

## **Components of Dominant Factors in Developing Policies and Strategies for Developing Area of Sustainable Settlements in State Border Areas: A Case Study of Nunukan District, Kalimantan Timur**

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### **Abstract**

*To achieve integration in developing the border region especially in the settlement sector, it is necessary to consider the profile, characteristics, and settlement's development needs. Those are important to understand the development trends covering aspect of harmony between capital areas with protected areas, the linkage between the centers of new growth centers (cities), and the increase of economy-oriented interaction pattern based on regional natural resources. The understanding is required to prepare the development policy tools for sustainable settlement area at regency level in the border area in more detail and more operational by using the cluster approach. Based on the results of analytical hierarchy process (AHP) analysis for factors (level 2) shows that government policies and funding of development a top priority, for stakeholders (level 3) showed that central and local governments have a major role in the development of settlements, for the purpose (level 4) indicates that the development and arrangement of the region and improving the welfare of a major priorities, and for the target (level 5) shows that the strategy of regional development a top priority. The implementation of settlement development in Nunukan Regency in the border region which refers to policy utilizing the three key factors above in development strategy and scenario would establish resources potential based development to the clusters that in the end would be border cities. The condition would drive the improvement of social welfare and public safety. The border cities would be the "display window" for the country's fine, regulated, progressive and sustainable city.*

**Keyword:** area of boundaries, settlement area, policy of development

### **Introduction**

With the entry into force of international free trade and agreements and economic, regional and bilateral cooperation, economic opportunities in some land and sea border areas become more open and need to be taken into consideration in efforts to develop the region. Sub-regional cooperation between Indonesia and neighboring ASEAN in particular and the countries of the Asia Pacific Region in general need to be utilized optimally, so as to provide benefits for both parties equally. To implement various international and sub-regional economic cooperations, Indonesia needs to prepare various policies and steps as well as a comprehensive and integrated development program, so that it is not left behind by neighboring countries.

In order to realize integration in development in the border region, especially in the settlement sector, it is necessary to understand the profile of the characteristics and needs of settlement development. This is intended to determine the direction of development trends which include aspects of harmony between cultivation areas and protected areas, the linkages between new growth centers and centers of activity (cities), strengthening patterns of interaction of economic orientation based on the region's natural resource potential. For this reason, it is necessary to prepare a policy set for the development of residential areas at the district level, growth centers as well as in areas that are very detailed in the border regions.

The development of border cities in the border region has six categories, namely: (1) protecting green open spaces / conservation and natural resources (2) being able to optimize land use (3) reducing and efficiency in financing infrastructure development (4) encouraging the synergy of city and village relations (5) ensuring the transition of the use of rural land to urban areas runs naturally and directed (Seong, 2006). The dynamics of urban economic activity in the border region is a condition that can increase the growth of cities (new growth centers) of the national border. But if it is not controlled, it can become an obstacle in developing growth potential as a driver of social development, population, economy, and sustainable welfare improvement in the region. (Canales, 1999).

Based on this, it is necessary to make a policy design for the development of sustainable settlement areas in the border region. From the above case, the research questions can be formulated as follows:

- a. What is the condition of the settlements in the border area of Nunukan Regency?
- b. What is the potential of natural resources related to supporting the development of sustainable settlements in the border region?
- c. What are the influences, interests and mechanisms of stakeholder involvement in the formulation of policies and strategies for the development of sustainable settlements in the state border areas in Nunukan Regency?

### ***Methodology***

#### a. Analysis of the Design of Border Settlement Area Development Policies

Designing policies for the development of border settlements is through the Analytical Hierarchy Process (AHP) approach. The principle of assessment in AHP is to compare in pairs (pairwise comparisons) the level of importance or level of influence of one element with other elements that are in one level (level) based on certain considerations. The value given is in the scale of opinion issued by (Saaty, 1993). The geometric mean of all respondents from each opinion value compared to processed using Criterium Plus Version 3 software. This analysis is used to interpret the priorities of the factors, actors, and the nature of policies that influence the policy of border settlement area development in Indonesia.

#### b. Analysis of Important Factor Scenarios and Policy Recommendations

After the classification of sub-elements and policy designs is made, a description of policy analysis that is in accordance with the field conditions and the results of ISM and AHP analysis, with the following stages, determines the state of a factor, builds a scenario that may occur and determines the scenario implications.

