Community Based Development in Agrotourism Case Study: Dragon Fruit Plantation in Desa Baru, Kampar District, Riau Province

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ABSTRACT

Conditions of soil and climate in Desa Baru is perfect for Dragon fruit plants, so the it has a plantation area of Dragon fruit (Hylocereus undatus) which is managed by a private of 500 Ha. While there was still a lot of vacant land in Desa Baru that has not been used by the community for life. Most of the people work as farmers, either individually or cultivate land as farm laborers. The public must be able to harness the potential in Desa Baru as a tool to improve the economy, due to the economic level of local population is still relatively low. Dragon fruit plantation can become tourist activities and the results can be sold as a source of income for the community. Another advantage is the location of the plantation not far from Pekanbaru City (20 Km) as a capital of Riau Province and directly adjacent to Desa Buluh Cina as a ecotourism village (Rimbo Tujuh Danau). So the Dragon fruit growing areas can synergize with other tourist activities in Riau Province. This study aims to assess the development potential of community based development in agrotourism especially dragon fruit plantation. A study using qualitative descriptive research method. Data were collected by using observation, questionnaires and interviews. Based on the research activities are contributing factors in agrowisata dragon fruit plantation in Desa Baru: 1) Prospects Dragon Fruit plantations are profitable. 2) Absorb local labor. 3) Revenue and local communities can be increased. 4) The potential of the land and the location of the advantageous location. 5) People are friendly to newcomers. While the inhibiting factors that: 1) The state of infrastructure is inadequate. 3) Lack of support from the government. 4) The low quality of human resources. 5) Lack of promotion for tourists. Plantation development aims to increase people's income so development concept is based on the analysis of agrotourism, the development of strategies that can be done such as (1) the formation of which has a specific tourist areas. (2) the establishment of small industrial activities especially in Dragon Fruit processing and handicraft. (3) Improvement of infrastructure and facilities in the field of agro plantation. 4) increase local income by selling dragon fruit both local and international market.

Key word: Development, Agrotourisme, Dragon Fruit, Community

INTRODUCTION

Riau Province is located on the island of Sumatra which have tourism potential that can be developed by the government, private, and community. One of these is the potential for plantation Dragon fruit (Hylocereus undatus) located in Desa Baru, Siak Hulu, Kabupaten Kampar. Dragon fruit plantation sare managed by the private sector and can be used as a pilot plantation communities in Desa Baru because there is vacant land belonging to people who had not managed optimally. Proper management and optimum of the Dragon fruit plantation activity and its associated activities will be able to improve the economy of the community.
In addition to producing Dragon fruit can be sold, people were able to take advantage of the state's agrotourist attractions, such as Strawbery plantation in Bandung (West Java), Apple plantation in Batu Malang (East Java) or a Tea plantation in Puncak (West Java). Given the agrotourism Dragon fruit plantation, will merge as a result of other activities such as business stalls/kiosks, souvenirs, and Dragon fruit processing business. This course will increase incomes. In line with the government's efforts to improve the income of farmers who have a narrow field of land use and the presence of symptoms that exceed the carrying capacity, the existence of alternative land uses oriented to the interests of a very good to urtodox.

Another advantage is the location of Desa Baru only 20 Km from Pekanbaru City as the capital of Riau Province and directly adjacent to Desa Buluh Cina with Rimbo Tujuah Danau (forest with seven-lake) attractions. With allocation adjacent to each other, the two can synergized attraction as a source of income communities in the area.

