

## Contribution of Area Change to Minangkabau International Airport (BIM) to the Community in Kenagarian Ketaping West Sumatra

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**Abstract.** Nagari Ketaping, located in Batang Anai District, West Sumatra, has undergone significant land use changes, primarily due to the establishment of Minangkabau International Airport (BIM) in 2005. Initially a swamp and forest area, this region has transformed into a rapidly developing urban area, triggering various socio-economic and cultural shifts. This study aims to analyze the impact of these changes on the local community, including population growth, livelihood transitions, educational access, and social interactions. A qualitative research approach with a descriptive method was employed. Data collection techniques included interviews and observations, involving five key informants: local government representatives, affected residents, and workers. Observations were conducted to examine land use transformation, including the construction of infrastructure such as housing complexes, overpasses, highways, and airport railway connections. The findings reveal that the airport's presence has significantly increased the population due to urbanization and migration. New housing developments have proliferated, attracting settlers from various regions. Economic shifts are evident, with residents transitioning from agricultural livelihoods to employment in trade, construction, and service industries. Additionally, the expansion of educational facilities has improved access to schooling, supporting human resource development. Changes in social interaction patterns are also observed, as denser settlements foster stronger community bonds and reduce crime rates. The study applies Herbert Spencer's evolutionary theory, which posits that societal transformations occur gradually. The development of BIM has triggered continuous infrastructure expansion, leading to sustained regional and socio-economic growth. However, discrepancies remain in employment opportunities for indigenous residents despite prior agreements. The findings highlight the profound influence of large-scale infrastructure projects on local communities, emphasizing the need for inclusive and sustainable development policies.

**Keywords:** Area Change, Minangkabau International Airport, Kenagarian Ketaping

### INTRODUCTION

Kenagarian Ketaping as one of the areas in West Sumatra that is experiencing rapid regional change. Area change is defined as a change in part or all of the land from its original function to another function which certainly has positive and negative impacts on the environment and the potential of the land itself (Nurhayati et al., 2020). Nagari ketaping is one of the areas located in the Batang Anai sub-district, Padang Pariaman Regency, West Sumatra. Batang Anai sub-district has 8 nagari and 52 korong, these nagari are Ketaping, Kasang, Buayan, Sungai Buluh, Sungai Buluh Selatan, Sungai Buluh Barat, Sungai Buluh Timur and Sungai Buluh Utara. Nagari Ketaping itself has 8 korongs, namely Marantih, Pilubang, Tabek, Simpang, Pauh, Olo Bangau, Batang Sariak and Talao Mundam. Among the 8 villages in Batang Anai District, Nagari Ketaping is the one that has experienced the most area changes and land use change.

Before the many changes that occurred in the Ketaping Kenagarian area began because of the

construction of the Minangkabau International Airport which stood on an area of 4, 27 km<sup>2</sup> with a runway of 3,000 meters with a width of 45 meters. before the construction of this airport the area was swamp and forest. This development had a major effect on the changes that occurred afterward in Ketaping village. Minangkabau International Airport operated in 2005, with various beauties and tours in West Sumatra, the construction of this airport made it easier for tourists and foreign tourists to enter West Sumatra. so that the Ketaping Kenagarian area also experienced a lot of sustainable development that continued to occur to improve the quality of infrastructure services around the airport.

Some of the sustainable development of this airport are (1) the development of several housing points that are expanding, such as griya ketaping housing, puri ketaping housing, ketaping residence, adena raya ketaping and several others. (2) construction of an overpass as a road link to Minangkabau International Airport. (3) paving the highway in nagari ketaping which is increasingly evenly distributed in each korong. (4) construction of the minangkabau international airport train which passes several routes, namely padang station, tabing station, duku station and the last stop of BIM station. This sustainable development certainly also has an impact on changes in the life of the Ketaping community. These changes start from (1) the rapid increase in population so that the pattern of community interaction changes, (2) the opening of new job vacancies for the local community so that the livelihood of some people changes, and (3) increasing access to education so that more young people pursue higher education.