### ***Findings and Discussion***

#### Weighting Results on each Component

The AHP model is used to choose easy and important policy directions towards the development of sustainable settlement areas. Figure 1 is an AHP hierarchy diagram that has been discussed and is the main expert opinion through in-depth interviews. Experts involved included Bappenas, Ministry of Home Affairs, Ministry of Public Works, Minister of Public Housing, Provincial Government, Regency Government, Developers, Financial Institutions, and NGOs.

The AHP hierarchy is composed of five levels that show the stages of the priority setting process starting from determining the focus on level 1, namely the success of the pattern of development of settlements on the national border. Level 2 is a factor consisting of government policy, income level, development funding, infrastructure and facilities. Level 3 is an actor consisting of the central government, local government, private sector, community, experts and local BKM / NGOs. The actor is related to the development of residential areas and each actor has a role, influence and strength of regional development policies. Level 4 is the goal for the development of residential areas which consists of developing and structuring the area, improving welfare, managing natural resources and regional ecosystems, developing regional infrastructure and minimizing conflict. Level 5 is a target consisting of regional development strategies, institutional development strategies and financing development strategies. The results of filling in a paired comparison matrix questionnaire were submitted to experts from the central government, local government, private sector, community, university experts, and BKM / NGOs, then processed with Expert Choice software. The results of AHP analysis at each level of the sustainable regional development design hierarchy. The weight and priority analyzed are the results of a combination (combined) of the opinions of experts in each paired matrix.

Figure 1. AHP hierarchy diagram of border settlement area

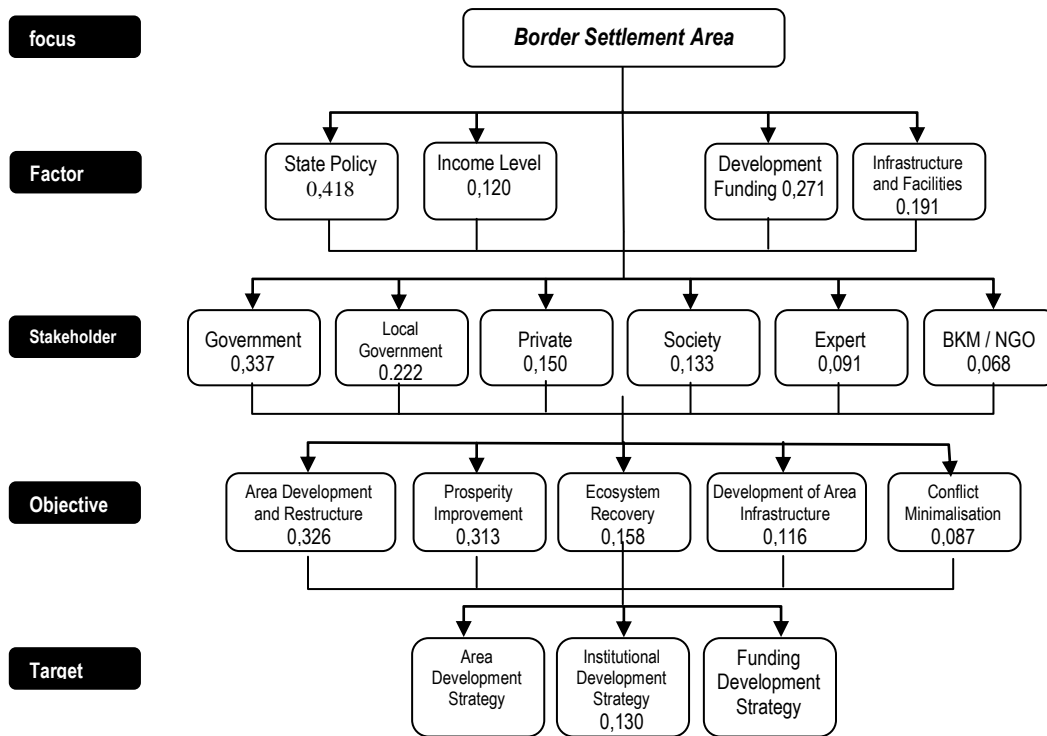
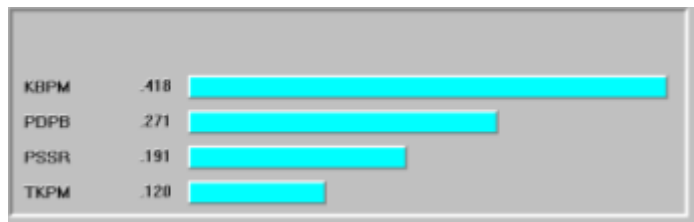


Figure 2. Sequence of priority factors



Note:

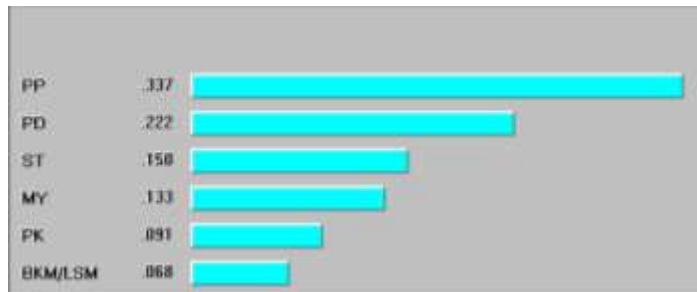
KBPM = Government Policy

PDPB = Development Funding

PSSR = Infrastructure and Facilities

TKPM = Income Level

Based on Figure 2 AHP analyst results which are factors (level 2) government policies and development funding are the top priorities with each value weight being 0.418 and 0.271. Government policies will help build growth centers for economic and trade activities. Preparation of policy instruments and development funding is needed to develop residential areas at the district level, central growth areas and in areas that are very detailed in the border region. The results of the AHP analysis then the priority is the improvement of infrastructure and facilities with a weight value of 0.191 and the last priority is the level of income with a weight value of 0.120. With the increase in infrastructure and facilities as well as an increase in the level of income, it is hoped that a comprehensive and integrated development program can be carried out in the border area of the Nunukan Regency, so that it will provide benefits to the government and the welfare of the communities around the area.

**Figure 3. Order of priority stakeholder**

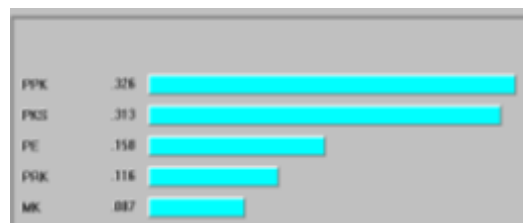
Note :

PP = Central Government  
 PD = Regional Government  
 ST = Private  
 MY = Society  
 PK = Expert

Based on Figure 3 the results of AHP analysts who are stakeholders (level 3) indicate that the central and regional governments have a major role in the development of residential areas, the weight of the values of each stakeholder is 0.337 and 0.222. The central government and local governments have a high level of importance in determining alternative settlement area development policies in the border area of Nunukan district.

#### Weighting Destination Criteria

Based on the results of expert opinion arranged goals that are the main achievements in the development of sustainable state border settlements, Figure 4 shows the order of priority of these objectives.

**Figure 4. Sequence of priority goals**

Note:

KDP = Regional Development and Arrangement  
 PKS = Improvement of Welfare  
 PE = Development of Natural Resources and Regional Ecosystems  
 PRK = Regional Infrastructure Development  
 MK = Conflict Minimization

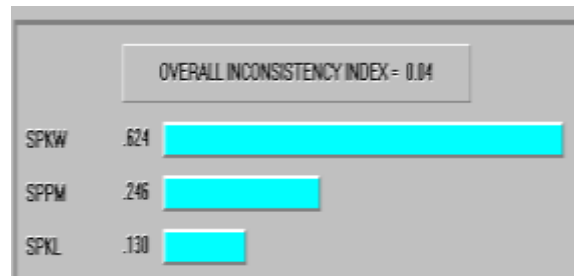
Based on Figure 4, the results of the AHP analyst (level 4) show that the development and arrangement of the area and improvement in welfare get the main priority in the objective criteria with each weighting value of 0.326 and 0.313. Regional development becomes a priority in accordance with the 1999 GBHN mandating that border areas are underdeveloped areas that must be prioritized in development. The mandate of this GBHN has been described in Law No. 25 of 2000 concerning the National Development Program (Propenas) and in Law No. 26 of 2007 concerning Spatial Planning, mandating that the national border area as a National Strategic Area (KSN) and prepare various policies and steps as well as a comprehensive and integrated development program, so that there will be an increase in the welfare of the community around the Nunukan district border area (Kirmanto D, 2005).

The next priority is the management of natural resources and regional ecosystems with a weight value of 0.158. Management of natural resources and regional ecosystems is very important to implement, so that natural resources and areas are not degraded due to the development in the area. Therefore development activities need to be planned in an integrated manner based on optimal management of natural resource potentials and regional ecosystems. The next priority is the development of infrastructure and facilities with a weight value of 0.116. it is very important to develop infrastructure and facilities so that there will be development of economic potential and natural resources in the region.