AGROTOURISM

1.1. Development of Agrotourism

Agrotourism is part of the attraction that utilize agriculture (agro) as a tourist attraction. The aim is to broaden the knowledge, experience leisure and business relations in agriculture. Through the development of agrotourism that high light local culture in the use of the land there by increasing farmer's income while conserving land resources, and preserve local culture and technology (indigenous knowledge) that are generally in accordance with the conditions of their natural environment. Agrotourism development in accordance with the capabilities, typology, and ecological function of land will directly influence the sustainability of land resources and income of farmers as well as the surrounding communities. This activity will indirectly increase the positive perception of farmers as well as the surrounding community about the importance of preservation of agricultural land resources. Agrotourism development will turn will create jobs, because it can absorb labor or from rural communities, and the nits hold or reduce the increasing urbanization today. Benefits of agrotourism is to conserve natural resources, preserve local technology, and increase the income of farmers/communities around tourist sites.

Agrotourism in principle an industrial activity that is expecting the arrival of consumers directly organized tourist place. Assets that are important to attract tourists is authenticity, uniqueness, comfort, and natural beauty. Therefore, the environmental quality factors become important capital that must be provided, especially in those regions that is used to the tourists explore. Recognizing the importance of environmental quality, community/local farmers need to be encouraged to always keep the authenticity, comfort, and environmental sustainability. Agrotourism can be grouped into ecological tourism (eco-tourism), that is activities and travel with no damage or pollute nature with a view to ride and enjoy the
beauty of nature, wild animal sand plants in their natural environment as well as educational facilities.

In addition to providing value comfort, beauty or knowledge, agrotourism can bring in income for farmers as well as the surrounding community. Tourists visiting consumer of agricultural products will be produced, so that the results become more efficient marketing. The other side, the presence of farmer's awareness of the meaning of sustainability resources, then continuity of production become more awake which in turn will increase the income of farmers. For the communities, the increasing numbers of tourists they can gain business opportunities by providing services and sell products to meet the needs of travelers.

Objects of natural agrotourism in open space is located carried out directly by the local farming community in accordance with their daily lives. Communities conduct their activities in accordance with what they used to do without any settings from other parties. To provide additional enjoyment to the tourists, the attractions are made by specific people can be highlighted, while still maintaining the natural aesthetic value. While supporting facilities for travelers security remain supplied to the extent no conflict with the culture and aesthetics of the original there, such as transportation, shelter, sanitation, and security from wild animals.

Community participation in tourism development can be active and passive. Active participation is held directly either individually or jointly with initiative and creativity would involve them selves in the activities of tourism exploitation. While the emergence of passive participation is to conduct public awareness activities that support the preservation of natural resource conservation. Importance of conserving natural resources around the attractional so has a positive impact on the economy (Suwantoro, 2004).

Economic aspect of tourism can not be separated from travel expenses (tourist expenditure) that travelers spend money in tourist destinations to meet a variety of needs during a visit at a country/regional tourist destination. Spending money in the tourism economy traveler scalled the new money that have a positive impact on the economy of countries/areas visited (Oka, 2008:187). Calculation of travel expenses is important to show the real value of tourism to the area. It's also important to describe the specific impact of tourism to the local economy such as households, local businesses, local economies and so on, as well as the basic planning new facilities or tourist attraction, illustrates the impact of tourism on economic acceptance assalary, employment, and the more (Goldman, 1994:1).

1.2. Dragon Fruit

Dragon fruit or Pitaya is the fruit of several cactus species from the genera Hylocereus and Selenicereus. The fruit is native to Mexico, Central America and South America but is now also cultivated in Asian countries such as Taiwan, Vietnam, Philippines, Indonesia and Malaysia. The fruit can also be found in Okinawa, Israel, Northern Australia and Southern China. Hylocereus blooms only at night. In 1870 the French people were brought from Guyana to Vietnam as an ornamental plant. Bythe Vietnam ese and Chinese fruit are considered to bring blessings. Therefore, the fruit is always placed between wo male green dragon...
statues on top of the altar table. The red color of the fruit looks striking, color green dragons. The fruit of this habit among Vietnamese people highly influenced Chinese culture known as Thang Loy (Dragon Fruit). The term Thang Loy then translated in Europe and other countries that speak English as Dragon fruit.