Based on the phenomena described above, this article will discuss the impact of changes in the area to become the Minangkabau International Airport in Nagari Ketaping, Batang Anai District, West Sumatra. This is because of the 8 villages in the Batang Anai sub-district, nagari Ketaping is the one that has experienced the most area changes and land use change, which of course also has an impact on socio-cultural, economic and educational changes as previously described.

## **METHOD**

The research method used by researchers is a qualitative approach with descriptive methods. The data collection techniques in this study were interviews and observations. Interviews were conducted with several informants. Informants in this study were selected purposively as needed and combined with snowballing techniques, namely people who are considered to know the problem under study (Lenaini, 2021). The number of informants in this study were 5 people, including Mr. Harjoni (Wali Korong Talao Mundam), Mr. Dirman (Farmer), Lusi (Residents affected by the construction of the flyover), Riko (Private employee), and Yudisman (Head of the Ketaping Nagari Government). Observations were made by observing and seeing directly the areas and lands that have been converted into several buildings such as the Minangkabau International Airport, several housing points, flyovers and the construction of the airport train. The two methods were used by researchers to analyze more deeply the changes in the area and land use change that occurred in Nagari Ketaping, Batang Anai sub-district, West Sumatera.

## **RESULTS AND DISCUSSION**

The area of Nagari Ketaping, Batang Anai sub-district, has undergone many changes, especially the area used as the Minangkabau International Airport, which used to be an uninhabited forest and swamp area, because the area was far from residential areas (Yunisman, 49 years old). Nagari Ketaping is an area that still adheres to the king system until now. The king in question is Raja Sampono, formerly the king's system was the law that applied to the people in the Ketaping Nagari area. However, the more advanced and developed a country, the state law applies to the people in the Ketaping Nagari area today. Even so, the culture and law of the king are not abandoned, even the community still preserves the culture of regulation and obeys the decisions taken by the king of sampono, because it is very influential on social sanctions in the Ketaping Nagari community until now.

Raja Sampono has very strong legitimacy in the life of the Ketaping Nagari community, both economically, politically and socio-culturally. He is the one who gave an agreement to the state to be able to build the Minangkabau International Airport with the condition that 20 percent of the workers at the airport will be indigenous people in West Sumatra, especially in Ketaping village. With this agreement, the king of Samono agreed and donated the land to be built as the Minangkabau International Airport. because the land built as the Minangkabau International Airport is the territory of King Sampono. Every year the state also pays hundreds of billions in taxes to Nagari Ketaping (Yunisman, 49 years old), this tax is then the budget for sustainable development in the Nagari Ketaping area of Batang Anai District.

### **Forms of regional change in nagari ketaping**

Before the existence of Minangkabau International Airport (BIM) the area was swamp land and uninhabited forests. then with the agreement made by Raja Sampono with the state and community problems that were able to be reduced by Raja Sampono, the construction of Minangkabau International Airport began in 1998 and began operating in 2005. Minangkabau International Airport stands on an area of 4.27 km<sup>2</sup> with a runway of 3,000 meters with a width of 45 meters. Domestic and international flights are served by a 20,568 m<sup>2</sup> terminal, which has a capacity of around 2.3 million passengers annually. In 2017, the airport was expanded in two stages to reach 49,000 m<sup>2</sup>. The expansion will be able to accommodate around 5.9 million passengers per year.

The granting of land by Raja Sampono to the state was done through a grant system. There was no direct financial compensation for this land grant. The Head of Government of Ketaping village, Mr. Yunisman (49 years old) stated that "This land was given freely by King Sampono to the government in a grant system. However, there were binding agreements that later became an agreement between the two parties. The agreement is in the form of taxes given directly to the development of Nagari Ketaping by BIM and an agreement to employ 20% of the indigenous people at BIM.". However, in fact, until now the indigenous people of Nagari Ketaping have not been employed as much as 20%, some who work are only as lower workers at the Minangkabau International Airport.

The area that is currently the Minangkabau International Airport (BIM) was once also used by the community to take eels and a place to fish as a source of food and life for the community, which is still a small number. From this explanation, it can be interpreted that the BIM area is land whose ownership is purely from local residents. There is only a binding agreement between the two parties as a form of indirect compensation.

