan, to be implemented by the government. The article’s content was drawn on the author’s accumulated experiences and on-the-job learning from working in a non-governmental organization, whose ideological framework was oriented toward human rights and political economy perspectives. Communities are now part of the globalized development. To equip the communities with a capacity for global and community analysis may be difficult for the communities. But the author believes otherwise if the villagers and their communities are continuously informed of analytical updates while their livelihood problems and serious resource competition are addressed. Even if one in a hundred communities was well aware and wanted to be informed of how its development strategy and direction in this current capitalist and globalized world ought to be, the author is sure that this group of people would be adequately powerful.

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