In Indonesia started Pitaya is grown commercially since the early 2000s. This plant is increasingly popular because it has properties to cure various diseases. In addition, no less captivating than the appearance of ornamental plants. Dragon fruit is grown and cultivated in Indonesia, only two varieties are Red Varieties (Hylocereus Polyrhizus) and White (Hylocereus Undatus). Dragon fruit is a re-commodity crops with market prospects are still promising, both for domestic and export markets. Because the types of plants including cacti, the fruit needs to land conditions are hot and dry so it fits developed in Riau, especially in Desa Baru. These plants do not require chemical fertilizers that many would even be better quality if you use organic fertilizers, so the solution for the community in conditions of high prices of fertilizer manufacturers today.

1.3. Description of Study Area

Administratively, Desa Baru is located in the Sub District of Siak Hulu, Kampar District in Riau Province with an area of 1369.75 Ha. Desa Baru is a division of Desa Buluh Cina. The village was established in 1979 and while it was still by the Indigenous Elders. In 1983 Desa Baru has been led by the village head (Kepala Desa). Then in 2000, Desa Baru split into three villages; Desa Baru, Desa Tanah Merah and Desa Pandau Jaya. Desa Baru is a village liaison on between Desa Buluh Cina the outer villages of Pekanbaru about 10 km from Pekanbaru City.

Desa Baru has a tropical village because it is close to the equator and are included in the wetter climate zones with rain fall 2869 mm/year and an average temperature of 31.638 oC. Desa Baru were classified plateau 85 meters above sea level and ground levels lying ranging between 0-5 which consists of swamps and peat. In this village there are still a lot of vacant land should be managed by the community to improve economic. Existing condition land use in Desa Baru can be seen in Table 1:

Tabel 1. Land Use in Desa Baru

<table>
<thead>
<tr>
<th>No</th>
<th>Land Use</th>
<th>Area (Ha)</th>
<th>No</th>
<th>Land Use</th>
<th>Area (Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Settlement</td>
<td>179</td>
<td>8</td>
<td>Private Plantation</td>
<td>500</td>
</tr>
<tr>
<td>2</td>
<td>Cemetery</td>
<td>8</td>
<td>9</td>
<td>Farm</td>
<td>250</td>
</tr>
<tr>
<td>3</td>
<td>Yards</td>
<td>48</td>
<td>10</td>
<td>Village Farm</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Office Complex</td>
<td>0.5</td>
<td>11</td>
<td>Fields Exercise</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Rainfed Rice Fields</td>
<td>35</td>
<td>12</td>
<td>Education Building</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Swamp</td>
<td>260</td>
<td>13</td>
<td>Market</td>
<td>0.25</td>
</tr>
<tr>
<td>7</td>
<td>Peat Lands</td>
<td>50</td>
<td>14</td>
<td>Sanctuary</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td><strong>Totally</strong></td>
<td><strong>1369.75</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Desa Baru Monograph, 2008
Demographic aspect is very important in this research because it involves community development in agrotourism totally there in. Desa Baru in 2008 amounted to 6358 souls with a population density of 82 people/km and the number of families as 1485 house holders, consisting of 3233 men and 3125 women. Based on age, the majority of the population are in the productive age 16-45 years of age and mostly just graduated from Junior High School.

The source of clean water in Desa Baru is dug wells and springs are utilized by house holds in 1122 and in not good condition. Similarly, the source of electrical energy which is not sufficient for the purposes of society. Most people still use the light of a kerosene lamp, the fuel was difficult to obtain. For telecommunications network, telephone cable has not reached Desa Baru, but the use of mobile phones is very adequate. For waste management and sanitation especially household, traditionally managed. Access to the road network as critical to the development of agrotourism, the hierarchy of roads in Desa Baru consists of street village, village roads, county roads and provincial roads. The road network environment and provincial roads were in poor condition, along the 13.5 m. In addition, conditions in the drainage conditions is not good because it always happens puddle even flooding in some parts of the village when it rains.