The presence of the airport in fact has had many impacts on various lines of life in the Ketaping Nagari area. Among them contributes to the development of population activities. From what used to be only forests and swamps where eels and fish were hunted, now the number of people living in the area has increased significantly. As stated by Mr. Harjoni (49 years old) "The population here is increasing, from what used to be only small groups, but now many outsiders are starting to enter the Ketaping nagari area". The presence of the airport has had a major effect on sustainable development in the Ketaping nagari area, increasing by more than 50%, including housing.

Some of the housing that has been built in the Ketaping village area is griya ketaping housing, puri ketaping housing, ketaping residence, adena raya ketaping and there are still several others. This housing is on average built by developers who are not indigenous to Nagari Ketaping. The developer's interest in building housing around the Ketaping area is inseparable from the strategic layout. Close to the airport, the land is quite large and the price is still quite affordable when compared to other big cities. Almost every corner in the Nagari Ketaping area has been filled with housing.

The continued development of BIM also had an impact on the construction of an overpass that has existed since 2005, about 300-400 meters long (Rini, 2013). This overpass is one of the connecting roads that speeds up travel from Padang City to the Minangkabau International Airport. In addition, the paving of highways in each korong in the Ketaping Kenagarian area is also significantly more evenly distributed. The continuation of airport development also has an impact on the construction of airport trains that pass through several routes, namely padang station, tabing station, duku station and the last stop of BIM station. With various developments that have been built since the operation of the Minangkabau International Airport, it has a very positive impact on significant sustainable development in the Ketaping village, Batang Anai sub- district.

### **Impact of area change in Nagari Ketaping**

#### 1) Increase in population

Changes in the area and land use change that occurred in Nagari Ketaping have had a significant impact in increasing the population quite rapidly. This significant increase in population is not only caused by natural population growth, but also driven by the flow of urbanization and migration of residents from other areas who are attracted by economic opportunities and new jobs in the Nagari Ketaping area. The number of new housing developments and other supporting facilities is an attraction for migrants to settle in Nagari Ketaping. This is in accordance with the explanation of Mrs. Lusi (34 years old) "the difference in population before the development with the current one is much different, previously there were only a few groups of residents here but now it has reached more than 58 thousand people, very significant after the

development everywhere". The same thing was also conveyed by Riko (35 years old) "After the development in this area, the development of the population has increased very rapidly, because there are also many schools here, close to the airport and increasingly modern infrastructure so that automatically this area is getting crowded".

The rapid increase in population has a positive impact on the development of Nagari Ketaping. With the increase in population, there will be an increase in demand for goods and services, which will be able to encourage the economic growth of the Nagari Ketaping community (Indrianawati & Mahdiyyah, 2019). In addition, population diversity can also enrich the culture and social interactions of the community. The presence of newcomers can bring diversity which can be an asset to improve the quality of life for the development of Nagari Ketaping.

#### 2) Change in livelihood

With various sustainable developments in infrastructure that are increasingly significant and modern, some communities have changed their livelihoods. Where initially the community's livelihoods were farming and gardening, now many people trade, factory laborers, become civil servants and the private sector. As expressed by Mr. Harjoni (49 years old) "the various infrastructures that have been built have had a huge impact on our area, one of which is the opening of new job vacancies. This is also in accordance with what was expressed by Mr. Dirman (55 years) "Ketaping people also worked a lot as construction workers during the construction of housing until now around the Ketaping village area".

Changes in the area have opened new job vacancies for local people in various sectors, such as construction workers, traders, factory laborers, civil and private employees and others. These livelihood opportunities provide an increase in income for people who previously depended on the agricultural and plantation sectors. Increasing the income of local communities can improve their standard of living and can improve the ability of the community in education (Pontoh et al., 2021).

#### 3) Increased access to education

Along with the rapid population growth as a result of the development of the Ketaping Nagari area, which is increasingly advanced, it has a positive impact on increasing access and educational facilities for the local community. At this time it is recorded that the Ketaping village area has 14 schools, consisting of 11 elementary schools, 1 public junior high school and 2 public high schools.