The last priority is conflict minimization with a weight of 0.087. This is important so that there is no conflict in the border area between the community and the government, so that it will bring benefits to the government and the community

#### Weighting Target Criteria

**Figure 5. Sequence of priority goals**



Note :

SPKW = Regional Development Strategy

SPPM = Financing Development Strategy

SPKL = Institutional Development Strategy

Based on Figure 5, the AHP analyst results (level 5) show that the regional development strategy is a top priority with a weight value of 0.624. This is due to the support of the availability of adequate basic infrastructure for the development of border areas in Nunukan district. The second priority is the development of financing with a weight value of 0.246. This is supported by the existence of financial support from the government to develop the area in the Nunukan district border area. The last priority is an institutional development strategy with a weight value of 0.130. This is due to the support of participatory spatial planning, the establishment of a community-based organization (CBO), socialization of sustainable settlement management programs, technical assistance and advocacy for the development of home and environmental design, institutionalization of socio-cultural activities, neighborhood attachments, increase public investment.

#### **Strategy Preparation**

Based on the results of the linkage analysis and system performance, it shows that the current system is still in a less sustainable position. Thus it is necessary to formulate various strategies and policy recommendations for the development of sustainable settlement areas in the border region. From the AHP results, a policy analysis was prepared conducted through a study of three choices strategies. From the analysis it is known that there are two problems that most influence the strategy and policy recommendations for the development of sustainable residential areas in the border areas, among others: (1) Strategy for Regional Development, (2) Institutional Development Strategy and (3) Financing Development Strategy.

From the estimation regarding the state of the problems in the future, a strategy can be developed that might occur. Based on the respondents' dominance regarding the future condition of the problem, then a possible combination of problem conditions is carried out, by removing incompatible combinations. From a combination of problem conditions, two scenarios are obtained, namely: (1) First Scenario and (2) Second Scenario.

#### Policy Strategy and Recommendations

##### **First Scenario**

###### (a) Regional Development

This is built on the condition of the key factors with conditions namely; Lack of public awareness of national identity; Low public welfare; Economic development gaps and poverty in border areas; Limited facilities and social facilities; Increased area and settlement infrastructure; Social and economic conditions are better in their own country. The application of this first scenario will have implications in the form of: (1) Decreasing public awareness of national identity, (2) Low public welfare, (3) Gap in economic development and poverty in border areas.

To support the policy of developing sustainable settlements in the border areas, efforts can be made to develop the region by accelerating the growth of regional superior potential areas such as the following: the creation of superior-based clusters, the following areas for access to and out of the region cluster, ease of access to information and markets, integrated, increased community empowerment in business activities based on community potential and local wisdom, strengthening cooperation between local governments, entrepreneurs / investors, communities and educational

institutions in improving community skills, opening up solid employment works in border areas, making land use maps agreed upon by all relevant stakeholders including the user community and accessible to relevant stakeholders, integrated infrastructure development with residential areas and crowded centers / fitting ar along the border, development of growth centers and markets in border areas, construction of regional superior-based terminals as showrooms that are easily accessible, integrated infrastructure development with residential areas and crowded centers / markets along the border and ease of ownership , the construction of public facilities and fasos that are in accordance with the needs of the community in stages, maintenance of fasum and fasos by the local government by involving the community as users by giving rewards to regions with well-maintained fasum and fasos.

#### (b) Financing Development

This scenario is based on the circumstances of the key factors, namely; Increased allocation of special funds for the development and management of border residential areas; Limited funds for the development and management of infrastructure and facilities; The utilization and management of development funds is not optimal. To support the policy of developing sustainable settlements in the border areas of the country in the first scenario, the development of financing is recommended such as the following: ease of business financing by financial institutions, implementing cross subsidies on community joint business activities, ease of home ownership in collaboration with financial institutions at affordable costs and making special budgeting policies for the development of short-term, mid-term and long-term border areas that are evaluated at the end of each year.

#### (c) Institutional Development

This scenario is based on the circumstances of the key factors namely; Limited public services; Law and regulation enforcement is still weak; and the socio-economic activity of the community increases. To support the policy of developing sustainable settlement areas in the border areas, institutional development is recommended as follows: the creation and strengthening of joint business groups, supervision and law enforcement, training and extension of community resources initiated by regional governments in collaboration with institutions education for industrial needs, the production of plasma plasma business activities that are fostered by 1 foster father / chairman of a business group and fostered by regional governments and entrepreneurs / investors, policy making by limiting Malaysian citizens to work in labor intensive companies except as instructors and entrepreneurs / investors in the term certain time that can be renewed, the ease of the bureaucracy in making land legality certification and related evaluation and policy making.