Conditions means of primary and secondary education in Desa Baru is now adayable to serve the needs of its population. So also for health facilities and places of worship. For the means of transport used consisted of bicycles, motorcycles, microbus and private car. The condition of existing houses in Desa Baru consists of permanent houses, semi-permanent and non-permanent. Semi-permanent home at the top of the current housing conditions.

**RESEARCH METHODE**

This study aims to identify the factors supporting and inhibiting the development of community based on agrotourisme specially Dragon fruit plantation in Desa Baru. A study using qualitative descriptive research method. Data were collected by using observation, questionnaires and interviews. The data were analyzed qualitatively and quantitatively. To support the development of agrotourism activities, do some analysis, namely: analysis of population growth, infrastructure needs analysis, development analysis of Dragon fruit plantations, agrotourism development plan projection, and SWOT analysis (Strength, Weakness, Opportunity, Threats).

**DISCUSSION**

1.4. Analysis of Population Growth

This analysis was performed to predict the readiness of the people in this agrotourism development activities. Development of society in this regard will be a surge of tourists and grants both actors agrotourism activities. Predicted total...
population will increase to settle because of the agroactivity plan. For this community readiness, needs further study.

1.5. Facilities and Infrastructure Needs Analysis

Means is one of the supporting facilities that must be met to develop an area or region. The ingredients contained in the Desa Baru is still sufficient for the community. The ingredients contained in the Desa Baru among others, the means of education, worship, health and economy. However, if the activities of Dragon Fruit agrotourism is developed, there will be a surge in the population so that means that there is now no longer meet the needs of the community.

If it is associated with an increase in human resources is still low, it means education will change the scale of the service into a higher level. For health facilities, need additional services and increased scale. The most important thing in this regard is the economic means to support agro-tourism activities. Suggestions economy in question is directly related to the means of the processing of Dragon Fruit. In order for the economic value of Dragon fruit is increased, it is advisable to sell Dragon fruit in the form that has been processed. For this requires the proper tools such as Dragon fruit processing plant. Another follow activities is the establishment of predictable stalls and kiosks as a place to sell Dragon fruit and dairy.

The infrastructure is included into the road network, drainage network, water supply network, the power grid, telephone network, a system of solid waste, sanitation network (waste water discharge). The infrastructure planning, the government provides specific and ards based on their needs. Electrical network is a major requirement in the service of lighting, not only for households but also for other productive sectors. For now, the demand for electricity in the village yet to meet community needs.

Water issues in Desa Baru become essential for the development of agrotourism; to meet the daily needs of the population, for the purpose of watering Dragon Fruits plantations, and for the purposes of visiting tourists. Seeing the current state of the existing clean water source comes from springs and dug wells are not yet eligible health. To meet the need for clean water in the village have planned development of network taps with the intake of the Kampar River.

Problems flood and rainwater in Desa Baru only occurs in some areas of the lower surface and ground water usually occurs during the rainy season. In addition to the drainage network has not reached the entire region. For village drainage planning is an important priority that agro activities not flooded by water. It can also damage the quality of dragon fruit that is harvested.

The top priority in the development of infrastructure for agro Dragon Frut is the development and improvement of the road network as the access in and out of Desa Baru. The road network is an essential element in a region, because of the absence of a road network it will not progress and develop. So is the case the function of way for Desa Baru, the road would open access to the village and developing economies, as access to the Dragon fruit plantation. New road network in the village are mostly in poor condition and should be repaired and refurbished.
narrow village road to pass and consists of a dirt road. To get to the Dragon fruit plantation that is now traversed by a dirt road. For waste management, sanitation, and telecommunication networks, today is sufficient to meet the needs of society while still traditionally managed.