Sustainable development that continues to advance and modernize such as housing, public facilities, airport trains, and various other infrastructure has in fact attracted many newcomers to settle in Nagari Ketaping. This is in accordance with what was revealed by Mr. Yunisman (49 years) "This is one of the impacts of progress in Nagari Ketaping, which used to be a forest and swamp area, but now it can be said to be a developed area, one of which is complete and increasingly complex educational facilities ranging from kindergarten to high school". Improved education facilities have a positive impact, especially for the younger generation. They can more easily access quality education (Dimmera et al., 2023). This is expected to improve the quality of human resources, thus supporting the development and growth of the region.

#### 4) Changes in community social interaction

The social interaction of the Ketaping Nagari community after various developments that continue to be evenly distributed has also changed a lot, in the past the distance between community houses was quite far while now the community's houses are increasingly dense so that community social interactions are also increasingly complex. People meet and interact more often with neighborhood neighbors.

With more intense social interactions, the sense of togetherness and solidarity among Nagari Ketaping residents is more closely intertwined. Strong kinship relations become social capital to work together in an effort to improve the common welfare of the Nagari Ketaping community. This more intense social interaction has also resulted in a decrease in the crime rate in Nagari Ketaping. With closer relationships between neighbors, people care and love each other more, thus creating a more conducive environment.

Changes in social interactions also open up opportunities for cultural and knowledge exchange between local communities and newcomers who settle in Nagari Ketaping. Thus, changes in community social interactions in Nagari Ketaping after various BIM sustainable developments strengthen kinship relations, solidarity, and community social capital, and create a safer environment for the community in Nagari Ketaping (Ichsan et al., 2024).

Evolutionary theory is the relevance of researchers in seeing social changes in land and area conversion in Nagari Ketaping. This evolutionary theory suggests that social change occurs slowly and gradually in the community system. Society changes and develops from a simple stage to a more complex stage (Iskandar, 2008). This change takes place continuously and never stops. Changes in the area and land use change that occurred in Nagari Ketaping, Batang Anai District, are very relevant to the theory of evolution by Herbert Spencer, where changes in the area and land use change in Nagari Ketaping occurred slowly and gradually (Ritzer, 2012). The first most significant development was the construction of the Minangkabau International Airport (BIM) which operated in 2005. BIM stands on an area of 4.27 km<sup>2</sup> with a runway of 3,000 meters with a width of 45 meters (Our Airport, 2020). The development of the area does not stop there, BIM has a very significant impact on sustainable development from year to year, namely the large number of housing developments around nagari ketaping, the construction of flyovers, the construction of airport railways and the construction of asphalt roads that are starting to be evenly distributed in each korong of nagari ketaping.

From the changes in physical development that have been described previously. very impact on economic, socio-cultural and educational changes in the community around nagari ketaping. Some of the impacts of these changes are a significant increase in population, new livelihoods, increased access to education and changes in community social interactions. This is in accordance with what was conveyed (Triasputri, 2023), the presence of the airport provides a number of good benefits for the nagari ketaping community, one of which is that many opportunities open up in the region. The community adapts to the changes that continue to occur as a result of airport development, the community is also able to open businesses and read business opportunities around them. Although at the beginning of the development there was resistance from the local community, the local government, in this case Rajo Sampono, succeeded in approaching the community so that they would accept the construction of the Minangkabau International Airport in their area.

## CONCLUSIONS

Based on the results of the study, it can be concluded that changes in the area and land use change in Nagari Ketaping, Batang Anai District to become the Minangkabau International Airport have a good impact on sustainable development that continues to occur in the region. Some of these sustainable developments are flyovers, airport railways and the even distribution of asphalt road construction in the nagari ketaping area. This change also has a major impact on economic, socio-cultural and educational changes in the community in the Ketaping Nagari area. Evolutionary theory in this case analyzes the regional changes that occur in Nagari Ketaping where this area is experiencing growth towards the progress of the welfare of the Nagari Ketaping community. The research still focuses on social changes that occur in one of the villages in Batang Anai District, namely Nagari Ketaping. It is recommended that further researchers can expand the analysis related to social change in several other Nagari in Batang Anai District, West Sumatera.

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