### **Second Scenario**

#### (a) Regional Development

This scenario implies that future conditions that might occur are considered to be considered in accordance with the conditions and capabilities of the resources possessed and believe that the strategy and policy recommendations for the development of sustainable residential areas in the border region can be balanced between the environment, social and economy of the community. The second scenario is built on the condition of the key factors with the condition of Regional Development namely; Increased public awareness of national identity; Community welfare is relatively fixed; Decreasing gap in economic development and poverty in border areas; Increased fasum and fasos; Lack of regional and residential infrastructure; Social and economic conditions are better in neighboring countries. To support the policy of developing sustainable settlements in the border areas of the country in the second scenario in Regional Development, the following matters are recommended: the creation of integrated information, periodic promotions for regional superior results, strengthening cooperation between local governments, employers / investors, communities and institutions educational institutions in improving community skills, construction of regional superior-based terminals as showrooms that can be easily accessed, integrated development of infrastructure with residential areas and maintenance of fasum and fasos by local governments by involving the community as users by giving rewards to regions with public facilities and social facilities well maintained.

#### (b) Financing Development

The second scenario is built on the condition of the key factors with the condition of Financing Development, namely; Limited allocation of special funds for the development and management of border settlement areas; Increased funds for the development and management of infrastructure and fixed equipment; Optimizing the utilization and management of permanent development funds.

To support the policy of developing sustainable settlements in the border regions of the country in the second scenario, the Development of Financing is recommended as follows: ease of business financing by financial institutions and evaluation of special budgeting for the development of short, medium and long term border areas.

#### (c) Institutional Development

The second scenario is built on the circumstances of the key factors with the condition of Institutional Development namely; Permanent public service; Law and regulation enforcement; Socio-economic activities are better in neighboring countries. To support the policy of developing sustainable settlements in the border areas of the country in the second scenario, Institutional Development is recommended as follows: supervision and law enforcement, training and extension of community resources initiated by regional governments in collaboration with educational institutions for industrial needs, evaluation and related policy making.

### **Conclusion and Recommendation**

Based on AHP analyst results for factors (level 2) shows that government policies and development funding are the top priorities, for stakeholders (level 3) shows that the central and regional governments have a major role in the development of residential areas, for the purpose (level 4) shows that the development and structuring of the area and improvement of welfare get the main priority, and for the target (level 5) shows that the regional development strategy is a top priority. In Regional Development, the following matters are recommended, the creation of superior-based clusters in the following areas of access to and out of the cluster area, ease of access to information and markets, creation of integrated information, periodic promotion of superior regional results, increased empowerment community in business activities that are based on community potential and local wisdom, strengthening cooperation between local governments, entrepreneurs / investors, communities, cooperation institutions for national border development, and educational institutions in improving community skills, opening labor-intensive jobs in border areas, making land use maps for planning and structuring settlements agreed upon by all relevant stakeholders including the user community and accessible to relevant stakeholders, integrated infrastructure development with residential areas along with activity centers along the border, terminal construction -Mineral-based regional leading sectors as showrooms that can be easily accessed, integrated infrastructure development with residential areas and activity centers along the border, and ease of ownership, construction of public facilities and fasos that are in accordance with community needs in stages and maintenance of fasum and fasos by local government by involving the community as users by giving rewards to regions with well-maintained public facilities and social facilities. In the development of financing it is recommended such as the following matters, ease of business financing by financial institutions, sources of special allocation funds, implementing cross subsidies on community joint business activities and ease of home ownership in collaboration with financial institutions at affordable costs. In Institutional Development, it is recommended as follows: the creation and strengthening of joint business groups, supervision and law enforcement, training and extension of community resources initiated by regional governments in collaboration with educational institutions for the needs of regional leading sector industries, ease of bureaucracy making land legality certification, as well as evaluating and making relevant policies.

To be able to maintain the sustainability of settlement area development in the border areas of the region strategic policies are formulated, such as: In developing and structuring the area it is necessary to make technical guidelines, location criteria and sectoral development criteria as a means of fostering spatial planning for local governments and other development actors. It can be used as a reference in fostering spatial planning for district and city governments by the provincial government as a representative of the central government in maintaining the consistency of the national system. The provincial government has the role of maintaining functional linkages between the components of the national system and components that become competencies (regional authority). Besides that, preliminary studies and pre-feasibility studies are recommended to be made in advance as a reference for investment in building long-term settlements, infrastructure, environmental infrastructure and facilities.

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