1.6. Development Dragon Fruit Plantation Analysis

Dragon Fruit plants will thrive if planted in porous media (not muddy), nutrient-rich, sandy, enough sun light and temperature between 28-40 °C. If the care is good enough, the plant will begin to bear fruit at the age of 7-12 months. Riau Province was 80-120 above sea level, is very suitable for the cultivation of Dragon fruit. But getting enough sunlight is capital for growth. Dragon fruit can be grown with soil conditions PMK (Podzolik Red Yellow), peat and altitude of any location, but it is quite voracious plant nutrient, so if the soil contains fertilizer is good, then it will rapidly grow. According to the criteria already mentioned, the physical condition of Desa Baru meets all these criteria. But there are some other reasons that underlie the election of Dragon Fruit as objects in this study: 1). Dragon fruit is a plant that is durable and not easily die. 2). Relatively easy to maintain so that the general public can do. 3). Dragon fruit plant does not disturb the main livelihood of the people. 4). Does not require high costs in the process of planting. 5). Dragon fruit has high benefits for health. 6). Dragon fruit has a high economic value as a commodity.

Desa Baru is a proper agrotourism village as: a). Desa Baru have potential in terms of the provision of land. b). It still the lack of tourist destinations in Riau Province especially for agrotourism, Desa Baru can be a tourist destination that will attract local and foreign visitors. c). Society that is friendly to new comers. d). As a supporter Desa Buluh cina attraction in ecotourism.

1.7. Projection of Agrotourism Development Plan

To realize activities in Desa Baru then do some projections:

a. Projected number of visitors.

Based on the results of the calculation of projected tourists visiting will increase as the opening of agrotourism activities. It is estimated that in the year 2015-2018 the number of visitors reached 1000 people per year due to the more complete tourism facilities as well as more frequent publication and participation of local communities are becoming active and creative to process products from raw materials.

b. Prediction tourist area of origin.

Based on observations and interviews, currently visitors comes from Pekanbaru City. Prediction tourist area of origin when active ated agro activities specifically for holiday visitors will increase rapidly and comes from out side the County, from West Sumatra, Jambi, Bengkulu, South Sumatra, and a few other provinces in Sumatra. It is estimated that visitors from abroad as well as Malaysia, Singapore, and Thailand.
c. Predicted levels of income.

With the planned Desa Baru as the Dragon Fruit agrotourism destination in the Riau Province is expected to bean increase in income for rural communities. A side from ecotourism activities a site the main source of income, other activities as a follow of agrotourism activities will also provide them even less such as parking lots, souvenir sales, restaurant, or other typical food sales from Kampar area. The greater the number of visitors and the more frequent visiting frequency, will increase incomes.

The results of several studies, a Dragon fruit plantation commodities will give a great advantage. Assumed plantations planted with 5000 m2 to 5000 stems Dragon fruit yield about 5 quintals per month or 10 tons for one fruit season lasts 6 months. While the current selling price in stable position at Rp. 25,000 per kg so that residents can obtain the results of Rp. 200,000 per meter for a minimum of one-time harvest. Can be predicted if they plant an area of 5000 m2 will earn around Rp. 250 million. Profit will double in the next harvest. Plus, if people are able to breed Dragon Fruit and able to sell.

Other sources of revenue comes from tourism activities in Dragon fruit orchard. Activity gardening and picking fruit can also be an interesting attraction for tourists. In addition to selling fresh Dragon fruit, the communities can also sell it in a processed form such as juice, syrup, crackers, etc, are made from Dragon fruit or modified traditional foods with processed there in.

1.8. Supporting and Inhibiting Factors in Agrotourism Development in Desa Baru

Based on the results of a questionaire distributed to a random sample of 150 people from visitors and communities, identified the factors supporting and inhibiting the development of agrotourism in Desa Baru, namely:

a. The factors that favor the development of agrotourism potential of Dragon Fruit in Desa Baru, among others: 1) Prospects Dragon Fruit plantations profitable. 2) Can absorb local labor. 3) Revenue and local communities can be increased. 4) The potential of the land and the location of the advantageous location. 5) People who are friendly to new comers.

b. Factor which is the bottle neck of the development of agrotourism in Desa Baru, among others: 1) The state of infrastructure is inadequate. 2) Lack of support from the government. 3) The low quality of human resources. 4) Lack of promotion for tourists.

1.9. SWOT Analysis

SWOT analysis (Strenght Weakness Opportunity Threat) is used to identify relationships agrotourism resources with other resources.
Tabel 3. SWOT Analysis

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Desa Baru has the potential for plantation Dragon Fruit.</td>
<td>a. Still the lack of existing infrastructure to support the agro.</td>
</tr>
<tr>
<td>b. Desa Baru have vacant land that is still wide spread.</td>
<td>b. Existing facilities scan not meet the needs of the population.</td>
</tr>
<tr>
<td>c. Its very strategic location close to the city of Pekanbaru.</td>
<td>c. The lack of public knowledge about the cultivation and management of dragon fruit plantation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>S – O</th>
<th>W – O</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Opportunities for the development of Dragon fruit agro tourism activities.</td>
<td>a. The need careful planning for the development of agro Dragon Fruit.</td>
<td>a. Propose to the local government and Riau Province to support the development of agrotourism in Desa Baru.</td>
</tr>
<tr>
<td>b. Dragon fruit is a promising prospect.</td>
<td>b. With the extent of land owned by the public will attract employers to capitalization.</td>
<td>b. Build the appropriate infrastructure for agrotourism activities.</td>
</tr>
<tr>
<td>c. Employment and reduceun employment.</td>
<td>c. Ecotourism activities will grow rapidly.</td>
<td>c. Providing training to improve the competency of human resources and institutional.</td>
</tr>
<tr>
<td>d. Income area sand communities will increase.</td>
<td>d.</td>
<td></td>
</tr>
<tr>
<td>e. Attract investors to invest.</td>
<td>e.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Threats</th>
<th>S – T</th>
<th>W – T</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Crop failures and the results are not optimal due to the lack of knowledge in managing the Dragon fruit plantations.</td>
<td>a. Government funding.</td>
<td>a. Provision of equipment at the Desa Baru.</td>
</tr>
<tr>
<td>b. Pests that may interfere with Dragon Fruit plants.</td>
<td>b. Educate the public about the potential and Dragon fruit plantations governance.</td>
<td>b. Provide support facilities in plantation management.</td>
</tr>
<tr>
<td>c.</td>
<td>c. Training on Dragon fruit processed products.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Analysis, 2012

1.10. Development of Agrotourism Concept in Desa Baru

Plantation development aims to increase people's income. Based on analysis, concept development in Desa Baru is agrotourism. The development of strategies that can be done such as: (1) the formation of which has a specific tourist areas. (2) the establishment of small industrial activities especially in Dragon Fruit
processing and handi craft. (3) Improvement of infrastructure and facilities in the field of agro plantation. 4) increase local income by selling dragon fruit both local and international exit.

To develop Desa Baru become agrotourism village, it should have special characteristics and different from other regions, so there must be innovative to attract visitors: (1). Complete facilities and infrastructure in Desa Baru. (2). Provide education and training to resident show to manage a good Dragon fruit plantation. (3). Provide capital assistance and support equipment Dragon Fruit plantation activities. (4). Streamlining access to and from Desa Baru. (5). Making a calendar vent for Dragon fruit plantations and visit schedule to Desa Baru. (6). Creating various local souvenirs. (7). Making and selling processed products Dragon fruit plantation that became the hallmark of Desa Baru.

CONCLUSION

Based on their research it can be concluded that:
1. Desa Baru income levels will rise if the concept of Dragon fruit agrotourism can be developed and provide sustainable results.
2. Dragon Fruit agromanagement at Desa Baru requires active participation from the communities as the owner and manager of the region.
3. To develop Desa Baru become agrotourism village, it should have special characteristics and different from other regions.

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